

Source: T1
Title: CR's to TS 34.123-1 v5.2.0 related to RRC test cases
Agenda item: 5.1.3
Document for: Approval

This document contains 28 CRs to TS 34.123-1 v5.2.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

NOTE: TS 34.123-1 R99, Rel-4 and Rel-5 are all merged into the Rel-5 specification. This means that test cases for the three releases are included in TS 34.123-1 Rel-5 and therefore this is the only release being maintained.

CR related to corrections to RRC package 1 and 2 test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	409	-	Rel-5	Clause 8.3.1.1 Cell Update: cell reselection in CELL_FACH(Package1) as T1S0300015rev1	F	5.2.0	5.3.0	T1-030033	TEI	R99, Rel-4, Rel-5
34.123-1	418	-	Rel-5	Correction to package 1 RRC Test Case 8.1.1.1	F	5.2.0	5.3.0	T1-030070	TEI	R99, Rel-4, Rel-5
34.123-1	419	-	Rel-5	Correction to TS 34.123-1 Package1; Radio Bearer Establishment procedure	F	5.2.0	5.3.0	T1-030071	TEI	R99, Rel-4, Rel-5
34.123-1	420	-	Rel-5	Corrections to Package 1 RRC test cases	F	5.2.0	5.3.0	T1-030072	TEI	R99, Rel-4, Rel-5
34.123-1	421	-	Rel-5	Corrections to Package 2 RRC test cases	F	5.2.0	5.3.0	T1-030073	TEI	R99, Rel-4, Rel-5
34.123-1	422	-	Rel-5	Update to test cases 8.2.4.3 and 8.2.4.4(Package 2)	F	5.2.0	5.3.0	T1-030074	TEI	R99, Rel-4, Rel-5
34.123-1	423	-	Rel-5	Corrections to Early UE Specific Information in RRC Connection Request (Package 1)	F	5.2.0	5.3.0	T1-030075	TEI	R99, Rel-4, Rel-5
34.123-1	424	-	Rel-5	Corrections to package 2 test case 8.1.10.1	F	5.2.0	5.3.0	T1-030076	TEI	R99, Rel-4, Rel-5
34.123-1	428	-	Rel-5	Correction to package 1 RRC Test Case 8.1.1.7	F	5.2.0	5.3.0	T1-030080	TEI	R99, Rel-4, Rel-5
34.123-1	471	-	Rel-5	Correction to package 1 RRC Test Case 8.1.2.7	F	5.2.0	5.3.0	T1-030242	TEI	R99, Rel-4, Rel-5

CR related to corrections to RRC package 3 and 4 test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	425	-	Rel-5	Corrections to package 3 RRC test case 8.4.1.40	F	5.2.0	5.3.0	T1-030077	TEI	R99, Rel-4, Rel-5
34.123-1	426	-	Rel-5	Corrections to package 4 test cases on Inter system handover	F	5.2.0	5.3.0	T1-030078	TEI	R99, Rel-4, Rel-5
34.123-1	427	-	Rel-5	Corrections to package 4 test cases on RRC Direct transfer	F	5.2.0	5.3.0	T1-030079	TEI	R99, Rel-4, Rel-5
34.123-1	429	-	Rel-5	Corrections to package 4 test cases on RRC connection establishment and release	F	5.2.0	5.3.0	T1-030081	TEI	R99, Rel-4, Rel-5

34.123-1	430	-	Rel-5	Corrections to package 4 test cases on Physical Channel Reconfiguration	F	5.2.0	5.3.0	T1-030082	TEI	R99, Rel-4, Rel-5
34.123-1	431	-	Rel-5	Corrections to package 4 test cases on RB establishment	F	5.2.0	5.3.0	T1-030083	TEI	R99, Rel-4, Rel-5
34.123-1	432	-	Rel-5	Corrections to package 4 test cases on TrCH reconfiguration	F	5.2.0	5.3.0	T1-030084	TEI	R99, Rel-4, Rel-5
34.123-1	433	-	Rel-5	Corrections to package 4 test cases on RRC Connection mobility	F	5.2.0	5.3.0	T1-030085	TEI	R99, Rel-4, Rel-5
34.123-1	438	-	Rel-5	Corrections to package 4 test cases on RB release	F	5.2.0	5.3.0	T1-030090	TEI	R99, Rel-4, Rel-5
34.123-1	439	-	Rel-5	Corrections to package 4 test cases on RB reconfiguration	F	5.2.0	5.3.0	T1-030091	TEI	R99, Rel-4, Rel-5
34.123-1	440	-	Rel-5	Corrections to package 4 test cases on Measurements	F	5.2.0	5.3.0	T1-030092	TEI	R99, Rel-4, Rel-5
34.123-1	451	-	Rel-5	Corrections to package 4 test cases on RRC Security	F	5.2.0	5.3.0	T1-030103	TEI	R99, Rel-4, Rel-5

CR related to corrections to RRC low priority test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	434	-	Rel-5	New test cases for security	F	5.2.0	5.3.0	T1-030086	TEI	R99, Rel-4, Rel-5
34.123-1	435	-	Rel-5	Removal of low priority RRC test cases with state transition	F	5.2.0	5.3.0	T1-030087	TEI	R99, Rel-4, Rel-5
34.123-1	436	-	Rel-5	Corrections to clause 8.2.2.20	F	5.2.0	5.3.0	T1-030088	TEI	R99, Rel-4, Rel-5
34.123-1	437	-	Rel-5	Addition of re-run statements when it is failed in cell reselection	F	5.2.0	5.3.0	T1-030089	TEI	R99, Rel-4, Rel-5
34.123-1	441	-	Rel-5	Corrections to Low Priority RRC test cases	F	5.2.0	5.3.0	T1-030093	TEI	R99, Rel-4, Rel-5
34.123-1	442	-	Rel-5	Correction to clause 8.1.6.4 and 8.1.9a/b as T1S-020628rev1	F	5.2.0	5.3.0	T1-030094	TEI	R99, Rel-4, Rel-5

3GPP TSG- T1 Meeting #18
San Antonio, Texas, Feb 10th –13th 2003

Tdoc # T1-030033

3GPP TSG- T1 SIG Meeting #27
San Antonio, Texas, Feb 10th –13th 2003

Tdoc # T1S-030022

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 409 ⌘ rev - ⌘	Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘	Correction to RRC Package 1 test case 8.3.1.1 (T1S-030015Rev1)	
Source:	⌘	Motorola	
Work item code:	⌘	TEI	Date: ⌘ 10/1/03
Category:	⌘	F	Release: ⌘ REL-5
		<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘	In the test sequence a CELL UPDATE CONFIRM message is sent to the UE with state indicator set to CELL_FACH and Physical Channel IEs included, which are not relevant in CELL_FACH state. Therefore the message contents do not represent a realistic network scenario. The test case should use a more realistic configuration for the CELL UPDATE CONFIRM!
Summary of change:	⌘	In step 8 when k>0 RRC State indicator is changed to CELL_DCH and the Physical Channel IEs included to assist UE to move to CELL_DCH state. Added steps 10a to 10e to move UE back to CELL_FACH state and trigger the next Cell Update procedure for k>1 case.
Consequences if not approved:	⌘	The test prose cannot test UE correctly.

Clauses affected:	⌘	8.3.1.1								
Other specs affected:	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N		X		X		X
Y	N									
	X									
	X									
	X									
Other comments:	⌘	Affects R99, REL-4 and REL-5 test cases.								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.1.1 Cell Update: cell reselection in CELL_FACH

8.3.1.1.1 Definition

8.3.1.1.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection;
or

3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

...

When initiating cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

...

...

1> move to CELL_FACH state, if not already in that state;

1> if the UE performs cell re-selection:

2> clear the variable C_RNTI; and

2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

1> in case of a cell update procedure:

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

2> submit the CELL UPDATE message for transmission on the uplink CCCH.

...

1> set counter V302 to 1;

1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

NOTE: During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes.

1> set the IE "U-RNTI" to the value of the variable U_RNTI;

1> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:

...

1> if the value of the variable FAILURE_INDICATOR is TRUE:

...

...

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or

- if the message is received on DCCH:

the UE shall:

1> stop timer T302;

1> in case of a cell update procedure and the CELL UPDATE CONFIRM message:

2> includes "RB information elements"; and/or

2> includes "Transport channel information elements"; and/or

2> includes "Physical channel information elements"; and

2> if the variable ORDERED_RECONFIGURATION is set to FALSE:

3> set the variable ORDERED_RECONFIGURATION to TRUE.

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:

...

2> perform the physical layer synchronisation procedure as specified in TS 25.214;

...

...

1> enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

...

If the UE after state transition remains in CELL_FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select PRACH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.

If the UE after the state transition remains in CELL_FACH state; and

- a C-RNTI is stored in the variable C_RNTI;

...

the UE shall:

...

- 1> in case of a cell update procedure:
 - 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry.

...

- 1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;

...

If the CELL UPDATE CONFIRM message:

- includes the IE "RB information to release list":

the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include the IE "RB information to release list"; and
- includes the IE "RB information to reconfigure list"; or
- includes the IE "RB information to be affected list":

the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- includes "Transport channel information elements":

the UE shall:

- 1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

- 1> transmit no response message.

If the new state is CELL_FACH, the response message shall be transmitted using the new configuration after the state transition., and the UE shall:

...

- 1> if the variable PDCP_SN_INFO is empty:

...

- 2> if the CELL UPDATE CONFIRM or URA UPDATE CONFIRM message did not contain the IE "Ciphering mode info":

- 3> when RLC has been requested to transmit the response message,

4> continue with the remainder of the procedure.

...

If any or several of the following conditions are true:

...;

- reselection to another UTRA cell (including the previously serving cell) before completion of the cell update or URA update procedure;

the UE shall:

1> stop T302 if it is running;

...

1> check whether it is still in "in service area";

...

1> in case of a cell update procedure:

2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

1> if V302 is equal to or smaller than N302, the UE shall:

2> if the UE performed cell re-selection:

3> delete its C-RNTI.

2> in case of a cell update procedure:

3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

3> submit the CELL UPDATE message for transmission on the uplink CCCH.

2> increment counter V302;

2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.

1> if V302 is greater than N302, the UE shall:

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1.3 Test purpose

1. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell.
2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.1

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.3.1.1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions. SS switches the power settings repeatedly between columns "T1" and "T0", whenever the description below specifies that the transmission power settings for cell 1 and cell 2 be reversed.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. UE shall verify that IE "New C-RNTI" is not included in the downlink message and shall send a CELL UPDATE message to SS again. SS shall then send a CELL UPDATE CONFIRM message which includes a valid IE "New C-RNTI". SS verifies that the UE send UTRAN MOBILITY INFORMATION CONFIRM message.. UE shall stay in CELL_FACH state. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with CELL UPDATE CONFIRM message and allocates new C-RNTI and U-RNTI identities to the UE. The IE "RRC State Indicator" is set to "CELL_FACH" in this message. The UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall initiate a cell update procedure by transmitting a CELL UPDATE message and stating the cause as 'cell re-selection'. SS replies with a CELL UPDATE CONFIRM message which contains IE "Physical channel information elements" and IE "RRC State Indicator" is set to "CELL_DCH". The UE shall move to CELL_DCH state and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FACH state. ~~The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge the change in physical resources.~~ Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "Transport channel information elements" and IE "RRC State Indicator" is set to "CELL_DCH". The UE shall move to CELL_DCH state and send TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FACH state. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to be affected list". The UE shall send RADIO BEARER RECONFIGURATION COMPLETE message. Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to release list". The UE shall send RADIO BEARER RELEASE COMPLETE message. Finally, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS shall not respond to this message but SS configures its downlink

transmission power settings according to columns "T0" in table 8.3.1.1. UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS shall then send CELL UPDATE CONFIRM message to UE. UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2			Void	SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.1. The UE shall find that the cell 2 is better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
3		→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". SS set k=0.
4a		→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4b		←	CELL UPDATE CONFIRM	See message content. SS set k=0.
5		→	UTRAN MOBILITY INFORMATION CONFIRM	
6				SS reverses the transmission power level of cell 1 and cell 2.
7		→	CELL UPDATE	
8		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". If $k \geq 0$, new C-RNTI and U-RNTI identities are assigned to the UE. If $k > 0$, IE "Physical channel information elements" is included in this message and IE "RRC State Indicator" is set to "CELL_DCH" . If $k > 1$, IE "Transport channel information elements" is included in this message and IE "RRC State Indicator" is set to "CELL_DCH". Increment k by 1.
9		→	UTRAN MOBILITY INFORMATION CONFIRM	If $k=1$ when SS received this message, go to step 6. Else if $k=1$ and this message is not received, test fails. If this message is not received, proceed to next step.
10		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	If $k=2$ when SS received this message, go to step 6 next step . If $k=2$ and this message is not received, test fails. If this message is not received, proceed to next step.

10a	←	<u>PHYSICAL CHANNEL RECONFIGURATION</u>	<u>The UE is in CELL_DCH now. The SS shall send PHYSICAL CHANNEL RECONFIGURATION message to the UE asking the UE to transit to CELL_FACH state.</u>
10b	→	<u>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</u>	
10c			<u>The SS reverses the transmission power level of cell 1 and cell 2.</u>
10d	→	<u>CELL UPDATE</u>	
10e	←	<u>CELL UPDATE CONFIRM</u>	<u>IE "RRC State Indicator" is set to "CELL_FACH". If $k \geq 0$, new C-RNTI and U-RNTI identities are assigned to the UE. If $k > 0$, IE "Physical channel information elements" is included in this message, and IE "RRC State Indicator" is set to "CELL_DCH". If $k > 1$, IE "Transport channel information elements" is included in this message and IE "RRC State Indicator" is set to "CELL_DCH". Increment k by 1.</u>
11	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	If $k=3$ when SS received this message, proceed to next step. If $k=3$ and this message is not received, test fails.
11a	←	PHYSICAL CHANNEL RECONFIGURATION	The UE is in CELL_DCH now. The SS shall send PHYSICAL CHANNEL RECONFIGURATION message to the UE asking the UE to transit to CELL_FACH state.
11b	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
11c			The SS reverses the transmission power level of cell 1 and cell 2.
11d	→	CELL UPDATE	
11e	←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". If $k \geq 0$, new C-RNTI and U-RNTI identities are assigned to the UE. If $k > 0$, IE "Physical channel information elements" is included in this message. If $k > 2$, IE "RB information to be affected list" is included in this message. If $k > 3$, IE "RB information to release list" is included in this message. Increment k by 1.
12	→	RADIO BEARER RECONFIGURATION COMPLETE	If $k=4$ when SS received this message, go to step 11c6. Else if $k=4$ and this message is not received, test fails. If this message is not received, proceed to next step.

13	→	RADIO BEARER RELEASE COMPLETE	If k=5 when SS received this message, proceed to next step. Else if k=5 and this message is not received, test fails. If this message is not received, test fails.
14			SS reverses the transmission power level of cell 1 and cell 2.
15	→	CELL UPDATE	
16			SS reverses the transmission power level of cell 1 and cell 2.
17	→	CELL UPDATE	
18	←	CELL UPDATE CONFIRM	
19	→	UTRAN MOBILITY INFORMATION CONFIRM	
20	↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 3, 7, [10d](#), 11d, 15 and 17)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	Check to see if set to '0000 0000 0001' In step 3, check to see if set to '0000 0000 0000 0000 0001'. In step 7 and when k<1, check to see if set to '0000 0000 0000 0000 0001'. In step 7 and when k>0, check to see if set to same string in IE "S-RNTI" in IE "New U-RNTI" of CELL UPDATE CONFIRM message in previous step 8. In step 15 and 17, check to see if set to same string in IE "S-RNTI" in IE "New U-RNTI" of CELL UPDATE CONFIRM message in previous step 8.
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 4b and 18)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_FACH
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE CONFIRM (Step 8 and k = 0)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	'0000 0000 0001' An arbitrary 20-bits string which is different from original S-RNTI
New C-RNTI	An arbitrary 16-bits string which is different from original C-RNTI assigned in RRC connection establishment procedure.

CELL UPDATE CONFIRM (Step 8 and k=1)

Use the same message sub-type found in step 8 and k=0, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
Maximum allowed uplink TX power	3 dB below the following value: Minimum of {33 dBm for FDD and 30 dBm for TDD, maximum uplink power allowed under the UE power class}
CHOICE channel requirement Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)

CELL UPDATE CONFIRM (Step [10e8](#) and k=2)

Use the same message sub-type found in step 8 and k=1, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information for all transport channels	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Added or Reconfigured uplink TrCH information	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)the system information block type 5
DL Transport channel information for all transport channels	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Added or Reconfigured downlink TrCH information	Same as RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)the system information block type 5
CHOICE channel requirement Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)

CELL UPDATE CONFIRM (Step 11e and k=3)

Use the same message sub-type found in step 8 and k=21, with the following exceptions:

Information Element	Value/remark
RB information to be reconfigure - RB identity - PDCP info - PDCP SN info - RLC info - RB mapping info - RB stop/continue	20 Not Present Not Present Not Present Not Present Stop

CELL UPDATE CONFIRM (Step 11e and k=4)

Use the same message sub-type found in step 11e8 and k=3, with the following exceptions:

Information Element	Value/remark
RB information to release -RB identity	4

PHYSICAL CHANNEL RECONFIGURATION (Step [10a](#), 11a)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_DCH in PS":

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step [10b](#), 11b)

Use the same message sub-type found in [9] TS 34.108 clause 9.

8.3.1.1.5 Test requirement

After step 2 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 3 the UE shall transmit CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

After step 4a, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

After step 6 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

After step 8, if k=1, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

If k=2, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new physical channel assigned.

[After step 10e](#), If k=3, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to acknowledge that it has reconfigured the transport channels.

After step 11e, If k=4, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message to acknowledge that it has reconfigured the radio bearers.

If k=5, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message to acknowledge that it has release its radio bearers.

After step 14 the UE shall transmit a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

After step 16 the UE shall transmit a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place. After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

CR-Form-v5.1
CHANGE REQUEST
⌘ 34.123-1 CR 418 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ CR to 34.123-1 REL-5; Correction to package 1 RRC Test Case 8.1.1.1 (Update to T1S-030121/T1S-030193)		
Source:	⌘ Anite Telecoms, NTT DoCoMo		
Work item code:	⌘ TEI Date: ⌘ 30/1/2003		
Category:	⌘ F Release: ⌘ REL-5 Use <u>one</u> of the following categories: <table style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 50%; vertical-align: top;"> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) </td> <td style="width: 50%; vertical-align: top;"> Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) </td> </tr> </table> Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)		

Reason for change:	⌘ The specific message contents given for the System Information Blocks Type 1 and 13 do not support the permitted UE initial condition of "UE Idle State 7" as specified in clause 8.1.1.1.4. In order to support initial condition UE Idle State 7, "CN domain system information" must be provided, in SIBs 1 and 13, for both a PS and a CS domain. If this change is made then these SIBs revert to to the default message contents defined in TS 34.108. In order not to provoke specific behaviour required if the UE is paged with the IMSI in the PS Domain, paging in the PS domain should be done with P-TMSI instead.
Summary of change:	⌘ The specific message contents for SIBs 1 and 13 are removed from clause 8.1.1.1.4. Merged with T1S-030053. Paging in the PS Domain now employs the registered P-TMSI. Different IDNNS specified in INITIAL DIRECT TRANSFER depending upon CN domain.
Consequences if not approved:	⌘ Test case will not correctly test UEs supporting and registering in both CS and PS domains.

Clauses affected:	⌘ 8.1.1.1
Other specs	⌘ <input type="checkbox"/> Other core specifications ⌘

affected:	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘	Affects R99, REL-4 and REL-5 test cases. Depends upon changes to TS34.108 T1S-030176 and T1S-030177	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8 Radio Resource Control RRC

8.1 RRC Connection Management Procedure

8.1.1 Paging

8.1.1.1 Paging for Connection in idle mode

8.1.1.1.1 Definition

8.1.1.1.2 Conformance requirement

A UE in idle mode, CELL_PCH state or URA_PCH state shall receive the paging information for all its monitored paging occasions. For an UE in idle mode, the paging occasions are specified in [25.304] and depend on the IE "CN domain specific DRX cycle length coefficient", as specified in subclause 8.6.3.1a. For a UE in CELL_PCH state or URA_PCH state, the paging occasions depend also on the IE "UTRAN DRX cycle length coefficient" and the IE "RRC State Indicator", as specified in subclauses 8.6.3.2 and 8.6.3.3 respectively.

When the UE receives a PAGING TYPE 1 message, it shall perform the actions as specified below.

If the UE is in idle mode, for each occurrence of the IE "Paging record" included in the message the UE shall:

- 1> if the IE "Used paging identity" is a CN identity:
 - 2> compare the IE "UE identity" with all of its allocated CN UE identities:
 - 2> if one match is found:
 - 3> indicate reception of paging; and
 - 3> forward the IE "CN domain identity", the IE "UE identity" and the IE "Paging cause" to the upper layers.
- 1> otherwise:
 - 2> ignore that paging record.

:

In the UE, the initial direct transfer procedure shall be initiated, when the upper layers request establishment of a signalling connection. This request also includes a request for the transfer of a NAS message.

Upon initiation of the initial direct transfer procedure when the UE is in idle mode, the UE shall:

- 1> set the variable ESTABLISHMENT_CAUSE to the cause for establishment indicated by upper layers;
- 1> perform an RRC connection establishment procedure, according to subclause 8.1.3;
- 1> if the RRC connection establishment procedure was not successful:
 - 2> indicate failure to establish the signalling connection to upper layers and end the procedure.
- 1> when the RRC connection establishment procedure is completed successfully:
 - 2> continue with the initial direct transfer procedure as below.

Upon initiation of the initial direct transfer procedure when the UE is in CELL_PCH or URA_PCH state, the UE shall:

- 1> perform a cell update procedure, according to subclause 8.3.1, using the cause "uplink data transmission";
- 1> when the cell update procedure completed successfully:

2> continue with the initial direct transfer procedure as below.

The UE shall, in the INITIAL DIRECT TRANSFER message:

- 1> set the IE "NAS message" as received from upper layers; and
- 1> set the IE "CN domain identity" as indicated by the upper layers; and
- 1> set the IE "Intra Domain NAS Node Selector" as follows:
 - 2> derive the IE "Intra Domain NAS Node Selector" from TMSI/PTMSI, IMSI, or IMEI; and
 - 2> provide the coding of the IE "Intra Domain NAS Node Selector" according to the following priorities:
 1. derive the routing parameter for IDNNS from TMSI (CS domain) or PTMSI (PS domain) whenever a valid TMSI/PTMSI is available;
 2. base the routing parameter for IDNNS on IMSI when no valid TMSI/PTMSI is available;
 3. base the routing parameter for IDNNS on IMEI only if no (U)SIM is inserted in the UE.
- 1> calculate the START according to subclause 8.5.9 for the CN domain as set in the IE "CN Domain Identity"; and
- 1> include the calculated START value for that CN domain in the IE "START".

In CELL_FACH state, the UE shall:

- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

The UE shall:

- 1> transmit the INITIAL DIRECT TRANSFER message on the uplink DCCH using AM RLC on signalling radio bearer RB3;
- 1> when the INITIAL DIRECT TRANSFER message has been submitted to lower layers for transmission:
 - 2> confirm the establishment of a signalling connection to upper layers; and
 - 2> add the signalling connection with the identity indicated by the IE "CN domain identity" in the variable ESTABLISHED_SIGNALLING_CONNECTIONS.
- 1> when the successful delivery of the INITIAL DIRECT TRANSFER message has been confirmed by RLC:
 - 2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.2 and 8.1.8, 3GPP TS 25.211 clause 5.3.3.10 (FDD), 3GPP TS 25.221 (TDD), 3GPP TS 25.304 clause 8.

8.1.1.1.3 Test purpose

[1\) For the CS domain](#)

To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE 1 message which includes IE "UE identity" (in IE "Paging Record") set to the IMSI of the UE, and responds with a correct INITIAL DIRECT TRANSFER message.

[2\) For the PS domain](#)

To confirm that the UE establishes an RRC connection after it receives a PAGING TYPE 1 message which includes IE "UE identity" (in IE "Paging Record") set to the P-TMSI allocated by SS at initial attach and responds with a correct INITIAL DIRECT TRANSFER message.

8.1.1.1.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108 with a CN UE identity (set to IMSI in the CS domain), depending on the CN domain(s) supported by the UE.

Test Procedure

SS transmits SYSTEM INFORMATION BLOCK TYPE 1 or 13 messages, depending on the CN type supported by the UE. The SS transmits a PAGING TYPE 1 message, which includes an unmatched CN UE identity for the UE in the idle state. The UE shall not change its state. The SS transmits a PAGING TYPE 1 message, which includes a matched CN UE identity for the UE in the idle state. During transmission of PAGING TYPE 1 messages, SS selects the correct paging indicator on the PICH in order to allow the UE to respond to paging. Then the UE transmits an RRC CONNECTION REQUEST to the SS, the SS transmits an RRC CONNECTION SETUP to the UE. When the UE receives this message, the UE establishes an RRC connection and transmits an RRC CONNECTION SETUP COMPLETE message and an INITIAL DIRECT TRANSFER message on the uplink DCCH.

NOTE: For UEs supporting GSM-MAP CN type only, SYSTEM INFORMATION TYPE 1 messages are to be sent by SS in this test case. On the other hand, SS transmits SYSTEM INFORMATION TYPE 13 messages if the UE under test supports only ANSI-41 CN type.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13 or SYSTEM INFORMATION BLOCK TYPE 1	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See <u>specific default message contents in TS 34.108.</u>
2		←	PAGING TYPE 1	The SS transmits the message, which includes an unmatched identity (incorrect IMSI), and the UE does not change its state.
3		←	PAGING TYPE 1	The SS transmits the message, which includes a matched identity (test-SIM IMSI). See <u>default message contents in TS 34.108.</u>
4		→	RRC CONNECTION REQUEST	
5		←	RRC CONNECTION SETUP	SS assigns DPCH resources to allow UE to establish an RRC connection.
6		→	RRC CONNECTION SETUP COMPLETE	
7		→	INITIAL DIRECT TRANSFER	

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 1 (Step 1) – for UEs supporting GSM-MAP core networks

Use the default message type found in TS 34.108, clause 6.1.

Information Element	Value/remark
CN common GSM-MAP NAS system information CN domain system information list — CN domain system information — CN domain identity — CHOICE CN Type — CN domain specific NAS system information — CN domain specific DRX cycle length coefficient	LAC Only 1 entry Supported Domain (PS Domain or CS Domain) GSM-MAP 1E-01(CS) or 00-00(PS) 7
UE Timers and constants in idle mode — T300 — N300 — T312 — N312	4000 milliseconds 7 40 seconds 4

SYSTEM INFORMATION TYPE 13 (Step 1) – for UEs supporting ANSI-41 core networks

[Use the default message type found in TS 34.108, clause 6.1.](#)

Information Element	Value/remark
CN domain system information list CN domain system information — CN domain identity — CHOICE CN Type — CN domain specific NAS system information — CN domain specific DRX cycle length coefficient	Only 1 entry Supported Domain (PS Domain or CS Domain) ANSI-41 Default 7
UE Timers and constants in idle mode — T300 — N300 — T312 — N312	4000 milliseconds 7 40 sec 4

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Message Type Paging record list Paging record CHOICE Used paging identity - Paging cause - CN domain identity - CHOICE UE Identity - IMSI BCCH modification info	Only 1 entry CN identity Terminating Call with one of the supported services Registered Domain (PS Domain or CS Domain) IMSI Set to an arbitrary octet string of length 7 bytes which is different from the IMSI value stored in the TEST USIM card. Not Present

PAGING TYPE 1 (Step 3)

Information Element	Value/remark
Message Type Paging record list Paging record CHOICE Used paging identity — Paging cause — CN domain identity — CHOICE UE Identity — IMSI BCCH modification info	Only 1 entry CN identity Terminating Call with one of the supported services Registered Domain (PS Domain or CS Domain) IMSI Set to the same octet string as in the IMSI stored in the TEST USIM card Not Present

[Use the default message type found in TS 34.108, clause 9.1.](#)

Note that Separate message types are defined in TS 34.108 for the cases of TM (Speech in CS) and for TM (Packet in PS).

RRC CONNECTION REQUEST (Step 4)

Information Element	Value/remark
Message type Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI <u>depending upon CN domain concerned.</u>
Establishment Cause	Check to see if it is set to the same value as "Paging Cause" IE in the PAGING TYPE 1 message transmitted on step 3.
Protocol Error Indicator	Check to see if it is set to FALSE
Measured results on RACH	Not checked.

INITIAL DIRECT TRANSFER (Step 7) – for UEs supporting GSM-MAP core networks

Information Element	Value/remark
Message Type	Not present
Integrity check info	Not present
CN domain identity	CS domain or PS domain <u>(as specified by the SS in the PAGING TYPE 1 message of Step 3)</u>
Intra Domain NAS Node Selector - CHOICE version -- CHOICE CN type --- CHOICE Routing basis ---- Routing parameter	R99 GSM-MAP IMSI (response to IMSI paging <u>in CS domain</u>) P-TMSI (response to P-TMSI paging <u>in PS Domain</u>) <u>If the IE "CN domain identity" is equal to "CS domain",</u> <u>b</u> Bit string (10) consisting of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant. <u>If the IE "CN domain identity" is equal to "PS domain", this bit string is set to bits b14 through b23 of the P-TMSI.</u> <u>The P-TMSI bits are numbered from b0 to b31, with bit b0 being the least significant..</u>
--- Entered parameter	False
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

INITIAL DIRECT TRANSFER (Step 7) – for UEs supporting ANSI-41 core networks

Information Element	Value/remark
Message Type	Not present
Integrity check info	Not present
CN domain identity	CS domain or PS domain <u>(as specified by the SS in the PAGING TYPE 1 message of Step 3)</u>
Intra Domain NAS Node Selector - CHOICE version	ANSI-41 : Bitstring(14), all bits set to 0
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

8.1.1.1.5 Test requirement

After step 2 the UE shall not respond to PAGING TYPE 1 message sent in step 2.

After step 3 the UE shall transmit RRC CONNECTION REQUEST message on the uplink CCCH.

After step 5 the UE shall have an RRC connection based on dedicated physical channel resources and transmit an RRC CONNECTION SETUP COMPLETE message and INITIAL DIRECT TRANSFER message on the uplink DCCH.

3GPP TSG-T1 Meeting #18
 San Antonio, US, 10th- 14th February 2003
 3GPP TSG-T1/SIG Meeting #27
 San Antonio, US, 10th- 14th February 2003

Tdoc # T1-030071

Tdoc # T1S030054

CR-Form-v7

CHANGE REQUEST

34.123-1 CR 419 # rev - # Current version: 5.2.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Correction to TS 34.123-1 Package1; Radio Beare Establishment procedure		
Source:	# NTT DoCoMo		
Work item code:	# TEI	Date:	# 10/02/2003
Category:	# F	Release:	# Rel-5
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# One of the test purpose at clause 8.2.1.9 is to verify that the UE when receiving a RADIO BEARER SETUP message not including a value for C-RNTI initiates a cell update procedure and indicating the cause "Cell reselection". But at clause 8.2.1.9.4, the specific message contents of RADIO BEARER SETUP includes C-RNTI according to TS 34.108 clause 9.
Summary of change:	# In step3, the IE "C-RNTI" is deleted.
Consequences if not approved:	# Correct UEs couldn't pass this test.

Clauses affected:	# 8.2.1.9										
Other specs affected:	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">#</td> <td style="width: 20px; text-align: center;">#</td> </tr> <tr> <td style="width: 20px; text-align: center;">#</td> <td style="width: 20px; text-align: center;">#</td> </tr> <tr> <td style="width: 20px; text-align: center;">#</td> <td style="width: 20px; text-align: center;">#</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	#	#	#	#	#	#		#
Y	N										
#	#										
#	#										
#	#										
Other comments:	# N/A										

How to create CRs using this form:

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.1.9 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Success (Cell re-selection)

8.2.1.9.1 Definition

8.2.1.9.2 Conformance requirement

8.2.1.9.3 Test purpose

1. To verify that the UE when receiving a RADIO BEARER SETUP message not including a value for C-RNTI initiate a cell update procedure and indicating the cause "Cell reselection".
2. To verify that the UE when the CELL UPDATE CONFIRM message does not include "RB information elements", "Transport channel information elements" nor "Physical channel information elements" but include the IE "New C-RNTI" transmit a UTRAN MOBILITY INFORMATION CONFIRM message.
3. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message after it completes the cell update procedure.

8.2.1.9.4 Method of test

Initial Condition

System Simulator: 1 cell- Cell 1 is active.

UE: PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message which includes IE "Primary CPICH info" and no dedicated physical channel information, to request the UE to transit from CELL_DCH to CELL_FACH. Due to absence of the C-RNTI in the RADIO BEARER SETUP message the UE shall initiate the cell update procedure even if the UE selects the same cell as indicated by the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD). The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3		←	RADIO BEARER SETUP	Assigned the transition from CELL_DCH to CELL_FACH
4		→	CELL UPDATE	The value "cell reselection" set in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	C-RNTI included
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7		→	RADIO BEARER SETUP COMPLETE	
8		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 3) (FDD)

The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL_FACH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exception:

<u>Information Element</u>	<u>Value/Remarks</u>
<u>New C-RNTI</u>	<u>Not present</u>

3GPP TSG-T1 Meeting #18
 San Antonio, USA, 10th-14th Feb 2003

T1-030072

3GPP TSG-T1/SIG Meeting #27
 San Antonio, USA, 10th - 14th, February 2003

T1S030031

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 420 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 Corrections to Package 1 RRC test cases		
Source:	⌘ Panasonic		
Work item code:	⌘ TEI Date: ⌘ 21/01/03		
Category:	⌘ F Release: ⌘ Rel-5 Use <u>one</u> of the following categories: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change: ⌘	<ol style="list-style-type: none"> 1. During T1/SIG #26 meeting, it was agreed that RF condition provided in the signalling conformance test cannot guarantee that UE reselect to the right cell when more than one cell is used in the test. It was suggested that re-run of such test case should be allowed if the UE failed the test due to a failure to reselect to the right cell. 2. In order to avoid the duplication of CPICH code(sf256,0) and DPCH(sfXXX,0) in cell 2 in ACTIVE SET UPDATE message, it is proposed to change the secondary scrambling code of cell 2 from "Not present" to other values. 3. In clause 8.4.1.1, in step 13 SS should re-adjust the downlink transmission power setting according to column T1 to ensure that cell 2 is within the reporting range taking into consideration the tolerance of the SS and the measurement accuracy of the UE. 4. In clause 8.4.1.3, the reporting range in step 1 should be 16dB to ensure that cell 2 is within the reporting range taking into consideration the tolerance of the SS and the measurement accuracy of the UE. 5. Cell timing of each active cell should be different. 6. It is not necessary to provide the cell info of the serving cell in the MEASUREMENT CONTROL message. 7. Editorial mistakes.
Summary of change: ⌘	<ol style="list-style-type: none"> 1. A note has been added to clause 8.3.4.2 to indicate that this test case can

be re-run if the UE failed due to failure to reselect to the right cell.

2. In ACTIVE SET UPDATE messages of clause 8.3.4.1, 8.3.4.2 and 8.3.4.3, it is revised so that secondary scrambling code of cell 2 and 3 is set to '1' and '2' respectively.
3. In clause 8.4.1.1, in step 13 it is revised so that SS changes downlink power setting according to column 'T1' instead of 'T0'.
4. In clause 8.4.1.3, the reporting range in step 1 is set to 16dB.
5. In step 7 of clause 8.4.1.1, the reference time difference of cell 3 is revised to 256 chips. In step 10a and 12, the reference time difference of cell 2 is set as 0 chip.
6. The serving cell info has been removed from all the MEASUREMENT CONTROL messages in clause 8.4.1.1.
7. In SIB 11 (step 1 of clause 8.4.1.3), the CPICH_Ec/No reporting indicator for active set cells should be set to 'TRUE' so that the UE would report this value in the measurement report (in step 11).
8. In step 1 of clause 8.4.1.1 and 8.4.1.3, redundant IEs in the SIB 11 message has been removed and the text in the test procedure has been revised accordingly.
9. The report range in step 12 of clause 8.4.1.1 has been revised as 8dB to be consistent with the value described in the test procedure.
10. The reporting interval in step 12 of clause 8.4.1.1 has been revised to 16s as the current value(64s) is out of range.
11. The reporting range in step 1 of clause 8.4.1.3 has been revised to 14dB as the current value(15dB) is out of range. As a result, the cell power of cell 2 is changed to -67dB to ensure that cell 2 is within the reporting range taking into consideration the tolerance of the SS and the measurement accuracy of the UE.
12. There are missing IEs in ACTIVE SET UPDATE message found in step 0c of clause 8.3.4.3, therefore the missing IEs are added.

Consequences if not approved: ☞ These affected test cases could fail good UE.

Clauses affected: ☞ 8.3.4.1, 8.3.4.2, 8.3.4.3, 8.4.1.1, 8.4.1.3

Other specs Affected:		Y	N	☞ Other core specifications ☞	
			X		
		X			☞ Test specifications
		X		☞ O&M Specifications	

Other comments: ☞ Affects R'99, Rel-4 and Rel-5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modification>

8.3.4 Active set update in soft handover (FDD)

8.3.4.1 Active set update in soft handover: Radio Link addition

8.3.4.1.1 Definition

8.3.4.1.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLCs indicated in the IE "Radio Link Addition Information";
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

...

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.1.3 Test purpose

1. To confirm that the UE continues to communicate with the SS on both the additional radio link and an already existing radio link after the radio link addition.

8.3.4.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.1

Parameter	Unit	Cell 1				Cell 2			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 1			
CPICH Ec	dBm/3.84 MHz	-60	-60	OFF	-60	-75	-60	-60	OFF

Table 8.3.4.1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

Initially, the UE goes to connected mode and establishes a radio access bearer in CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.1. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC without waiting for the physical channel synchronisation B.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.1. UE shall not detect the DPCH from cell 1 but continue to communicate through the another DPCH from cell 2. The UE shall transmit a MEASUREMENT REPORT message which indicates the event '1b' for cell 1.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2. The UE shall transmit a UE CAPABILITY ENQUIRY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.1. UE shall detect DPCH from cell 1 and 2 and transmit a MEASUREMENT REPORT message which indicates the event '1a' for cell 1.

The SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.1. UE shall not detect the DPCH from cell 2 but continue to communicate through another DPCH from cell 1. The UE shall transmit a MEASUREMENT REPORT message which indicates the event '1b' for cell 2.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 1. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.1.
2		→	MEASUREMENT REPORT	See specific message contents for this message
3		←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1.
5				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.1
5a		→	MEASUREMENT REPORT	See specific message contents for this message

6	←	UE CAPABILITY ENQUIRY	Use default message.
7	→	UE CAPABILITY INFORMATION	Use default message.
8	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
9			SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.1
9a	→	MEASUREMENT REPORT	See specific message contents for this message
10			Wait 15 seconds and SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.1
10a	→	MEASUREMENT REPORT	See specific message contents for this message
11	←	UE CAPABILITY ENQUIRY	Use default message.
12	→	UE CAPABILITY INFORMATION	Use default message.
13	←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
14	↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- New intra-frequency cells	1
- Intra-frequency cell id	
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	Checked that this IE is absent
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	
- Primary CPICH info	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- Primary scrambling code	
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - SSDT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - SCCPCH information for FACH	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 FDD P-CPICH can be used. Calculated value from Cell synchronisation information Not Present This IE is repeated for all existing downlink DPCHs allocated to the UE Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" For each DPCH, assign the same code number in the current code given in cell 1. Not Present 0 Not Present Not Present Not Present Not Present

MEASUREMENT REPORT (Step 5a)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss Measured results on RACH Additional measured results Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 1 Checked that this IE is absent Checked that this IE is absent Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent 1b Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

MEASUREMENT REPORT (Step 9a)

The received message at this step should have the same contents as the message received in Step 6, with the following exceptions:

Information Element	Value/remark
Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	1a Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

MEASUREMENT REPORT (Step 10a)

The received message at this step should have the same contents as the message received in Step 6, with the following exceptions:

Information Element	Value/remark
Event results <ul style="list-style-type: none"> - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	1b Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

8.3.4.1.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a UE CAPABILITY INFORMATION message.

After step 9a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 10a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 11 the UE shall transmit a UE CAPABILITY INFORMATION message.

8.3.4.2 Active set update in soft handover: Radio Link removal

8.3.4.2.1 Definition

8.3.4.2.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

...

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.2.3 Test purpose

1. To confirm that the UE continues to communicate with the SS on the remaining radio link after radio link removal on the active set.

2. To confirm that the UE is not using the removed radio link to communicate with the SS.

8.3.4.2.4 Method of test

Initial Condition

System Simulator: 2 cells - both Cell 1 and Cell 2 are active

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.2

Parameter	Unit	Cell 1				Cell 2			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 1			
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60	-75	-60	-60	OFF

Table 8.3.4.2 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE goes to connected mode and establishes a radio access bearer service in the CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.2 so as to generate a radio link failure condition. The UE shall detect the radio link failure UE shall re-select to cell 1 and transmit a CELL UPDATE message. SS transmits a CELL UPDATE CONFIRM message after it receive CELL UPDATE message from UE. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities..

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2
2		→	MEASUREMENT REPORT	See specific message contents for this message
3		←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1.
5				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.2
6		→	MEASUREMENT REPORT	See specific message contents for this message
7		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE "Radio Link Removal Information".
8		→	ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio link associated with cell 1.
9		←	UE CAPABILITY ENQUIRY	Use default message.
10		→	UE CAPABILITY INFORMATION	Use default message.
11		←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
12				SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.2
13		→	CELL UPDATE	UE sends this message in cell 1.
14		←	CELL UPDATE CONFIRM	See message content.
15		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
<ul style="list-style-type: none"> - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code 	1 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
<ul style="list-style-type: none"> - Primary CPICH TX power - TX Diversity indicator - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code - Primary CPICH TX power - TX Diversity indicator 	Not Present FALSE 2 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Not Present FALSE

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss	1 Checked that this IE is absent Checked that this IE is absent Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is present and includes IE COUNT-C-SFN frame difference Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent
Measured results on RACH Additional measured results	Checked that this IE is absent Checked that this IE is absent
Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	1a Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in Annex.A, with the following exceptions:

Information Element	Value/remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - SSDT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - SCCPCH information for FACH	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 FDD P-CPICH can be used. Calculated value from Cell synchronisation information Not Present This IE is repeated for all existing downlink DPCHs allocated to the UE Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" For each DPCH, assign the same code number in the current code given in cell 1. Not Present 0 Not Present Not Present Not Present Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number Measurement identity Measured Results - Intra-frequency measured results list - Cell measured results - Cell Identity - Cell synchronisation information - CHOICE mode - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - CHOICE mode - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss Measured results on RACH Additional measured results Event results - CHOICE event result - Intra-frequency event identity - Cell measurement event results - CHOICE mode - Primary CPICH info - Primary scrambling code	The presence of this IE is dependent on Ixit statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 1 Checked that this IE is absent Checked that this IE is absent FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent FDD Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent Intra-frequency measurement event results 1b FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 7)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link removal information - Primary CPICH info - Primary scrambling code	1 radio link to be removed Set to the same P-CPICH scrambling code assigned for cell 1

CELL UPDATE (Step 13)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.4.2.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 7 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

After step 10 the UE shall transmit a UE CAPABILITY INFORMATION message.

After step 12 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 14, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.4.3 Active set update in soft handover: Combined radio link addition and removal

8.3.4.3.1 Definition

8.3.4.3.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

...

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.3.3 Test purpose

1. To confirm that the UE continues to communicate with the SS on the added radio link and removes radio link which exists prior to the execution of active set update procedure.

8.3.4.3.4 Method of test

Initial Condition

System Simulator: 3 cells- Cell 1, Cell 2 and Cell 3 are active, with downlink transmission power settings according to columns "T0" in table 8.3.4.3.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE [Active set is not full.]

Test Procedure

Table 8.3.4.3

Parameter	Unit	Cell 1					Cell 2					Cell 3				
		T0	T1	T2	T3	T4	T0	T1	T2	T3	T4	T0	T1	T2	T3	T4
UTRA RF Channel Number		Ch. 1					Ch. 1					Ch. 1				
CPICH Ec	dBm/ 3.84 MHz	-60	-60	-60	OFF	-60	-80	-60	-60	OFF	-70	-80	-80	-60	-60	OFF

Table 8.3.4.3 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

The UE goes to connected mode and establishes a radio access bearer in the CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.3. UE transmits a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE in cell 1 an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information", indicating the addition of cell 2 into the active set, on DCCH using AM RLC.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.3. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 3 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 3 and then the SS transmits to the UE an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information" and IE "Radio Link Removal Information", indicating the removal of cell 2 and addition of cell 3 into the active set, on DCCH using AM RLC.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links and then the UE removes the radio link specified in an ACTIVE SET UPDATE message. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.3.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond to this message through the DPCH in cell 3. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.3.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond to this message through the DPCH in cell 1. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a				SS configures the initial active set with only cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.3
0b		→	MEASUREMENT REPORT	See specific message contents for this message
0c		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information" for cell 2.
0d		→	ACTIVE SET UPDATE COMPLETE	The UE adds the radio link in cell 2.
1				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.3
2		→	MEASUREMENT REPORT	See specific message contents for this message
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information" for cell 3 and IE "Radio Link Removal Information" for cell 2.
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link in cell 3 and removes the old radio link in cell 2.
4a				SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.3
5		←	UE CAPABILITY ENQUIRY	Use default message.
6		→	UE CAPABILITY INFORMATION	Use default message.
7		←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
8				SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.3
9		←	UE CAPABILITY ENQUIRY	Use default message.
10		→	UE CAPABILITY INFORMATION	Use default message.
11		←	UE CAPABILITY INFORMATION CONFIRM	Use default message.

Specific Message Content

The contents of SIB11 broadcast- in cell 1 and cell 2 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
<ul style="list-style-type: none"> - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code 	1 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
<ul style="list-style-type: none"> - Primary CPICH TX power - TX Diversity indicator - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code 	Not Present FALSE 2 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
<ul style="list-style-type: none"> - Primary CPICH TX power - TX Diversity indicator - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code 	Not Present FALSE 3 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
<ul style="list-style-type: none"> - Primary CPICH TX power - TX Diversity indicator 	Not Present FALSE

The contents of SIB12 in cell 1 and cell 2, and SIB11 and SIB12 in cell 23 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 0b)

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- Primary scrambling code	
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 0c)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - DPCH frame offset <u>- CHOICE mode</u> <u>- Primary CPICH usage for channel estimation</u> <u>- DPCH frame offset</u> <u>- Secondary CPICH info</u> <u>- DL channelisation code</u> <u>- Secondary scrambling code</u> <u>- Spreading factor</u> <u>- Code Number</u> <u>- Scrambling code change</u> <u>- TPC Combination Index</u> <u>- SSTD Cell Identity</u> <u>- Close loop timing adjustment mode</u> <u>- TFCI Combining Indicator</u> <u>- SCCPCH information for FACH</u>	Set to same code as assigned for cell 2 Calculated value from Cell synchronisation information FDD <u>P-CPICH can be used.</u> <u>Calculated value from Cell synchronisation information</u> Not Present <u>This IE is repeated for all existing downlink DPCHs allocated to the UE</u> 1 <u>Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets"</u> <u>For each DPCH, assign the same code number in the current code given in cell 1.</u> Not Present 0 Not Present Not Present Not Present Not Present

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- Primary scrambling code	
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	Checked that this IE is absent
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 3
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present ²
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets"
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2

8.3.4.3.5 Test requirement

At step 0a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 0c the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 5 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH in cell 3.

After step 9 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH in cell 1.

<End of Modification>

<Start of Modification>

8.4.1.1 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state

8.4.1.1.1 Definition

8.4.1.1.2 Conformance requirement

Upon transition from idle mode to CELL_DCH state, the UE shall:

1> begin or continue monitoring the list of cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

1> if the "intra-frequency measurement reporting criteria" IE was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):

2> begin measurement reporting according to the IE.

In CELL_DCH state, the UE shall:

- 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT_IDENTITY are met for any ongoing measurements that are being performed in the UE.

...

The reporting criteria are fulfilled if either:

- the first measurement has been completed for a newly initiated measurement with periodic reporting; or
- the time period indicated in the stored IE "Periodical reporting criteria" has elapsed since the last measurement report was submitted to lower layers for a given measurement; or
- an event in stored IE "Measurement reporting criteria" was triggered.

For the measurement, which triggered the MEASUREMENT REPORT message, the UE shall:

- 1> set the IE "measurement identity" to the measurement identity, which is associated with that measurement in variable MEASUREMENT_IDENTITY;
- 1> set the IE "measured results" to include measurements according to the IE "reporting quantity" of that measurement stored in variable MEASUREMENT_IDENTITY; and
 - 2> if all the reporting quantities are set to "false":
 - 3> not set the IE "measured results".
 - 1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and
 - 2> if more than one additional measured results are to be included:
 - 3> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.
 - 1> if the MEASUREMENT REPORT message was triggered by an event (i.e. not a periodical report):

...

The UE shall:

- 1> transmit the MEASUREMENT REPORT message on the uplink DCCH using either AM or UM RLC according to the stored IE "measurement reporting mode" associated with the measurement identity that triggered the report.

When the MEASUREMENT REPORT message has been submitted to lower layers for transmission:

- 1> the procedure ends.

...

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in TS 25.331 subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

- 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 - ...
- 2> for measurement type "UE positioning measurement":
 - ...
- 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "Measurement command" has the value "modify":
 - 2> for all IEs present in the MEASUREMENT CONTROL message:
 - 3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":
 - 4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
 - ...
 - 4> for any other measurement type:
 - 5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;
 - 5> resume the measurements according to the new stored measurement control information.
 - 3> otherwise:
 - 4> set the variable CONFIGURATION_INCOMPLETE to TRUE.
 - 2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:
 - 3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.
- 1> if the IE "measurement command" has the value "release":
 - ...
- 1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;

Reference

3GPP TS 25.331 clause 8.4.1.8.1, 8.4.1.3, 8.4.2.2.

8.4.1.1.3 Test Purpose

1. To confirm that the UE continues to monitor intra-frequency measurement quantity of the cells listed in System Information Block type 11 or 12 messages, after it has entered CELL_DCH state from idle mode. When the intra-frequency measurement reporting criteria specified in System Information Block type 11 or 12 messages have been met, it shall report the measurements using MEASUREMENT REPORT message(s).
2. To confirm that the UE terminates monitoring and reporting activities for the cells listed in "intra-frequency cell info list" IE in System Information Block type 11 or 12 messages, after it has received a MEASUREMENT CONTROL message that specifies the measurement type to be "intra-frequency measurement" with the same measurement identity as in System Information Block Type 11 or 12 messages. To confirm that the UE

reconfigures the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

8.4.1.1.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, Cell 2 and Cell 3 are active.

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.1-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.1-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
CPICH Ec	dBm/3.84 MHz	-60	-60	-60	-70	-60	-80	-80	-60	-60

The UE is initially in idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings ~~to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the monitored neighbour cell list~~. The key measurement parameters in the modified System Information Block message are as follow: ~~measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP"~~, report criteria = "periodic reporting criteria", reporting interval = "64 seconds".

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service). The UE shall send a MEASUREMENT REPORT message after reaching CELL_DCH state, reporting cell 2's CPICH RSCP value. After 64 seconds has passed since SS receives the first MEASUREMENT REPORT message, the UE shall transmit a second MEASUREMENT REPORT message.

Note: In P11 or P13 in step 4, in RADIO BEARER SETUP message, IE "Default DPCH Offset Value" and IE "DPCH frame offset" are set to "0".

SS sends a MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS configures an intra-frequency measurement based on the measurement quantity CPICH RSCP. Parameters used in this message are: measurement identity = "1", report criteria = "event-trigger", event identity = "1e", reporting threshold = "-70 dBm". SS checks to see that no MEASUREMENT REPORT messages are sent within the next 64 seconds (which is due to periodic reporting). SS reconfigures the downlink transmission power settings according to values in column "T1" in table 8.4.1.1-1. The UE shall transmit a MEASUREMENT REPORT message when it detects that the CPICH RSCP of cell 3 has risen above the threshold value specified in the previous MEASUREMENT CONTROL message.

SS sends then a new MEASUREMENT CONTROL message to add cell 2 to the list of the cells the UE shall measure. Since the RSCP for cell 2 is above the threshold for event 1e to be triggered, a MEASUREMENT REPORT triggered by cell 2 shall be sent by the UE.

SS reconfigures the downlink transmission power settings according to values in column "T2" in table 8.4.1.1-1. SS sends a new MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS configures an intra-frequency measurement based on the measurement quantity CPICH RSCP. Parameters used in this message are: measurement identity = "1", report criteria = "event-trigger", event identity = "1a", Reporting range 8db. SS reconfigures the downlink transmission power settings according to values in column "~~T0~~T1" in table 8.4.1.1-1. The UE

shall transmit a MEASUREMENT REPORT message when it detects that the condition for event 1a is fulfilled. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped onto cell 1. The System Information Block type 11 messages to be transmitted are different from the default settings (see specific message contents)
2		↔	SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	IE "Default DPCH Offset Value" and IE "DPCH frame offset " in RADIO BEARER SETUP message is set to "0".
5		SS		SS shall wait for a MEASUREMENT REPORT message.
6		→	MEASUREMENT REPORT	After receiving this message, SS shall expect to receive the next MEASUREMENT REPORT message after 64 seconds.
6a		→	MEASUREMENT REPORT	SS shall receive consecutive MEASUREMENT REPORT messages at 64 seconds interval.
7		←	MEASUREMENT CONTROL	A measurement with "measurement identity" IE set to "1" is assigned, with the IE "CHOICE reporting criteria" set to "intra-frequency measurement reporting criteria". See specific message content for the rest of the message.
8				SS waits for 64 seconds and verifies that no further MEASUREMENT REPORT messages are detected on the uplink DCCH.
9				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.1-1.
10		→	MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 3 and containing report the measured CPICH RSCP value of cell 3.
10a		←	MEASUREMENT CONTROL	A MEASUREMENT CONTROL is sent to the UE to modify the list of the cells the UE shall monitor.
10b		→	MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 2.

Step	Direction		Message	Comment
	UE	SS		
11				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.1-2.
12		←	MEASUREMENT CONTROL	A measurement with "measurement identity" IE set to "1" is assigned, with the IE "CHOICE reporting criteria" set to "intra-frequency measurement reporting criteria". See specific message content for the rest of the message.
13				SS re-adjusts the downlink transmission power settings according to columns "T0T1" in table 8.4.1.1-3 and waits 5 seconds.
14		→	MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message to report occurrence of event 1a.
15		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

System Information Block type 11 (Step 1)

[Use the same System Information Block Type 11 message as found in clause 6.1.0b of TS 34.108, with the following exceptions:](#)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
— Use of HCS	Not used
— Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
	Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
	(This IE shall be ignored by the UE for SIB11)
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
	Absence of this IE is equivalent to default value 0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection	Not Present (The IE shall be absent as this is the serving cell)
	2
- Intra-frequency cell id	
- Cell info	Not present
- Cell individual offset	Absence of this IE is equivalent to default value 0dB
	1024
- Reference time difference to cell	TRUE
- Read SFN Indicator	FDD
- CHOICE Mode	
- Primary CPICH Info	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	Not present
- Cell selection and Re-selection info	For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
— Intra-frequency measurement quantity	
— Filter Coefficient	Not Present (Default is 0)
— CHOICE Mode	FDD
— Measurement quantity	CPICH RSCP
— Intra-frequency measurement for RACH reporting	Not Present
— Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
— Reporting quantities for detected cells	Not present

<ul style="list-style-type: none"> - Measurement Reporting Mode - Measurement Report Transfer Mode - Periodical Reporting / Event Trigger Reporting Mode - CHOICE report criteria - Amount of reporting - Reporting interval Inter-frequency measurement system information Inter-RAT measurement system information Traffic volume measurement system information 	<p>Acknowledged mode RLC Periodical reporting</p> <p>Periodic reporting criteria Infinity 64 seconds</p> <p>Not present Not Present Not Present</p>
--	--

MEASUREMENT REPORT (Step 6 and 6a)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	"Checked to see if set to within an acceptable range"
- Pathloss	Check to see if this IE is present
Measured Results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Remove all intra-frequency cells
- Intra-frequency cell info list	2 new intra-frequency cells
- CHOICE intra-frequency cell removal	3
- New intra-frequency cells	0 dB
- Intra-frequency cell id	0256 chips
- Cell info	TRUE
- Cell individual offset	FDD
- Reference time difference to cell	Set to same code as used for cell 3
- Read SFN Indicator	Not Present
- CHOICE mode	FALSE
- Primary CPICH Info	FALSE
- Primary Scrambling Code	4
- Primary CPICH TX power	0 dB
- TX Diversity Indicator	Not Present
Intra-frequency cell id	Not Present
Cell info	TRUE
Cell individual offset	FDD
Reference time difference to cell	Set to same code as used for cell 4
Read SFN Indicator	Not Present
CHOICE mode	FALSE
Primary CPICH Info	FALSE
Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	FDD
- CHOICE Mode	CPICH RSCP
- Measurement quantity	FALSE
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	FALSE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	TRUE
- Reporting quantities for monitored set cells	TRUE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not Present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	1e
- Intra-frequency event identity	Not present
- Triggering condition 1	Monitored set cells
- Triggering condition 2	Not Present
- Reporting range	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1 dB
- Threshold used frequency	-70 dBm
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present

<ul style="list-style-type: none"> - Time to trigger - Amount of reporting - Reporting interval - Reporting cell status - CHOICE reported cell 	0 ms Infinity Not Present Not Present Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
<ul style="list-style-type: none"> - Maximum number of reported cells DPCH compressed mode status info	3 Not Present

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	(for cell 1)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 3)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if this IE is set to "1e"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "FDD"
- Primary CPICH info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3

MEASUREMENT CONTROL (Step 10a)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	1 new intra-frequency cells
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present 0
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- CHOICE report criteria	Not Present

MEASUREMENT REPORT (Step 10b)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	(for cell 1)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 2)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 3)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if this IE is set to "1e"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "FDD"
- Primary CPICH info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 12)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove all intra-frequency cells
- New intra-frequency cells	2 new intra-frequency cells
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	256 0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency cell id	
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not Present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1a
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	15 8dB
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present

- Time to trigger	5000 msec
- Amount of reporting	Infinity
- Reporting interval	64 -16 s
- Reporting cell status	Not Present
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 14)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	
- CHOICE event result	
- Intra-frequency event identity	Check to see if this IE is set to "1a"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "FDD"
- Primary CPICH info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2

8.4.1.1.5 Test Requirement

After step 5 the UE shall start to transmit 2 MEASUREMENT REPORT messages at 64 seconds interval. The measurement quantity "CPICH RSCP" of cell 2 shall be reported in these messages.

After step 7 the UE shall not transmit any MEASUREMENT REPORT messages within 64 seconds after SS has transmitted the MEASUREMENT CONTROL message in step 7.

After step 9 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, to report that the CPICH RSCP value for cell 3 has risen above the threshold stated in the MEASUREMENT CONTROL message transmitted by the SS in step 7. This MEASUREMENT REPORT message shall also contain IE "Event results", indicating the triggering of event '1e' by cell 3. It shall also contain the measured CPICH RSCP value and cell synchronisation information for cell 3, and the measured CPICH Ec/No and RSCP values for cell 1.

After step 10a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report that the CPICH RSCP value for cell 2 has risen above the threshold stated in the MEASUREMENT CONTROL message transmitted by the SS in step 10a. The MEASUREMENT REPORT message shall contain the measured CPICH RSCP value and cell synchronisation information for cell 2 and cell 3, as well as the measured CPICH Ec/No and RSCP for cell 1. The IE "Event results" in this message shall indicate that cell 2 has triggered the event.

After step 13, the UE shall transmit a MEASUREMENT REPORT message containing IE "Event results", indicating the triggering of event '1a' by cell 2. The MEASUREMENT REPORT message shall not contain any measured results.

<End of Modification>

<Start of Modification>

8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

Upon transition from idle mode to CELL_FACH state, the UE shall:

- 1> begin or continue monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11).

In CELL_FACH state, the UE shall:

- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;
- 1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":
 - 2> resume the measurement reporting.
- 1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:
 - 2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);
 - 2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):
 - 3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

Reference

3GPP TS 25.331, clause 8.4.1.9.1, 8.4.1.7.1, 8.4.2.2.

8.4.1.3.3 Test Purpose

1. To confirm that the UE begins or continues to monitor cells listed in IE "intra-frequency cell info list" of System Information Block type 11 or 12 messages after it has entered CELL_FACH state from idle mode.
2. To confirm that the UE applies the reporting criteria stated in "intra-frequency measurement reporting criteria" IE in System Information Block Type 11 or 12 in a subsequent transition to CELL_DCH state.
3. To confirm that the UE reports measured results on RACH messages, if it receives IE "Intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" from System Information Block Type 11 or 12 upon a transition from idle mode to CELL_FACH state.

8.4.1.3.4 Method of test

Initial Condition

System Simulator: 2 cells. Cell 1 and cell 2 are active.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.3-1 illustrates the downlink power to be applied for the 2 cells in this test case.

Table 8.4.1.3-1

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel Number		Ch. 1	Ch. 1
CPICH Ec	dBm/ 3.84 MHz	-60	-70 67

The UE is initially in idle mode and camps on cell 1. The System Information Block type 11 are modified compared to the default settings ~~to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the IE "intra-frequency cell info list". The key measurement parameters are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP", reporting mode = "event reporting".~~ In the System Information Block type 11 messages, reporting of CPICH RSCP is also required for intra-frequency reporting when transmitting RACH messages on cell 1.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. SS starts timer T305 and waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measured value of cell 1's CPICH RSCP in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH, without changing the physical channel resources.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates dedicated physical channels to the UE. The UE shall transit to CELL_DCH state and then send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcast on System Information Block type 11 messages when the UE was still in idle mode. The IE "Measured results" in the MEASUREMENT REPORT messages shall contain measured values of cell 2's CPICH RSCP.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 1, System Information Block type 11	The UE is in idle mode and camps onto cell 1. System Information Block type 1 and 11 to be transmitted are different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5			Void	
6				SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are detected. SS waits for 5 minutes (for the expiry of T305 timer).
7		→	CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the measured CPICH RSCP for cell 1.
8		←	CELL UPDATE CONFIRM	SS does not change the physical channel configurations.

9	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns dedicated physical resources.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
11	→	MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH RSCP value periodically at 16 seconds interval. The measurement identity shall match the one that is broadcast for use in CELL_DCH in SIB11 in step 1.

Specific Message Content

System Information Block type 1 (Step 1)

[Use the same System Information Block Type 1 message as found in clause 6.1.0b of TS 34.108, with the following exceptions:](#)

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

System Information Block type 11 (Step 1)

[Use the same System Information Block Type 11 message as found in clause 6.1.0b of TS 34.108, with the following exceptions:](#)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
— Use of HCS	Not used
— Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- Qoffset1 _{s,n}	Not Present (Default is 0 dB)
- Qoffset2 _{s,n}	Not Present
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
— Intra-frequency Measurement quantity	
— Filter Coefficient	Not Present
— CHOICE Mode	FDD
— Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	FDD
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE TRUE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE

<ul style="list-style-type: none"> - CHOICE mode - CPICH Ec/No reporting indicator - CPICH RSCP reporting indicator - Pathloss reporting indicator Reporting quantities for detected set cells - Measurement Reporting Mode - Measurement Reporting Transfer Mode - Periodic Reporting/Event Trigger Reporting Mode - CHOICE report criteria - Parameters required for each event - Intra-frequency event identity - Triggering condition 1 - Triggering condition 2 - Reporting Range Constant - Cells forbidden to affect reporting range - W - Hysteresis - Threshold used frequency - Reporting deactivation threshold - Replacement activation threshold - Time to trigger - Amount of reporting - Reporting interval - Reporting Cell Status - CHOICE reported cell - Maximum number of reported cells Inter frequency measurement system information Traffic volume measurement system information 	<ul style="list-style-type: none"> FDD FALSE TRUE FALSE Not present Acknowledged mode RLC Event trigger Intra-frequency measurement reporting criteria 1a Not Present Monitored set cells 15-14 dB Not Present 0.0 1.0 dB Not Present 0 Not Present 60 ms Infinity 16 seconds Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 Not Present Not Present
--	--

CELL UPDATE (Step 7)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI value assigned in the execution of procedure P6.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if set to 'Periodical cell update'
Failure cause	Check to see if this IE is absent
Measured results on RACH	
- Measurement result for current cell	
- CHOICE measurement quantity	Check to see if set to 'CPICH RSCP'
- CPICH RSCP	Checked to see if set to within an acceptable range.
- Measurement results for monitored cells	Checked to see if this IE is absent.

PHYSICAL CHANNEL RECONFIGURATION (Step 9)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT (Step 11)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and if the reported cell synchronisation information is correct
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	Check to see if it's the same code for cell 1
- Primary Scrambling Code	Check to see if this IE is absent
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if set to "1a"
- Cell measurement event results	
- CHOICE Mode	Check to see if set to "FDD"
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the scrambling code of cell 2

8.4.1.3.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.

After step 6 the UE shall initiate cell update procedure by transmitting CELL UPDATE message on CCCH. In this message, IE "cell update cause" shall be set to "periodic cell update". It shall include IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 10 the UE shall transmit MEASUREMENT REPORT messages at 16 seconds interval. In these messages, cell 2's CPICH RSCP value shall be reported in IE "Measured results". The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in System Information Block type 11 messages transmitted in step 1. The MEASUREMENT REPORT messages shall also contain IE "Event results", indicating that intra-frequency event "1a" has triggered in the UE.

<End of Modification>

3GPP TSG-T1 Meeting #18
 San Antonio, USA, 10th-14th Feb 2003

T1-030073

3GPP TSG-T1/SIG Meeting #27
 San Antonio, USA, 10th - 14th, February 2003

T1S030032

CR-Form-v7
<h2 style="margin: 0;">CHANGE REQUEST</h2>
⌘ 34.123-1 CR 421 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 Corrections to Package 2 RRC test cases		
Source:	⌘ Panasonic		
Work item code:	⌘ TEI Date: ⌘ 21/01/03		
Category:	⌘ F Release: ⌘ R99Rel-5 Use <u>one</u> of the following categories: <table style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 50%; vertical-align: top;"> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) </td> <td style="width: 50%; vertical-align: top;"> Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table> Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change: ⌘	<ol style="list-style-type: none"> 1. In order to avoid the duplication of CPICH code(sf256,0) and DPCH(sfXXX,0) in cell 2 in ACTIVE SET UPDATE message, it is proposed to change the secondary scrambling code of cell 2 from "Not present" to other values. 2. The value in table 8.4.1.14 do not provide sufficient power level separation to ensure that measurement events are properly triggered taking into consideration the tolerance of the SS and the measurement accuracy of the UE. 3. Currently in step 12, UE is expected to sent the same message as in step 8. This test procedure may allow bad UE (those that fail to capture both MEASUREMENT CONTROL messages in step 9 and 11) to pass the test. 4. It is not necessary to provide the cell info of the serving cell in the MEASUREMENT CONTROL message. 5. Cell timing of each active cell should be different. 6. In practice, the network usually ask the UE to report the cell synchronisation information of monitored set cells. 7. In order to avoid the duplication of CPICH code(sf256,0) and DPCH(sfXXX,0) in cell 2 in ACTIVE SET UPDATE message, it is proposed to change the secondary scrambling code of cell 2 from "Not present" to other values. 8. Editorial mistakes.
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Summary of change: ⌘

1. In ACTIVE SET UPDATE messages of clause 8.4.1.14, it is revised so that secondary scrambling code of cell 2 is set to '1'.
2. Table 8.4.1.14 is revised and additional column 'T2' is added into the table. Step 5a has been added to ensure that UE triggers MEASUREMENT REPORT in step 6. In step 8a, it is revised so that the SS set its power transmission according to column 'T2'. In step 9a, it is revised so that the SS set its power transmission according to column 'T1'. The reporting range in step 7, 7b and 9 has been revised to 12dB.
3. MEASUREMENT CONTROL message in step 11 has been revised to request UE to report the CPICH RSCP value of the active set cells, hence making the MEASUREMENT REPORT message in step 12 different from the one in step 8. MEASUREMENT REPORT message is revised to include the CPICH RSCP value of the active set cells.
4. The serving cell info has been removed from all the MEASUREMENT CONTROL messages in clause 8.4.1.14.
5. The reference time differences of cell 2 and 3 are set to 'Not present' in the MEASUREMENT CONTROL message in step 1.
6. In MEASUREMENT CONTROL message in step 1, the cell synchronisation information reporting indicator for monitored set cells is set to 'TRUE'. Cell synchronisation information of cell 2 and 3 are reported in the MEASUREMENT REPORT message in step 2. Cell synchronisation information of cell 3 are reported in the MEASUREMENT REPORT message in step 6.
7. ~~In ACTIVE SET UPDATE message in step 3, it is revised so that secondary scrambling code of cell 2 is set to '1'. In ACTIVE SET UPDATE message in step 6a, it is revised so that secondary scrambling code of cell 3 is set to '2'.~~
8. Reporting range in step 1 of the expected sequence has been revised from 12 to 13dB. This has been a editorial mistake.
9. The cell individual offsets of cell 2 and 3 in MEASUREMENT CONTROL message are set to 'Not present' because the absence of thisIE is equivalent to 0dB (the current value set in the test case).
10. Cell 3 instead of cell 2 should be reported in step 6 and 8.
11. Cell 2 instead of cell 3 should be included in the ACTIVE SET UPDATE message found in step 3 of clause 8.4.1.14. This message should also include the calculated DPCH frame offset value of cell 2. The spreading factor of the radio link to be set up in cell 2 should refer to clause 6.10.2.4 in TS 34.108.
12. The ACTIVE SET UPDATE message found in step 6a should include the calculated DPCH frame offset value of cell 3. The spreading factor of the radio link to be set up in cell 3 should refer to clause 6.10.2.4 in TS 34.108.
- 13.

Consequences if not approved: ⌘

⌘ These affected test cases could fail good UE.

Clauses affected: ⌘

⌘ 8.4.1.14

Other specs Affected:

	Y	N	
⌘		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ☞ Affects R'99, Rel-4 and Rel-5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modification>

8.4.1.14 Measurement Control and Report: Cell forbidden to affect reporting range

8.4.1.14.1 Definition

8.4.1.14.2 Conformance requirement

The reporting range affects the reporting events 1A and 1B. The reporting range is defined as a function of all the Primary CPICHs in the active set. If the parameter W is set to 0, the reporting range is defined relative to the best Primary CPICH. However, there could be cases where it is good to forbid a specific Primary CPICH to affect the reporting range. This mechanism could be effective if the operator knows by experience that the quality of a Primary CPICH is very unstable in a specific area and therefore should not affect the reporting of the other Primary CPICHs.

The UE shall ignore that a Primary CPICH is forbidden to affect the reporting range if all of the following conditions are fulfilled:

- the Primary CPICH is included in active set; and
- all cells in active set are defined as Primary CPICHs forbidden to affect the reporting range.

Reference

3GPP TS 25.331 clause 14.1.2.1, 14.1.2.2, clause 14.1.5.4

8.4.1.14.3 Test Purpose

1. To confirm that the UE reports the triggering of event 1A to the SS, if a primary CPICH currently measured by the UE enters the reporting range.
2. To confirm that the UE reports the triggering of event 1B to the SS, if a primary CPICH currently measured by the UE leaves the reporting range.
3. To confirm that the UE use the forbidden cell indicated in the MEASUREMENT CONTROL message to affect the reporting range.
4. To confirm that the UE ignores that a primary CPICH is forbidden to affect the reporting range when (a) the primary CPICH concerned is included in active set and (b) all cells in the active set are defined as primary CPICHs forbidden to affect the reporting range.

8.4.1.14.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.14-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.14-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch.1		
CPICH Ec	dBm/3.84 MHz	-55	-55 50	-55	-64 62	-64 62	-64	-73 76	-64 68	-64

The UE is initially in CELL_DCH state of cell 1.

SS sends a MEASUREMENT CONTROL message with cell 1, cell 2 and cell 3 listed in IE "intra-frequency cell info list". In this message the IE "CHOICE reporting criteria" is set to "intra-frequency measurement report criteria", with the IE "intra-frequency event identity" set to "1A". The IE "reporting range" is set to 13 dB in the MEASUREMENT CONTROL message. The UE shall send a MEASUREMENT REPORT on the uplink DCCH, which contains the IE "Event results" to report that intra-frequency event 1A is triggered by cell 2.

SS executes the active set update procedure, requesting that cell 2 be added to the active set. The UE shall respond with ACTIVE SET UPDATE COMPLETE message on the uplink DCCH and then include cell 2 into its current active set. SS sends a MEASUREMENT CONTROL message to command that cell 1 in the active set is forbidden to affect the reporting range for event 1A. [SS reconfigures the downlink transmission power settings according to values in column "T1" in table 8.4.1.14-1.](#) The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1A. In this message, the IE "Events results" shall indicate that intra-frequency event 1A is triggered by cell 3. SS executes the active set update procedure, requesting that cell 3 be added to the active set. The UE shall respond with ACTIVE SET UPDATE COMPLETE message on the uplink DCCH and then include cell 3 into its current active set. SS sends a MEASUREMENT CONTROL message to command that cell 1 in the active set is forbidden to affect the reporting range for event 1B. The IE "reporting range" is set to ~~13~~ 12 dB in the MEASUREMENT CONTROL message. SS checks that no measurement report is sent by the UE. SS sends a MEASUREMENT CONTROL message to command that cell 1 in the active set to be removed from the "forbidden to affect the reporting range for event 1B" cell list. The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1B. In this message, the IE "Events results" shall indicate that intra-frequency event 1B is triggered by cell 3. SS reconfigures the downlink transmission power settings according to values in column "~~T2~~" in table 8.4.1.14-1. SS sends a MEASUREMENT CONTROL message to command that cell 1 in the active set is forbidden to affect the reporting range for event 1B. The IE "reporting range" is set to ~~13~~ 12 dB in the MEASUREMENT CONTROL message. SS reconfigures the downlink transmission power settings according to values in column "~~T0T1~~" in table 8.4.1.14-1. SS checks that no measurement report is sent by the UE. SS sends a MEASUREMENT CONTROL message to command that all cells in the active set are forbidden to update the reporting range for event 1B. The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1B. In these messages, the IE "Events results" shall indicate that intra-frequency event 1B is triggered by cell 3.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	UE is initially in CELL_DCH state in cell 1. Cell 1, cell 2 and cell 3 are listed in IE "Intra-frequency cell info list". The IE "CHOICE reporting criteria" is set to "Intra-frequency measurement reporting criteria" and IE "Intra-frequency event identity" is set to "1A" and "1B", with IE "reporting range" set to 42 13 dB for both events.
2		→	MEASUREMENT REPORT	Measurement made on cell 2 shall trigger event 1A
3		←	ACTIVE SET UPDATE	SS requests UE to add cell 2 into active set.
4		→	ACTIVE SET UPDATE COMPLETE	
5		←	MEASUREMENT CONTROL	SS request UE to monitor cell 3 for event '1A'. SS set cell 1 to be forbidden to affect reporting range.
5a				SS configures the downlink power according to column 'T1' of table 8.4.1.14-1.
6		→	MEASUREMENT REPORT	Measurement made on cell 3 shall trigger event 1A
6a		←	ACTIVE SET UPDATE	SS requests UE to add cell 3 into active set.
6b		→	ACTIVE SET UPDATE COMPLETE	
7		←	MEASUREMENT CONTROL	SS set cell 1 to be forbidden to affect reporting range for event '1B'.
7a			Void	SS checks that no measurement report is sent by the UE.
7b		←	MEASUREMENT CONTROL	Cell 1 shall not be forbidden to affect event '1B'.
8		→	MEASUREMENT REPORT	Measurement made on cell 3 shall trigger event 1B.
8a				SS configures the downlink power according to column ' T1 T2' of table 8.4.1.14-1.
9		←	MEASUREMENT CONTROL	SS set cell 1 to be forbidden to affect reporting range for event '1B'.
9a				SS configures the downlink power according to column 'T 1 0' of table 8.4.1.14-1.
10		→	Void	SS checks that no measurement report is sent by the UE.
11		←	MEASUREMENT CONTROL	SS request UE to monitor cell 3 for event '1B'. SS forbids all cells in active list to affect the reporting range. The SS requests UE to report the CPICH RSCP value of the active set cells.
12		→	MEASUREMENT REPORT	Same as step 8.

Specific Message Contents

MEASUREMENT CONTROL (Step 1)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency
- New intra-frequency info list	
- Intra-frequency cell id	4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	2
- Cell info	Not present
- Cell individual offset	Absence of this IE is equivalent to default value 0dB dB
- Reference time difference to cell	Not Present 0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	3
- Cell info	Not present
- Cell individual offset	Absence of this IE is equivalent to default value 0dB dB
- Reference time difference to cell	Not Present 0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell for measurement	
- Intra-frequency cell id	1, 2 and 3
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present

<ul style="list-style-type: none"> - Measurement validity - CHOICE report criteria - Parameters required for each events - Intra-frequency event identity - Triggering conditions 1 - Triggering conditions 2 - Reporting range - Cells forbidden to affect reporting range - W - Hysteresis - Threshold used frequency - Reporting deactivation threshold - Replacement activation threshold - Time to trigger - Amount of reporting - Reporting interval - Reporting cell status - CHOICE reported cells - Maximum number of reported cells <p>DPCH compressed mode status info</p>	<p>Not present</p> <p>Intra-frequency measurement reporting criteria</p> <p>1a</p> <p>Not Present</p> <p>monitored set cells</p> <p>13.0 dB</p> <p>Not Present</p> <p>0</p> <p>0 dB</p> <p>Not Present</p> <p>3</p> <p>Not Present</p> <p>0 msec</p> <p>Infinity</p> <p>4000</p> <p>Report cells within monitored set on used frequency</p> <p>3</p> <p>Not Present</p>
--	---

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2

ACTIVE SET UPDATE (Step 3)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Annex A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 32
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information chips
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" 542
- Spreading factor	
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	Not Present

ACTIVE SET UPDATE COMPLETE (Step 4 and 6b)

Information Element	Value/remark
RRC transaction identifier	Check to see if it is set to 0

MEASUREMENT CONTROL (Step 5)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Not Present
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	1a
- Intra-frequency event identity	Not Present
- Triggering conditions 1	monitored set cells
- Triggering conditions 2	13.0 dB
- Reporting range	FDD
- Cells forbidden to affect reporting range	Set to the same code as in cell 1
- CHOICE Mode	0
- Primary CPICH info	0 dB
- Primary scrambling code	Not Present
- W	3
- Hysteresis	Not Present
- Threshold used frequency	0 msec
- Reporting deactivation threshold	Infinity
- Replacement activation threshold	4000
- Time to trigger	Report cells within monitored set on used frequency
- Amount of reporting	3
- Reporting interval	Not Present
- Reporting cell status	Not Present
- CHOICE reported cells	Not Present
- Maximum number of reported cells	Not Present
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	Check to see if set to "Intra-frequency measured results list"
- CHOICE measurement	Check to see if it is absent
- Intra-frequency measurement results	Checked that this IE is present and includes IE COUNT-C-SFN frame difference Check to see if this IE is absent
- Cell measured results	Check to see if it's the same code for cell 23
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is present
- Primary CPICH Info	Check to see if this IE is absent
- Primary Scrambling Code	Check to see if this IE is present
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	Check to see if set to 'FDD'
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	Check to see if set to the same code for cell 3
- Primary Scrambling Code	Check to see if set to the same code for cell 3

ACTIVE SET UPDATE (Step 6a)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Annex A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 3
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information ⁰ chips
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present ²
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" ⁵⁴²
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	Not Present

MEASUREMENT CONTROL (Step 7 and 9)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Not Present
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	1b
- Intra-frequency event identity	Active set cells
- Triggering conditions 1	Not Present
- Triggering conditions 2	13.0 12.0 dB
- Reporting range	FDD
- Cells forbidden to affect reporting range	Set to the same code as in cell 1
- CHOICE Mode	0
- Primary CPICH info	0 dB
- Primary scrambling code	Not Present
- W	3
- Hysteresis	Not Present
- Threshold used frequency	0 msec
- Reporting deactivation threshold	Infinity
- Replacement activation threshold	4000
- Time to trigger	Report cells within monitored set on used frequency
- Amount of reporting	3
- Reporting interval	Not Present
- Reporting cell status	0 msec
- CHOICE reported cells	Infinity
- Maximum number of reported cells	4000
DPCH compressed mode status info	Report cells within monitored set on used frequency
	3
	Not Present

MEASUREMENT CONTROL (Step 7b)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Not Present
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	1b
- Intra-frequency event identity	Active set cells
- Triggering conditions 1	Not Present
- Triggering conditions 2	12.0 dB
- Reporting range	Not Present
- Cells forbidden to affect reporting range	0
- W	0 dB
- Hysteresis	Not Present
- Threshold used frequency	3
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	0 msec
- Time to trigger	Infinity
- Amount of reporting	4000
- Reporting interval	
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 8 ~~and 12~~)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	Not Present
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1b'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 23

MEASUREMENT CONTROL (Step 11)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in Annex A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	Not present
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1b
- Triggering conditions 1	Monitored set cells
- Triggering conditions 2	Not Present
- Reporting range	13.0 dB
- Cells forbidden to affect reporting range	
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 1
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 2
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 3
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	0 msec
- Amount of reporting	1
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC transaction identifier</u>	<u>Check to see if set to 1</u>
<u>Measurement identity</u>	<u>Check to see if set to 1</u>
<u>Measured Results</u>	
- <u>CHOICE measurement</u>	<u>Check to see if set to "Intra-frequency measured results list"</u>
- <u>Intra-frequency measurement results</u>	
- <u>Cell measured results</u>	
- <u>Cell Identity</u>	<u>Check to see if it is absent</u>
- <u>Cell synchronisation information</u>	<u>Check to see if it is absent</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Check to see if it's the same code for cell 1</u>
- <u>CPICH Ec/No</u>	<u>Check to see if this IE is absent</u>
- <u>CPICH RSCP</u>	<u>Check to see if this IE is present</u>
- <u>Pathloss</u>	<u>Check to see if this IE is absent</u>
- <u>Cell measured results</u>	
- <u>Cell Identity</u>	<u>Check to see if it is absent</u>
- <u>Cell synchronisation information</u>	<u>Check to see if it is absent</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Check to see if it's the same code for cell 2</u>
- <u>CPICH Ec/No</u>	<u>Check to see if this IE is absent</u>
- <u>CPICH RSCP</u>	<u>Check to see if this IE is present</u>
- <u>Pathloss</u>	<u>Check to see if this IE is absent</u>
- <u>Cell measured results</u>	
- <u>Cell Identity</u>	<u>Check to see if it is absent</u>
- <u>Cell synchronisation information</u>	<u>Check to see if it is absent</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Check to see if it's the same code for cell 3</u>
- <u>CPICH Ec/No</u>	<u>Check to see if this IE is absent</u>
- <u>CPICH RSCP</u>	<u>Check to see if this IE is present</u>
- <u>Pathloss</u>	<u>Check to see if this IE is absent</u>
<u>Measured Results on RACH</u>	<u>Check to see if this IE is absent</u>
<u>Additional Measured Results</u>	<u>Check to see if this IE is absent</u>
<u>Event Results</u>	<u>Check to see if set to 'Intra-frequency measurement event results'</u>
- <u>Intra-frequency event identity</u>	<u>Check to see if set to '1b'</u>
- <u>Cell measurement event results</u>	
- <u>CHOICE Mode</u>	<u>Check to see if set to 'FDD'</u>
- <u>Primary CPICH info</u>	
- <u>Primary Scrambling Code</u>	<u>Check to see if set to the same code for cell 3</u>

8.4.1.14.5 Test requirement

After step 1, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH. The message shall contain the IE "Event results" to report that cell 2 has triggered intra-frequency event 1A.

After step 3, the UE shall send a ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 5a, the UE shall transmit MEASUREMENT REPORT message on the uplink DCCH. The message shall contain IE "Event results" to report that cell 3 has triggered intra-frequency event 1A.

After step 6a, the UE shall send a ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 7b, the UE shall transmit MEASUREMENT REPORT message on the uplink DCCH. The message shall contain IE "Event results" to report that cell 3 has triggered intra-frequency event 1B.

After step 11, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH. The message shall contain IE "Event results" to report that cell 3 has triggered intra-frequency event 1B.

3GPP TSG-T1 Meeting #18
San Antonio, USA, 10th-14th Feb 2003

T1-030074

3GPP TSG-T1 SIG Meeting #27
San Antonio, USA, 10th – 14th February 2003

T1S030209

CR-Form-v7

CHANGE REQUEST

⌘ 34.123-1 CR 422 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR TS34.123-1: Update to test case 8.2.4.3 and 8.2.4.4 (Package 2) (revision of T1S030016)
Source:	⌘ Panasonic
Work item code:	⌘ TEI Date: ⌘ 11/2/2003
Category:	⌘ F Release: ⌘ Rel-5
Use <u>one</u> of the following categories:	
Use <u>one</u> of the following releases:	
F (correction)	2 (GSM Phase 2)
A (corresponds to a correction in an earlier release)	R96 (Release 1996)
B (addition of feature),	R97 (Release 1997)
C (functional modification of feature)	R98 (Release 1998)
D (editorial modification)	R99 (Release 1999)
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	
	Rel-4 (Release 4)
	Rel-5 (Release 5)
	Rel-6 (Release 6)

Reason for change:	⌘ Test case 8.2.4.3 and 8.2.4.4: Existing radio link modification such as code change, transport channel addition or deletion in the same cell with the same frequency commanded by TRANSPORT CHANNEL RECONFIGURATION message, is not considered as hard handover. According to clause 4.3.2.1 of TS25.214 the synchronisation procedure A is not applied to this reconfiguration. If synchronisation error occurs, this causes radio link failure instead of physical channel failure and cell update procedure is initiated in order to re-establish the radio link. Test case 8.2.4.4: In clause 8.2.4.4, IE "Downlink information common for all radio links" is missing in CELL UPDATE CONFIRM message in step 4. During T1/SIG #26 meeting, it was agreed that RF condition provided in the signalling conformance test cannot guarantee that UE reselect to the right cell when more than one cell is used in the test. It was suggested that re-run of such test case should be allowed if the UE failed the test due to a failure to reselect to the right cell.
Summary of change:	⌘ Test case 8.2.4.3 is modified. 1) Multi cell condition

To simulate physical channel failure, multi cell condition is prepared so that the existed radio link in cell 1 is replaced by a new radio link in cell 2 through a transport channel reconfiguration procedure.

2) Message content of TRANSPORT CHANNEL RECONFIGURATION Transport channel reconfiguration message is modified so as to restrict the transmission on UL DCH for SRB#2 in order to confirm whether the UE correctly revert to the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message without considering the restriction in TRANSPORT CHANNEL RECONFIGURATION message.

Test case 8.2.4.4 is modified.

1) Multi cell condition

To simulate physical channel failure, multi cell condition is prepared so that the existed radio link in cell 1 is replaced by a new radio link in cell 2 through a transport channel reconfiguration procedure.

2) IE "Downlink information common for all radio links" is added to the CELL UPDATE CONFIRM message in step 4 and the values shall be the same as the values in the RADIO BEARER SETUP message used in the initial condition.

3) A note has been added to cell reselection test cases to indicate that these test cases can be re-run if the UE failed due to failure to reselect to the right cell.

Revision of T1S030016 (highlighted in blue)

It is clarified in clause 8.2.4.3 that the TRANSPORT CHANNEL RECONFIGURATION message specifies a new configuration in cell 2.

Editorial corrections.

Consequences if not approved: ☹ The conformance requirement is not tested correctly.

Clauses affected: ☹ 8.2.4.3, 8.2.4.4

Other specs affected:	☹	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td>X</td><td></td></tr></table>	Y	N	X		Other core specifications	☹
	Y	N						
	X							
	<table border="1"><tr><td>X</td><td></td></tr></table>	X		Test specifications				
X								
	<table border="1"><tr><td>X</td><td></td></tr></table>	X		O&M Specifications				
X								

Other comments: ☹ Application of T1S020561 from Ericsson which was agreed in T1SIG#25.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of modified section>

8.2.4.3 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.4.3.1 Definition

8.2.4.3.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a TRANSPORT CHANNEL RECONFIGURATION message:

...

2> transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.4.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new configuration according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.3.4 Method of test

Initial Condition

System Simulator: +2 cells. – Cell 1 is active and cell 2 is inactive.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Either a streaming CS domain RAB (state 6-9) or an interactive/ background PS domain RAB (state 6-10) has been established.

Test Procedure

Table 8.2.4.3

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	OFF	-75
P-CCPCH RSCP (TDD)	dBm	-60	-60	OFF	-75

Table 8.2.4.3 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_DCH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. Then the SS configures its downlink transmission power settings according to column "T1" in table 8.2.4.3. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE to restrict transmission on the uplink DCH used by the signalling radio bearer RB2. – which includes new configuration parameters (rate change including change of spreading factor e.g. to change an interactive PS domain RAB from UL:64 DL:384 to UL:32 DL:64 or to change a streaming CS RAB from UL:14.4 DL:14.4 to UL:57.6 DL:57.6). The message specifies a new configuration in cell 2 but the SS does not configure the new physical channel in cell 2 specified in this message and keep its old configuration in cell 1. Therefore, the UE cannot synchronise with the SS on the new physical channel in cell 2 and shall revert to the old configuration in cell 1 after T312 expires. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2				The SS does not reconfigure the new configuration <u>in cell 2</u> .
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE reverts to the old configuration and transmits this message.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical Reporting
- Periodical Reporting / Event Trigger Reporting Mode	
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [91 TS 34.108 clause 9 Annex A](#), with the following exceptions:

Information Element	Value/remark
UL Transport channel information for all transport channels <ul style="list-style-type: none"> - TFC subset - Restricted TrCH information - Uplink transport channel type - Restricted UL TrCh identity - Allowed TFIs - Allowed TFI 	<p>Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"</p> <p>DCH 5 <UL DCH for SRB 2></p> <p>0</p>
Added or Reconfigured UL TrCH information	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
DL Transport channel information common for all transport channel	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
Added or Reconfigured DL TrCH information	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
-CHOICE channel requirement	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following
Uplink DPCH power control info	Not present
Downlink information common for all radio links	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following
Downlink DPCH info common for all RL	Not present
Downlink DPCH power control information	Not present
Downlink information for each radio link list	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following
<ul style="list-style-type: none"> - Downlink information for each radio links - CHOICE mode - Primary CPICH info - Primary CPICH scrambling code 	FDD Ref. to the Default setting for cell 2 in TS34.108 clause 6.1 (FDD)
Downlink DPCH info for each RL	Set to the value used when establishing this radio link
DPCH frame offset	Set to the value used when establishing this radio link
DL channelisation code	Set to the value used when establishing this radio link
Scrambling code change	Not Present

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in [91 TS 34.108 clause 9 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.4.3.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall revert to the old configuration [in cell 1](#) and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, and it shall set the value "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

<End of modified section>

<Start of modified section>

8.2.4.4 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and cell reselection)

8.2.4.4.1 Definition

8.2.4.4.2 Conformance requirement

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
- ...
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

The UE shall:

- 1> in case of reception of a TRANSPORT CHANNEL RECONFIGURATION message:

...

2> transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

8.2.4.4.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message after it completes a cell update procedure when the UE cannot synchronise with the SS on the new channel before T312 expires and fails to revert to the old configuration.

8.2.4.4.4 Method of test

Initial Condition

System Simulator: [+2 cells](#). – [Cell 1 is active and cell 2 is inactive](#).

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.4.4

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	OFF	-75
P-CCPCH RSCP (TDD)	dBm	-60	-60	OFF	-75

[Table 8.2.4.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.](#)

The UE is in CELL_DCH state [in cell 1](#). Then the SS configures its downlink transmission power settings according to [columns "T1" in table 8.2.4.4](#). The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE. The message specifies a new configuration [in cell 2](#) but the SS does not reconfigure the new channel [in cell 2](#) specified in this message and release the old configuration [in cell 1](#). The UE cannot synchronise with SS before T312 expires and shall attempt to revert to the old configuration [in cell 1](#). The UE cannot revert to the old configuration and then transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure" [in cell 1](#). The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

[Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.](#)

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2				The SS does not reconfigure L1 in accordance with TRANSPORT CHANNEL RECONFIGURATION message and release the old configuration.
3		→	CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
5				The SS changes physical channel configuration according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[91 TS 34.108 clause 9 Annex A\]](#), with the following exception.

Information Element	Value/remark
Uplink DPCH info ----- Scrambling code number Downlink information common for all radio links ----- Downlink DPCH info common for all RL ----- Timing Indicator Downlink information for each radio link list - Downlink information for each radio links - CHOICE mode - Primary CPICH info - Primary CPICH scrambling code	Different value from previous value Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" Maintain Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following FDD Ref. to the Default setting for cell 2 in TS34.108 clause 6.1 (FDD)

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [\[91 TS 34.108 clause 9 Annex A\]](#) with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0000 0001' "radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UplinkDPCH Info	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information common for all radio links	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links list	Same as RADIO BEARER SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_DCH
Uplink DPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information common for all radio links	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links list	Same as RADIO BEARER SETUP message used to move to initial condition

TRANSPORT CHANNEL RECONGURATION FAILURE (Step 7)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in [\[9\] TS 34.108 clause 9 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.4.4.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "radio link failure" [in cell 1](#).

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

<End of modified section>

3GPP TSG-T1 Meeting #18
 San Antonio, USA, 10th-14th Feb 2003

T1-030075

3GPP TSG-T1/SIG Meeting #27
 San Antonio, USA, 10th - 14th, February 2003

T1S030214

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 423 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1: Corrections to Early UE Specific Information in RRC Connection Request (Package 1) (Revision to T1S030042)		
Source:	⌘ Panasonic, Orange		
Work item code:	⌘ TEI Date: ⌘ 11/2/03		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change: ⌘	It was agreed in RAN#18 meeting that new IE "UE Specific Behaviour Information 1 idle" is added in RRC CONNECTION REQUEST message to identify and handle faulty UE implementations.
Summary of change: ⌘	<p>New IE "UE Specific Behaviour Information 1 idle" is added in RRC CONNECTION REQUEST message and in the current protocol version, the UE does not include this IE to in the uplink RRC message. This change is from CR1758r2 (RP-020726).</p> <p>(Note) When problem is identified and TS25.331 is modify so that IEs "UE Specific Behaviour Information idle" is included in RRC CONNECTION REQUEST message, it should be tested that UE sends IEs "UE Specific Behaviour Information idle" which has a certain 4bit data according to its faulty implementations.</p> <p>In the revision of T1S030042, comments (highlighted in blue) in the expected sequence and test requirement are revised to clearly indicated that the new IE is checked as not present in the messages only if the specific extension bit is present.</p> <p>In the revision of T1S030204T1S030172, comments added in T1S030172 has been removed as it is too detailed. Corrections in clause 8.1.2.7 has been removed so that only one test case is used to test the UE behaviour regarding this IE.</p>

In the revision of T1S030201, new test purpose has been revised so as to confirm that the UE does not send IE "UE Specific Behaviour Information 1 idle" in the RRC CONNECTION REQUEST message. Editorial corrections in message content.

Consequences if not approved: ⌘ Identification of faulty UE implementations isn't tested.

Clauses affected: ⌘ 8.1.2.1, ~~8.1.2.7~~

Other specs Affected:	⌘	Y	N	Other core specifications	⌘	
			X			Test specifications
			X			O&M Specifications

Other comments: ⌘ Affects R'99 and Rel-4 and Rel-5 UEs.

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.1.2 RRC Connection Establishment****8.1.2.1 RRC Connection Establishment in CELL_DCH state: Success****8.1.2.1.1 Definition****8.1.2.1.2 Conformance requirement**

The UE shall initiate the procedure when upper layers in the UE requests the establishment of a signalling connection and the UE is in idle mode (no RRC connection exists).

Upon initiation of the procedure, the UE shall:

...

- 1> set the contents of the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.3;
- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;
- 1> submit the RRC CONNECTION REQUEST message for transmission on the uplink CCCH;
- 1> set counter V300 to 1; and
- 1> start timer T300 when the MAC layer indicates success or failure to transmit the message;
- 1> select a Secondary CCPCH according to TS 25.304;
- 1> start receiving all FACH transport channels mapped on the selected Secondary CCPCH.

The UE shall, in the transmitted RRC CONNECTION REQUEST message:

- 1> set the IE "Establishment cause" to the value of the variable ESTABLISHMENT_CAUSE;
- 1> set the IE "Initial UE identity" to the value of the variable INITIAL_UE_IDENTITY;

...

[The UE shall not include the IE "UE Specific Behaviour Information 1 idle" in the transmitting RRC CONNECTION REQUEST message.](#)

The UE shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION SETUP message with the value of the variable INITIAL_UE_IDENTITY.

If the values are different, the UE shall:

- 1> ignore the rest of the message.

If the values are identical, the UE shall:

- 1> stop timer T300, and act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:

- 2> if the UE will be in the CELL_FACH state at the conclusion of this procedure:

...

- 1> if the UE will be in the CELL_DCH state at the conclusion of this procedure:

- 2> perform the physical layer synchronization procedure A as specified in TS 25.214;

- 1> enter UTRA RRC connected mode, in a state according to TS 25.331 subclause 8.6.3.3;
- 1> submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per TS 25.331 subclause 8.6.3.3, with the contents set as specified below:
 - 2> set the IE "RRC transaction identifier" to:
 - 3> the value of "RRC transaction identifier" in the entry for the RRC CONNECTION SETUP message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry.
 - ...
 - 2> retrieve its UTRA UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then
 - 2> include this in IE "UE radio access capability" and IE "UE radio access capability extension", provided this IE is included in variable UE_CAPABILITY_REQUESTED;
 - 2> retrieve its inter-RAT-specific UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then
 - 2> include this in IE "UE system specific capability".

When the RRC CONNECTION SETUP COMPLETE message has been submitted to lower layers for transmission the UE shall:

- 1> consider the procedure to be successful;

And the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.1.3 Test purpose

1. To confirm that the UE leaves the Idle Mode and correctly establishes signalling radio bearers on the DCCH.
2. ~~2-~~ To confirm that the UE indicates the requested UE radio access capabilities and UE system specific capabilities (may be used by UTRAN e.g. to configure inter RAT- measurements).
3. To confirm that the UE informs UTRAN if it has faulty implementations or not does not include the IE "UE Specific Behaviour Information 1 idle" in the RRC CONNECTION REQUEST message.

8.1.2.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by attempting to make an outgoing call. After SS receives this message, it assigns the necessary radio resources and U-RNTI to be used by the UE. SS then transmits an RRC CONNECTION SETUP message containing an IE "Initial UE Identity" that does not match the IE "Initial UE Identity" in the most recent RRC CONNECTION REQUEST message sent by the UE. UE receives the RRC CONNECTION SETUP message before timer T300 expires but discards it due to a IE "Initial UE Identity" mismatch. UE shall wait for timer T300 to time out before re-transmitting a RRC CONNECTION REQUEST message to the SS. SS again assigns the necessary radio resources and U-RNTI. SS then transmits a RRC

CONNECTION SETUP message containing an IE "Initial UE Identity" that matches the IE "Initial UE Identity" in the most recent RRC CONNECTION REQUEST sent by the UE. SS then waits for the UE to transmit an RRC CONNECTION SETUP COMPLETE message on the DCCH. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	By outgoing call operation. See specific message contents.
2		←	RRC CONNECTION SETUP	This message is not addressed to the UE. See specific message contents.
3		→	RRC CONNECTION REQUEST	UE shall re-transmit the request message again after a time out of T300 from step 1.
3a				SS checks IE "UE Specific Behaviour Information 1 idle" is not included in received RRC CONNECTION REQUEST message.
4		←	RRC CONNECTION SETUP	See specific message contents.
5				The UE configures the layer 2 and layer 1.
6		→	RRC CONNECTION SETUP COMPLETE	See specific message contents.
7		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 11 (FDD)

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE <i>mode</i>	
- FDD	
- Reporting quantity	CPICH Ec/N0
- Maximum number of reported cells on RACH	current cell

System Information Block type 11 (TDD)

Use the default system information block with the same type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE <i>mode</i>	TDD
- Reporting quantity list	
- Reporting quantity	P-CCPCH RSCP
- Maximum number of reported cells on RACH	current cell

RRC CONNECTION REQUEST (Step 1) (FDD)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
UE Specific Behaviour Information 1 idle	Check it see if this IE is absent.
Measured results on RACH	Check to see if set in accordance with the IE "Intra-frequency reporting quantity for RACH Reporting" included in SYSTEM INFORMATION BLOCK Type 11
- Measurement result for current cell	
- CHOICE mode	
- FDD	
- CHOICE measurement quantity	
- CPICH Ec/N0	The actual reported value is not checked

RRC CONNECTION REQUEST (Step 1) (TDD)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Measured results on RACH	Check to see if set in accordance with the IE "Intra-frequency reporting quantity for RACH Reporting" included in SYSTEM INFORMATION BLOCK Type 11
- Measurement result for current cell	
- CHOICE mode	TDD
- CHOICE measurement quantity	
- P-CCPCH RSCP	The actual reported value is not checked

RRC CONNECTION SETUP (Step 2)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Initial UE Identity	Set to the same type as in the RRC CONNECTION REQUEST message but with a different value

RRC CONNECTION SETUP (Step 4)

Use the default message with the same message type and covering the scenario used in this test (Transition to CELL_DCH) specified in clause 9 of TS 34.108.

RRC CONNECTION SETUP COMPLETE (Step 6)

Use the default message with the same message type specified in clause 9 of TS 34.108 with the following exception.

Information Element	Value/remark
UE Radio Access Capability	Checked to see if compatible with the stated capability in PIXIT/PICS statements.
UE radio access capability extension	Checked to see if compatible with the stated capability in PIXIT/PICS statements.
UE system specific Capability	Checked to see if compatible with the stated capability in PIXIT/PICS statements.

8.1.2.1.5 Test requirement

After step 2 the UE shall re-transmit the RRC CONNECTION REQUEST message again in order to continue the RRC connection establishment procedure.

After step 3 the SS shall check IE “UE Specific Behaviour Information 1 idle” isn’t included in received RRC CONNECTION REQUEST message.

After step 6 the UE shall establish an RRC connection and continue the procedure of the outgoing call on the DCCH.

<End of Modifications>

3GPP TSG- T1 Meeting #18
 San Antonio, US, 10th – 14th February 2003

Tdoc # T1-030076

3GPP TSG- T1 SIG Meeting #26
 San Antonio, US, 10th – 14th February 2003

Tdoc # T1S-030084

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 424 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to 34.123-1 R5; Corrections to package 2 test case 8.1.10.1		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI Date: ⌘ 31/01/2003		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
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Reason for change: ⌘	<ol style="list-style-type: none"> 1. Update of conformance requirement to 25.331 v3.13.0 (2002-12). 2. Verification of segment combination 4 is not guaranteed in the Maximum configuration as the checking of it is based on SIB12 and if a UE does not understand SIB12 will use SIB11 it will not be fully tested. However, combination is tested in the Minimum configuration and thus can the reference to segment combination 4 in table 2 for the Maximum configuration be removed. 3. To guarantee that segment combination 9 (at block 4) and 11 are verified by the Maximum configuration then SIB5 and SIB6 positioning need to be exchanged in the system information scheduling. Using SIB6 for this purpose would not cause SS to detect if the UE is failing to read segment combination 9 and 11 as the UE would use the SIB5 information if SIB6 is not understood. 4. To simplify TTCN implementatation SIB6 and SIB12 should not omit optional IEs which have the same value as corresponding IE in SIB5 and SIB11 respectively. 5. Scheduling information need to be updated according to the actual sizes of system information blocks. 6. According to ASN.1 definition in 25.331 the SIB-TypeAndTag for future SIBs must be Null. As the IE "CHOICE Value tag" is represented by SIB-TypeAndTag in ASN.1 then should the IE be marked as "Not present" in the tables for MIB for Minimum and Maximum configuration for System
-----------------------------	---

	Information type F1 and F2.
	7. The specific value for Qqualmin in SIB11 of Cell 2 was used in an earlier version of the test case to achieve cell reselection to Cell 2 when 3 cells were used. At T1#17 the test procedure was changed to use 2 cells and the triggering of cell re-selection was changed by making serving cell barred. Thus there is no need to specify any specific value for Qqualmin in SIB11 for Cell 2 any longer.
Summary of change: ⌘	<ol style="list-style-type: none"> References in the conformance requirement have been updated and content have been checked against 25.331 v3.13.0 (2002-12). Removed reference to segment combination 4 in Table 2 (Maximum configuration). For Maximum configuration: <ol style="list-style-type: none"> SIB5 and SIB6 have exchanged positions in Table 2; and A note have been added under "Other characteristics for Maximum configuration" explaining how segment combination 9 is varied. A note have been added stating that optional IEs in SIB6 and SIB12 shall be included even if they have same values as corresponding IEs in SIB5 and SIB11 respectively Change of scheduling information in the MIB and SB1. In the tables with MIB specific message content for System Information type F1 (Minimum configuration) and System Information type F2 (Maximum configurations) the IE "CHOICE Value tag" has been changed to "Not present". Removed specific message content for Maximum configuration and SIB11.
Consequences if not approved: ⌘	Incorrectly specified test case

Clauses affected: ⌘	8.1.10.1								
Other specs affected: ⌘	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Y	N								
<input checked="" type="checkbox"/>	<input type="checkbox"/>								
<input checked="" type="checkbox"/>	<input type="checkbox"/>								
<input checked="" type="checkbox"/>	<input type="checkbox"/>								
Other comments: ⌘	Affects R99, REL-4 and REL-5								

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- Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
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- With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.10 Broadcast of system information

8.1.10.1 Dynamic change of segmentation, concatenation & scheduling and handling of unsupported information blocks

8.1.10.1.1 Definition

8.1.10.1.2 Conformance requirement

1. The RRC layer in the UE shall perform re-assembly of segments. All segments belonging to the same master information block, scheduling block or system information block shall be assembled in ascending order with respect to the segment index. When all segments of the master information block, scheduling block or a system information block have been received, the UE shall perform decoding of the complete master information block, scheduling block or system information block.
2. For all system information blocks or scheduling blocks that are supported by the UE referenced in the master information block or the scheduling blocks, the UE shall perform the following actions:

.....

- read and store the IEs of that system information block;

NOTE: There are options with and without scheduling blocks.

3. For system information blocks, not supported by the UE.....

- skip reading this system information block;
- skip monitoring changes to this system information block.

4. However, to enable future introduction of new system information blocks, the UE shall also be able to receive system information blocks other than the ones indicated within the scheduling information. The UE may ignore contents of such system information block.

Reference

3GPP TS 25.331 clause ~~8.1.1.1.3~~, 8.1.1.1.4, ~~8.1.1.1.5~~, 8.1.1.5 and 8.1.1.6.

8.1.10.1.4 Test Purpose

1. To verify that dynamic change of System Information is identified, new information read and used.
2. To verify that the UE can support all segment types and "all" segment combinations.
3. To verify that the UE can dynamically use different configurations
4. To verify that the UE properly uses combinations of Default and assigned values.

NOTE: There are 4 segment types and 11 different SYSTEM INFORMATION segment combinations to interpret when re-assembling segments. There are many alternative SIB position offsets and repetition rates.

The allowed segment types are:

- First segment
- Subsequent segment
- Last segment
- Complete

The allowed segment combinations are:

1. No segment
2. First segment
3. Subsequent segment
4. Last segment
5. Last segment + First segment
6. Last segment + one or several Complete
7. Last segment + one or several Complete + First segment
8. One or several Complete
9. One or several Complete + First segment
10. One Complete of size 215 to 226 (not fully tested)
11. Last segment of size 215 to 222

NOTE: Segment combinations 10 and 11 are more difficult to test as they require SIBs of a very specific size.

8.1.10.1.5 Method of test

Alternate two sets of System Information and generate a call after one or the other set has been broadcasted.

These two sets of System Information are based on the System Information specified in 34.108, section 6.

A "Minimum" configuration and a "Maximum" configuration of System Information are defined. The "Minimum" configuration does not contain all of the Information Blocks defined for Configuration 1 in section 6 of 34.108, while the "Maximum" configuration does. The contents of the SIBs remains the same (for the "Minimum" configuration, the contents of SIB11 changes for the "Maximum" configuration) while the contents of the MIB and SB is altered depending on the nature of the test, i.e. the schedule changes between the "Minimum" and "Maximum" configurations.

The four segment types and the eleven segment combinations are tested using the two configurations.

NOTE: The decoding of system information in the UE is only measurable by functional tests. A large number of functions utilize system information. An extensive test of the system information decoding thus creates a large number of functional tests, which is impractical. This test specification uses a "sample test", where only a few functions are invoked.

Initial Condition

System Simulator: 2 cells (Cell 1, Cell 2), settings for Cell 1 and Cell 2 according to TS 34.108, clause 6.1.5, table 6.1.2 (Cell 1 configured as the serving cell). The Minimum Configuration System Information is being broadcast in Cell 1. The Maximum Configuration System Information is being broadcast in Cell 2.

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108 with a CN UE identity (set to IMSI), depending on the CN domain(s) supported by the UE.

Test procedure

- a) The UE is in C1 in Camped Normally state.
- b) UE starts establishing a MO call/session.
- c) SS disconnects the call. UE shall enter IDLE state.

- d) The SS sets the Cell Barred Indicator in SIB3 to "Barred". The SS notifies the UE of the changed System Information by sending the Paging Type 1 message including the IE BCCH Modification Info indicating that new System Information is available.
- e) Based on the updated information in SIB3, the UE performs a cell reselection to Cell 2. The UE reads the System Information in Cell 2, i.e. Maximum Configuration System Information.
- f) UE starts establishing a MO call/session.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	UE			Mobile originated call/session establishment
2	SS			Disconnection of call
3	←		System Information (Minimum Configuration)	System Information message is sent in Cell 1 with the Cell Barred Indicator in SIB3 set to "Barred".
4	←		Paging Type 1	This message is to inform the UE in Idle State that System Information has been updated.
5	UE			Mobile originated call /session establishment

Specific message content for "Minimum" configuration

The Minimum configuration is the same as the Configuration 1 System Information on 34.108, section 6 with some differences:

- Only SIB1, SIB3, SIB5, SIB7, SIB11 are used, i.e. the Minimum number of SIBs is used.
- No SB is used, all scheduling information is contained in the MIB. The contents of this changed MIB are shown below.
- A different schedule is used. Details below.
- SIB11 lists eight cells (one serving cell and seven neighbouring cells). Only the first two of these are considered relevant.

Other characteristics of the Minimum configuration are:

- An unknown future System Information Block (SIB-F1) is included. SIB-F1 is used to test segment combination 10. However, it should be noted that, based on the scheduling information in the MIB, UEs may decide not to read segment combinations associated with SIBs that they do not support/comprehend. Hence, the use of SIB-F1 does not fully cover the verification of combinations 10. The tests really just verify that UE ignores it. There is no real verification that the UE can support segment combinations 10.

The following tables show (based on SIB_REP and SIB_POS in the MIB and SB) the schedule used for the Minimum configuration.

Table 1: The schedule in this table incorporates segment combinations 1, 2, 3, 4, 7, 8, 10.

Block Type	MIB	SIB1	SIB3	SIB5	SIB7	SIB11
SIB_REP	8	64	64	64	16	64
SEG_COUNT	1	1	1	3	1	4

Frame No / SIB_POS	0	2	4	6	8	10	12	14
Block Type	MIB		SIB7		MIB			

Frame No / SIB_POS	16	18	20	22	24	26	28	30
Block Type	MIB		SIB7/SIB3	SIB1	MIB		SIB-F1	SIB5

Frame No / SIB_POS	32	34	36	38	40	42	44	46
Block Type	MIB	SIB5	SIB5/SIB7/SIB11	SIB11	MIB	SIB11	SIB11	

Frame No / SIB_POS	48	50	52	54	56	58	60	62
Block Type	MIB		SIB7		MIB			

Contents of Master Information Block PLMN type is the case of GSM-MAP

- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- MNC digit	Set to the same Mobile Network Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	22
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	20
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	30
- SIB_POS offset info	
- SIB_OFF	4
- SIB_OFF	2
- SIB type	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	16
- SIB_POS	4
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	36
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	4
- SIB_OFF	2
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Not Present Cell Value tag
Cell Value tag	4
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	28
- SIB_POS offset info	Not Present – use default
- SIB and SB type	System Information Type F1

Specific message content for "Maximum" configuration

The Maximum configuration is the same as the Configuration 1 System Information on 34.108, section 6 with some differences:

- A different schedule is used. Details below.
- SIB11 lists eight cells (one serving cell and seven neighbouring cells). Only the first two of these are considered relevant.
- [SIB6 and SIB12 includes all optional IEs even if having same values as correspondent IEs in SIB5 and SIB11 respectively \(to facilitate implementation of the test case for the Maximum configuration\).](#)

Other characteristics of the ~~m~~Maximum configuration are:

- one "unknown future" block (SIB-F2) is included. This SIB is concatenated with another SIB and is used to verify that the UE can receive an Information Block that it does not support and still process the Information Blocks that it does support in the correct way.
- [The test of the segment combination 9 is verified if the UE is able to read SIB7 and the first segment of SIB5 in position 4.](#)
- The test of the segment combination 11 is verified if the UE is able to read the last segment of SIB ~~6~~5. The SS ensures that this last segment shall have the length between 215 and 222 bits. Depending on the length of SIB ~~5~~6, the combination 11 occurs either in SIB_position 6, or in the most cases in SIB_position 10

The following tables show (based on SIB_REP and SIB_POS in the MIB and SB) the schedule used for the Maximum configuration.

Table 2: The schedule in this table incorporates segment combinations 1, 2, 3, ~~4~~, 5, 6, 8, 9, 11.

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB6	SIB7	SIB11	SIB12	SIB18
SIB_REP	8	16	64	64	64	64	64	64	32	64	64	64
SEG_COUNT	1	1	1	1	1	1	3	3	1	4	4	1

Frame No / SIB_POS	0	2	4	6	8	10	12	14
Block Type	MIB	SB1	SIB7/ SIB5/SIB6	SIB5/SIB6	MIB	SIB5/SIB6	SIB3/SIB-F2	SIB11

Frame No / SIB_POS	16	18	20	22	24	26	28	30
Block Type	MIB	SB1	SIB11	SIB11	MIB	SIB11/SIB12	SIB12	SIB12

Frame No / SIB_POS	32	34	36	38	40	42	44	46
Block Type	MIB	SB1	SIB7/SIB18	SIB12	MIB	SIB6/SIB5	SIB6/SIB5	SIB6/SIB5/SIB2

Frame No / SIB_POS	48	50	52	54	56	58	60	62
Block Type	MIB	SB1	SIB4		MIB	SIB1		

Contents of Master Information Block PLMN type is the case of GSM-MAP

Information Element	Value/remark
- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- MNC digit	Set to the same Mobile Network Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value Tag
- Cell Value tag	1
- Scheduling	
- SEG_COUNT	1
- SIB_REP	16
- SIB_POS	2
- SIB_POS offset info	Not Present – use default
- SIB type	Scheduling Block 1
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	58
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	46
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 2
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	12
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	52
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 4
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	42 <u>4</u>
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2 <u>4</u>
- SIB type	System Information Type 5

Contents of Scheduling Block 1 (FDD)

Information Element	Value/remark
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	442
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	42
- SIB and SB type	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	32
- SIB_POS	4
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	14
- SIB_POS offset info	
- SIB_OFF	6
- SIB_OFF	2
- SIB_OFF	4
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	26
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB_OFF	8
- SIB and SB type	System Information Type 12
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	36
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 18
- Scheduling information	
- CHOICE Value tag	Not Present
- Cell Value tag	Cell Value tag
- SEG_COUNT	4
- SIB_REP	1
- SIB_POS	64
- SIB_POS	12
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type F2

~~Contents of System Information Block type 11 (FDD)~~

~~Same contents as that defined in Configuration 1, Section 6, 34.108 except for the following:~~

Information Element	Value/remark
Qqualmin	-18 (for first adjacent cell)

Contents of System Information Block type F1

Information Element	Value/remark
Data	Arbitrary data with a size of 226 bits

Contents of System Information Block type F2

Information Element	Value/remark
Data	Arbitrary data with a size of 50 bits

NOTE: For these future System Information Block types one of the available spare values for SIB type should be used

8.1.10.1.6 Test requirement

After step 1 the UE shall have a call/session established in Cell 1.

After step 5 the UE shall have a call/session established in Cell 2.

3GPP TSG- T1 Meeting #18
 San Antonio, US, 10th – 14th February 2003

Tdoc # T1-030077

3GPP TSG-T1 SIG Meeting #27
 San Antonio, US, 10th – 14th February 2003

Tdoc# T1S030038

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-1 CR 425** ⌘ rev **-** ⌘ Current version: **5.2.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 REL-5; Corrections to package 3 RRC test case 8.4.1.40		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI	Date:	⌘ 22/01/2003
Category:	⌘ F	Release:	⌘ Rel 5
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ At the T1#16 meeting in Yokohama (September-02) default CM-patterns were introduced in 34.108. At the same meeting test cases using compressed mode were aligned to use the default CM pattern in 34.108. In this process also test case 8.4.1.40 was aligned. As the test purpose of test case 8.4.1.40 is to verify Inter-RAT measurements using a sparse compressed mode pattern then should the CM pattern not have been aligned to the default CM pattern.
Summary of change:	⌘ 8.4.1.40 - CM-pattern reverted according to how it was originally specified in V5.0.1 of 34.123-1 to achieve a sparse CM pattern.
Consequences if not approved:	⌘ No test coverage of sparse CM pattern

Clauses affected:	⌘ 8.4.1.40										
Other specs Affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Y	N										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:	⌘ Affects R99, Rel-4 and Rel-5 UEs.										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☒ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4.1.40 Measurement Control and Report: Inter-RAT measurement, event 3C, in CELL_DCH state using sparse compressed mode pattern

8.4.1.40.1 Definition

8.4.1.40.2 Conformance requirement

1. Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in 3GPP TS 25.331 clause 8.6 unless otherwise specified below.

The UE shall:

- read the IE "Measurement command";
 - if the IE "measurement command" has the value "setup":
 - store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", possibly overwriting the measurement previously stored with that identity;
 - for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 - if, according to its measurement capabilities, the UE requires compressed mode to perform the measurements and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or
 - if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
 - begin measurements according to the stored control information for this measurement identity;
2. Event 3c: The estimated quality of other system is above a certain threshold. When this event is ordered by UTRAN in a measurement control message the UE shall send a report when the estimated quality of the other system is above the value of the IE "Threshold other system" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains information specific for the other system.

Reference

3GPP TS 25.331 clause 8.4.1.3, 14.3.1.3.

8.4.1.40.3 Test Purpose

This test case is only applicable to UEs supporting both FDD and GSM, and which require compressed mode to perform the GSM related measurements.

1. To verify that the UE performs Inter-RAT measurement using a sparse compressed mode pattern as specified in the MEASUREMENT CONTROL message.
2. To verify that the UE send MEASUREMENT REPORT message when event 3C is triggered, and if the quality of the other system becomes better than the given threshold for event 3c.
3. To confirm that no other UE MEASUREMENT REPORT message is sent by the UE for a cell that has already triggered event 3c as long as the hysteresis condition for triggering once again event 3c has not been fulfilled.

8.4.1.40.4 Method of test

Table 8.4.1.40.4.1 Sparse compressed mode pattern for Inter.RAT measurement

TGMP	TGCFN	TGPRC	TGSN	TGL1	TGL2	TGD	TGPL1	TGPL2	Comment
GSM carrier RSSI measurement	Note 1	Inf.	4	7	Not sent	0	16 12	16	Set-up to monitor 16 GSM neighbours every second measurement period, i.e. every second 480ms period.
GSM Initial BSIC identification	Note 1	Inf.	8 4	14 7	Not sent	0	24 8	24	Equal to Pattern 6 in TS 25.133 table 8.7.
GSM BSIC re-confirmation	Note 1	Inf.	8 4	14 7	Not sent	0	24 8	24	Equal to Pattern 12 in TS 25.133 table 8.8.

NOTE 1: TGCFN can be found in the MEASUREMENT CONTROL message.

Initial Condition

System simulator: 1 UTRAN FDD cell and 2 GSM cells. The initial configurations of the cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test procedure

Table 8.4.1.40.4.2 Inter-RAT cell specific data

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0	T1	T2	T3
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				7			
CELL identity	#	0				1			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	-75	-80	-75	-75	-75	-75	-75

GSM cell 3 to 12 as indicated in the a MEASUREMENT CONTROL message shall not be active in the test, i.e. no BCCH carrier shall be transmitted for GSM cell 3 to 12 in this test.

The table above illustrate the downlink power to be applied for the two cells at various instants of the test execution. Column marked "T0" denotes the initial conditions, while column marked "T1", "T2" and "T3" indicate the values to be applied subsequently.

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements on 16 GSM cells. Event 3c is set up in this message, and if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.40.4.2, since the cell individual offset for GSM cell 1 is 10 dB, event 3c shall be triggered in the UE. A MEASUREMENT REPORT shall be sent to the SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is -3 dB.

At instant T2, the RF signal strength for GSM cell 1 drops as described in table 8.4.1.40.4.2, and at instant T3, it increases again to its previous level. No MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for the leaving condition to be met. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2		←	PHYSICAL CHANNEL RECONFIGURATION	If the UE requires compressed mode (refer ICS/IXIT), compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3c in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.40.4.2.
7		→	MEASUREMENT REPORT	After about 1.6 s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3c.
8				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.40.4.2.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.40.4.2.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	16 42
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	8 4
- TGL1	14 7
- TGL2	Not present
- TGD	0
- TGPL1	24 8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	66
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity

- TGSN	84
- TGL1	147
- TGL2	Not present
- TGD	0
- TGPL1	248
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	4.8 s

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=16
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	10
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	-3
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	3
- inter-RAT cell id	2
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	5
- inter-RAT cell id	3
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC4
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	4
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC5
- Band indicator	DCS 1800 band used
- BCCH ARFCN	9
- inter-RAT cell id	5
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC6
- Band indicator	DCS 1800 band used
- BCCH ARFCN	11
- inter-RAT cell id	6
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC7
- Band indicator	DCS 1800 band used
- BCCH ARFCN	13
- inter-RAT cell id	7
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC8
- Band indicator	DCS 1800 band used

- BCCH ARFCN	15
- inter-RAT cell id	8
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC9
- Band indicator	DCS 1800 band used
- BCCH ARFCN	17
- inter-RAT cell id	9
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC10
- Band indicator	DCS 1800 band used
- BCCH ARFCN	19
- inter-RAT cell id	10
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC11
- Band indicator	DCS 1800 band used
- BCCH ARFCN	21
- inter-RAT cell id	11
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC12
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	12
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC13
- Band indicator	DCS 1800 band used
- BCCH ARFCN	9
- inter-RAT cell id	13
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC14
- Band indicator	DCS 1800 band used
- BCCH ARFCN	11
- inter-RAT cell id	14
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC15
- Band indicator	DCS 1800 band used
- BCCH ARFCN	13
- inter-RAT cell id	15
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC16
- Band indicator	DCS 1800 band used
- BCCH ARFCN	15
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE

<ul style="list-style-type: none"> - GSM carrier RSSI reporting indicator CHOICE report criteria - Inter-RAT measurements reporting criteria <ul style="list-style-type: none"> - Parameters required for each event (1 to <maxMeasEvent>) <ul style="list-style-type: none"> - Inter-RAT event identity - Threshold own system - W - Threshold other system - Hysteresis - Time to Trigger - Reporting cell status - Maximum number of reported cells Physical channel information elements <ul style="list-style-type: none"> - DPCH compressed mode status info - TGPS reconfiguration CFN - Transmission gap pattern sequence (1 to <MaxTGPS>) <ul style="list-style-type: none"> - TGPSI - TGPS status flag - TGCFN - TGPSI - TGPS status flag - TGCFN - TGPSI - TGPS status flag - TGCFN 	<p>TRUE</p> <p><MaxMeasEvent>=1</p> <p>3c</p> <p>Not included</p> <p>Not included</p> <p>-74</p> <p>5</p> <p>100 ms</p> <p>Report cells within active set or within virtual active set or of the other RAT</p> <p>2</p> <p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.</p> <p>(Current CFN + (250 – TTI/10msec))_mod 256</p> <p><MaxTGPS>=3</p> <p>1</p> <p>Activate</p> <p>(Current CFN + (2562 – 11 – TTI/10msec))_mod 256</p> <p>2</p> <p>Activate</p> <p>(Current CFN + (2564 – 7 – TTI/10msec))_mod 256</p> <p>3</p> <p>Activate</p> <p>(Current CFN + (2560 – TTI/10msec))_mod 256</p>
---	---

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell id was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.40.5 Test Requirement

After instant T1, since the cell individual offset for GSM cell 1 is +10 dB, event 3c shall be triggered in the UE, i.e the UE shall begin to transmit a MEASUREMENT REPORT to the SS. Note that GSM cell 2 has not triggered event 3c

even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is -3 dB.

After instant T2, no MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for the leaving condition to be met.

CHANGE REQUEST

TS 34.123-1 CR 426 # rev **-** # Current version: **5.2.0**

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# CR to TS34.123-1 REL-5; Corrections to package 4 test cases on Inter system handover		
Source:	# Ericsson		
Work item code:	# TEI	Date:	# 20/01/2003
Category:	# F	Release:	# Rel 5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2	(GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
	D (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# The reasons for the changes proposed in this CR are indicated in the following section, summary of change
Summary of change:	# This CR includes the following changes: <div style="margin-left: 20px;"> <p>General/ several TCs</p> <ul style="list-style-type: none"> • <u>Editorials</u>: Several small editorials including update of conformance requirements with later revision of core specification, correction of references to default messages • The current description often talks about handover from the UTRAN cell. This is generalised, since prior to handover the active set could be bigger than one cell • <u>Specific message content, HANDOVER FROM UTRAN COMMAND</u>: The reference to TC 8.3.7.1 is replaced by a reference to a newly introduced default message (see corresponding CR to 34.108). This involves no changes to message contents • <u>Specific message content, HANDOVER FROM UTRAN FAILURE</u>: The message details are replaced by a reference to a newly introduced default message (see corresponding CR to 34.108). This involves no changes to message contents <p>TC 8.3.7.1 to TC 8.3.7.7, TC 8.3.7.9 and TC 8.3.7.12</p> </div>

- GSM cell is renumbered from Cell 2 to Cell 9: Cell 9 and Cell 10 should be used for GSM cells, see CR to 34.108 in T1S030077 (R99) and T1S030078 (Rel-4).

TC 8.3.7.5

- General: the test is extended to verify that the compressed mode pattern and the periodic measurement that was configured prior to handover is re-activated upon handover failure.

TC 8.3.7.7

- Test procedure: the descriptive text is aligned with the expected message sequence in the sense that the traffic channel is switched off after the SS receives a first HANDOVER ACCESS message from the UE (rather than that the SS applies a low power all the time).

TC 8.3.7.9

- Cause value: “Configuration unsupported” is changed to “configuration unacceptable” to align with the core specification.

TC 8.3.7.12

- Expected sequence: the sequence is changed such that initially the SS configures the target GSM channel but removes it upon receiving a HANDOVER ACCESS message. At that same point in time, the SS also removes the old UTRA configuration to ensure the reversion also fails. This change solves the unclarity about when the old UTRA configuration is to be removed, as reflected in step 5 of the expected sequence. Please note that a similar approach is used in 8.3.7.7
- Specific message contents, CELL UPDATE CONFIRM: primary scrambling code is replaced by a reference to 34.108 in accordance with general conventions. Furthermore, frequency info is removed since it is only required when the frequency is changed. The same applies to the maximum allowed uplink Tx power. Finally, the downlink information common for all radio links is included since all physical channel parameters need to be provided in this scenario. Finally SSTD cell identity is change to Not present, which is the common network scenario

TC 8.3.7.13

- Initial conditions: Both initial and foreseen final state are changed to U0 (NULL) from U10, since the UE starts with sending SETUP and ends after the call is rejected
- Expected sequence: SAMBE and UA have been removed since they are not relevant for an RRC test case
- **Added missing clause number for test purpose (8.3.7.13.3)**

Consequences if not approved: ☼ If this CR is not approved, the errors indicated above will remain in the test specification.

Clauses affected: ☼ 8.3.7.1, 8.3.7.2, 8.3.7.3, 8.3.7.4, 8.3.7.5, 8.3.7.6, 8.3.7.7, 8.3.7.9, 8.3.7.12

Other specs affected:	☼	<input type="checkbox"/> Y	<input type="checkbox"/> N	Other core specifications ☼	
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Test specifications
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		O&M Specifications
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Other comments: ☼ Affects both Rel 99, Rel 4 and Rel 5 test cases.

This CR is depending on approval of following CRs to 34.108:

- T1S030111 (R99) / T1S030112 (Rel-4) introducing default inter RAT handover messages.
- T1S030077 (R99) / T1S030078 (Rel-4) defining cell environment for inter-RAT test cases.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of modified section>

8.3.7.1 Inter system handover from UTRAN/To GSM/Speech/Success

8.3.7.1.1 Definition

8.3.7.1.2 Conformance requirement

The UE shall be able to receive a HANOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

- 1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.

NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if the USIM is present:
 - 2> store the current START value for every CN domain in the USIM [50];
 - 2> if the "START" stored in the USIM [50] for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the USIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.

- 1> if the SIM is present:
 - 2> store the current START value for every CN domain in the UE;
 - 2> if the "START" stored in the UE for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the SIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 clause 8.3.7.3, 8.3.7.4.

8.3.7.1.3 Test purpose

To test that the UE supporting both GSM and UTRAN handovers from a UTRAN serving cell to the indicated channel of GSM target cell when the UE is in the speech call active state and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.1.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 92 is GSM. GSM 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 92.

UE : CC State U10 in cell 1, one CS domain RAB is established and no PS domain RABs are established.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports GSM AMR,
- UE supports GSM EFR,
- UE supports GSM HR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 29.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS starts GSM cell and configures a traffic channel, then sends HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GSM cell. The SS checks

whether the handover is performed by checking that the UE transmits the HANOVER COMPLETE message to the SS through GSM cell.

Depending on the PIXIT parameters the above procedure is executed maximum four times, each time with different target channel in the GSM cell.

UEs for which the PIXIT indicates support for the GSM/ DCS 1800 and/ or GSM/ PCS 1900 band, the test should cover these frequencies in order to verify the correct handling of the IE "Frequency band".

Inter RAT handover is normally preceded by the configuration and activation of compressed mode (depending on UE capabilities/ PIXIT) and the configuration of inter- RAT measurements. The inter RAT handover is normally initiated by the SS upon receiving an event triggered measurement report. The verification of this functionality is covered by other subclauses.

Expected sequence

This sequence is performed for a maximum execution counter M = 1, 2, 3, 4, depending on the PIXIT parameters.

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into UTRAN U10 state in cell 1
2	SS			The SS configures cell 92 as a GSM cell with a traffic channel: for GSM AMR (M = 1); or for GSM EFR (M = 2); or for GSM FR (M = 3); or for GSM HR (M = 4).
3	←		HANOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM AMR (M = 1); or the target channel for GSM EFR (M = 2); or the target channel for GSM FR (M = 3); or the target channel for GSM HR (M = 4).
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANOVER FROM UTRAN COMMAND-GSM
5	→		HANOVER ACCESS	The SS receives this burst on the traffic channel of cell 92 (GSM cell) It implies that the UE has switched to GSM cell.
6	→		HANOVER ACCESS	
7	→		HANOVER ACCESS	
8	→		HANOVER ACCESS	
9	←		PHYSICAL INFORMATION	
10	→		SABM	
11	←		UA	
12	→		HANOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.

Specific message contents

For execution 1:

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Activation time RAB Info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. now 0000 0001B CS domain Not present Use T315 GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" Single GSM message GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 3

For execution 2:

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Activation time RAB Info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. now 0000 0001B CS domain Not present Use T315 GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" Single GSM message GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 2

For execution 3:

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - Message sequence number Activation time RAB Info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer Inter-system message - System type - Frequency Band - CHOICE system - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. now 0000 0001B CS domain Not present Use T315 GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" Single GSM message GSM HANDOVER COMMAND formatted as BIT STRING(1..512). The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

For execution 4:

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	Arbitrarily selects one integer between 0 to 3
RRC transaction identifier	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
Integrity check info	SS calculates the value of MAC-I for this message and writes to this IE.
- Message authentication code	SS provides the value of this IE, from its internal counter.
- RRC Message sequence number	now
Activation time	
RAB Info	
- RAB identity	0000 0001B
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not present
- Re-establishment timer	Use T315
Inter-system message	
- System type	GSM
- Frequency Band	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- CHOICE system	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1

8.3.7.1.5 Test requirement

After step 12 the ongoing call shall be continued on the GSM cell.

8.3.7.2 Inter system handover from UTRAN/To GSM/Data/Same data rate/Success

8.3.7.2.1 Definition

8.3.7.2.2 Conformance requirement

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

- 1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANDOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
 - 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
 - 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.
- NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.
- NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if the USIM is present:
 - 2> store the current START value for every CN domain in the USIM [50];
 - 2> if the "START" stored in the USIM [50] for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the USIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
 - 1> if the SIM is present:
 - 2> store the current START value for every CN domain in the UE;
 - 2> if the "START" stored in the UE for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the SIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
 - 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
 - 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.
- NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clause 8.3.7.3, 8.3.7.4.

8.3.7.2.3 Test purpose

To test that the UE handovers to the indicated channel of same data rate in the GSM target cell when it is in the data call active state in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.2.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 92 is GSM. GSM 51.010 clause 26.6.5.1 or clause 26.13.1.3 (for HSCSD) shall be referenced for the default parameters of cell 92.

UE : CC State U10 in cell 1, one CS domain RAB is established and no PS domain RABs are established.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports UTRAN Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports UTRAN Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM 14.4 kbps data (HSCSD or full rate traffic channel for 14.4 kbit/s user data (TCH/F14.4)),
- UE supports GSM 28.8 kbps data (HSCSD or enhanced circuit switched full rate traffic channel for 28.8 kbit/s user data (E-TCH/F28.8)),
- UE supports GSM 57.6 kbps data,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 92.

Test Procedure

The SS starts the UTRAN cell and brings the UE into data call active state (CC state U10) with a suitable configuration (e.g. Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs for M = 1). The SS starts GSM cell and configures a traffic channel (e.g. 14.4 kbps data channel for M = 1), then sends HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

Depending on the PIXIT parameters the above procedure is executed maximum three times, each time with different target channel in the GSM cell.

UEs for which the PIXIT indicates support for the GSM/ DCS 1800 and/ or GSM/ PCS 1900 band, the test should cover these frequencies in order to verify the correct handling of the IE "Frequency band".

Inter RAT handover is normally preceded by the configuration and activation of compressed mode (depending on UE capabilities/ PIXIT) and the configuration of inter- RAT measurements. The inter RAT handover is normally initiated by the SS upon receiving an event triggered measurement report. The verification of this functionality is covered by other subclauses.

Expected sequence

This sequence is performed for a maximum execution counter M = 1, 2, 3, depending on the PIXIT parameters.

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into UTRAN U10 state in cell 1, the configuration is: Streaming/unknown/uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 1); Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 2); Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for M = 3).
2	SS			The SS configures cell 92 as a GSM cell with a traffic channel: for GSM 14.4 kbps data (M = 1); or for GSM 28.8 kbps data (M = 2); or for GSM 57.6 kbps data (M = 3).
3	←		HANDOVER FROM UTRAN COMMAND GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM 14.4 kbps data (M = 1); or for GSM 28.8 kbps data (M = 2); or for GSM 57.6 kbps data (M = 3).
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→		HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 92 (GSM cell) It implies that the UE has switched to GSM cell.
6	→		HANDOVER ACCESS	
7	→		HANDOVER ACCESS	
8	→		HANDOVER ACCESS	
9	←		PHYSICAL INFORMATION	
10	→		SABM	
11	←		UA	
12	→		HANDOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.

Specific message contents

For execution :

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Activation time RAB Info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. now 0000 0001B CS domain Not present Use T315 GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" GSM message List GSM HANDOVER COMMAND formatted as BIT STRING(1..512). The contents of the HANDOVER COMMAND see next table.

If the UE supports 14.4 kbps single slot:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = data, 14.5 kbit/s radio interface rate (14.4 kbit/s user data (TCH/F14.4))

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

If the UE supports HSCSD:

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.13.3.1 of GSM 51.010, except that the Description of a multi-slot configuration supporting 14.4 kbps user data.

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

For execution 2:

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Activation time RAB Info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. now 0000 0001B CS domain Not present Use T315 GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" GSM message List GSM HANDOVER COMMAND formatted as BIT STRING (1..512). The contents of the HANDOVER COMMAND see next table.

If the UE supports enhanced circuit switched full rate traffic channel for 28.8 kbps user data:

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = data, 29.0 kbit/s radio interface rate (28.8 kbit/s user data (E-TCH/F28.8))

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

If the UE supports HSCSD:

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.13.3.1 of GSM 51.010, except that the Description of a multi-slot configuration supporting 28.8 kbps user data.

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

For execution 3:

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Activation time RAB Info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. now 0000 0001B CS domain Not present Use T315 GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" GSM message List GSM HANDOVER COMMAND formatted as BIT STRING (1..512). The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND in clause 26.13.3.1 of GSM 51.010, except that the Description of a multi-slot configuration supporting 57.6 kbps user data.

NOTE: This test case requires that the size of the HANDOVER COMMAND does not exceed 64 octets. Whenever the contents for the 04.18 HANDOVER COMMAND is changed, a check is needed to verify that size constraint is still met.

8.3.7.2.5 Test requirement

After step 12 the ongoing call shall be continued on the GSM cell.

8.3.7.3 Inter system handover from UTRAN/To GSM/Data/Data rate down grading/Success

8.3.7.3.1 Definition

8.3.7.3.2 Conformance requirement

The UE shall be able to receive a HANOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

- 1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.

NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if the USIM is present:
 - 2> store the current START value for every CN domain in the USIM [50];
 - 2> if the "START" stored in the USIM [50] for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the USIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
- 1> if the SIM is present:

- 2> store the current START value for every CN domain in the UE;
- 2> if the "START" stored in the UE for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the SIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
- 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
- 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clause 8.3.7.3, 8.3.7.4.

8.3.7.3.3 Test purpose

To test that the UE handovers to the indicated channel of lower data rate in the GSM target cell when it is in the data call active state in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.3.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell [92](#) is GSM. GSM 51.010 clause 26.6.5.1 or clause 26.13.1.3 (for HSCSD) shall be referenced for the default parameters of cell [92](#).

UE: CC State U10 in cell 1, one CS domain RAB and one PS domain RAB (e.g. interactive/ background UL: 32kbps, DL: 32 kbps) is established (Conditional on support of CS+PS in UE).

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports UTRAN Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM 14.4 kbps data (HSCSD or full rate traffic channel for 14.4 kbit/s user data (TCH/F14.4)),
- UE supports GSM 28.8 kbps data (HSCSD or enhanced circuit switched full rate traffic channel for 28.8 kbit/s user data (E-TCH/F28.8)),
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.
- UE support CS and PS service.

Foreseen final state of the UE

The UE is in CC state U10 on cell [92](#).

Test Procedure

The SS starts the UTRAN cell and brings the UE into data call active state (CC state U10) with a suitable configuration (e.g. Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs for M = 1). The SS starts

GSM cell and configures a traffic channel (e.g. 14.4 kbps data channel for $M = 1$), then sends HANOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANOVER COMPLETE message to the SS in GSM cell.

Upon completion of the handover, depending on UE capabilities, the UE performs routing area update and (re-) establishes the connection towards the PS domain.

Depending on the PIXIT parameters the above procedure is executed maximum three times, each time with different target channel in the GSM cell.

Expected sequence

This sequence is performed for a maximum execution counter $M = 1, 2, 3$, depending on the PIXIT parameters.

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into UTRAN U10 state in cell 1, the configuration is: Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for $M = 1$); Streaming/unknown/uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs (for $M = 2$ and 3).
2	SS			The SS configures cell 92 as a GSM cell with a traffic channel: for GSM 14.4 kbps data ($M = 1$ and 2); or for GSM 28.8 kbps data ($M = 3$).
3		←	HANOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM 14.4 kbps data ($M = 1$ and 2); or for GSM 28.8 kbps data ($M = 3$).
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANOVER FROM UTRAN COMMAND-GSM
5		→	HANOVER ACCESS	The SS receives this burst on the traffic channel of cell 92 (GSM cell) It implies that the UE has switched to GSM cell.
6		→	HANOVER ACCESS	
7		→	HANOVER ACCESS	
8		→	HANOVER ACCESS	
9		←	PHYSICAL INFORMATION	
10		→	SABM	
11		←	UA	
12		→	HANOVER COMPLETE	The SS receives the message on the traffic channel of GSM cell.
13		→	ROUTING AREA UPDATE	Conditional on Class A UE.

Specific message contents

For execution 1:

Same as the message contents of clause 8.3.7.2 for $M = 1$.

For execution 2:

Same as the message contents of clause 8.3.7.2 for $M = 1$.

For execution 3:

Same as the message contents of clause 8.3.7.2 for $M = 2$.

8.3.7.3.5 Test requirement

After step 12 the ongoing call shall be continued on the GSM cell.

8.3.7.4 Inter system handover from UTRAN/To GSM/Speech/Establishment/Success

8.3.7.4.1 Definition

8.3.7.4.2 Conformance requirement

The UE shall be able to receive a HANOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

- 1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

Value of the IE "System type"	Standard to apply	Inter RAT Message
GSM	GSM TS 04.18, version 8.5.0 or later	HANOVER COMMAND
cdma2000	TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later	

- 1> if the IE "System type" has the value "GSM":
 - 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".
 - 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":
 - 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".
- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.
- 1> if the IE "RAB information List" is included in the HANOVER FROM UTRAN COMMAND message:
 - 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":
 - 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.

NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

Upon successfully completing the handover, the UE shall:

- 1> if the USIM is present:
 - 2> store the current START value for every CN domain in the USIM [50];
 - 2> if the "START" stored in the USIM [50] for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the USIM for that CN domain;

- 3> inform the deletion of these keys to upper layers.
- 1> if the SIM is present:
 - 2> store the current START value for every CN domain in the UE;
 - 2> if the "START" stored in the UE for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
 - 3> delete the ciphering and integrity keys that are stored in the SIM for that CN domain;
 - 3> inform the deletion of these keys to upper layers.
 - 1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:
 - 2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.
 - 1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

Reference(s)

TS 25.331 Clause 8.3.7.3, 8.3.7.4.

8.3.7.4.3 Test purpose

To test that the UE handovers to the indicated channel in the GSM target cell when it is in the call establishment phase in the UTRAN serving cell and receives an HANDOVER FROM UTRAN COMMAND.

8.3.7.4.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell [92](#) is GSM. GSM 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell [92](#).

UE : CC State U1 in cell 1, no RABs are established.

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports UTRAN AMR,
- UE supports GSM FR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U1 on cell [92](#).

Test Procedure

The SS starts the UTRAN cell and the UE is triggered to initialise an MO speech call. During the call establishment phase, after the SS receives SETUP message the SS starts GSM cell and configures a dedicated channel, then sends the UE an HANDOVER FROM UTRAN COMMAND indicating the dedicated channel in the target GSM cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			To trigger the UE to initialise an MO call
2	→		SETUP	U1
3	SS			The SS starts the GSM cell and configure a dedicated channel SDCCH.
4	←		HANDOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the dedicated channel SDCCH.
5	UE			The UE accepts the handover command and switches to the GSM dedicated channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
6	→		HANDOVER ACCESS	The SS receives this burst on the dedicated channel of cell 29 (GSM cell) It implies that the UE has switched to GSM cell.
7	→		HANDOVER ACCESS	
8	→		HANDOVER ACCESS	
9	→		HANDOVER ACCESS	
10	←		PHYSICAL INFORMATION	
11	→		SABM	
12	←		UA	
13	→		HANDOVER COMPLETE	The SS receives the message on the dedicated channel of GSM cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Activation time RAB Info Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. Now Not present GSM Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" Single GSM message GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.2 of GSM 51.010 version 8.2.0 Release 1999
--

8.3.7.4.5 Test requirement

At step 13 the SS shall receive HANDOVER COMPLETE message on the dedicated channel of the GSM cell.

8.3.7.5 Inter system handover from UTRAN/To GSM/Speech/Failure

8.3.7.5.1 Definition

8.3.7.5.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology, it shall

1> revert back to the UTRA configuration;

1> establish the UTRA physical channel(s) used at the time for reception of HANOVER FROM UTRAN COMMAND; ~~—resume the connection to UTRAN using the resources used before receiving the HANOVER FROM UTRAN COMMAND message; and~~

...

transmit the HANOVER FROM UTRAN FAILURE message setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the HANOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "Inter-RAT handover failure" to "physical channel failure".

1> When the HANOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:

2> the procedure ends.

~~—transmit the INTER-SYSTEM HANOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.~~

Reference(s)

TS 25.331 Clause 8.3.7.5.

8.3.7.5.3 Test purpose

To test that the UE reactivates the old ~~configuration channel~~ and uses this to transmits a HANOVER FROM UTRAN FAILURE message to the network ~~on the old channel in UTRAN cell including IE "Inter-RAT Handover failure cause" which is set to "physical channel failure"~~, when it receives an HANOVER FROM UTRAN COMMAND and the connection to GSM for handover can not be established.

To verify that after the handover failure the UE resumes previously configured compressed mode patterns and measurements.

8.3.7.5.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 92 is GSM. GSM 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 92.

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,
- UE supports GSM FR,

- UE supports UTRAN AMR,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message. This message is used to provide measurement control parameters (GSM RSSI) to the UE and to start compressed mode for the measurement if required according to the UE capabilities. The UE replies according to request by sending RRC: MEASUREMENT REPORT messages periodically to SS (reporting period is 1000 ms).

The SS starts GSM cell without activating any dedicated channel in the cell, then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but can not complete the handover. The SS checks that the handover is failed by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS using the old in-UTRAN cell configuration.

After the handover failure, the UE re-activates compressed mode (if configured) and resumes periodic measurement reporting including sending MEASUREMENT REPORT messages periodically to SS.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into UTRAN U10 state in UTRAN cell 1. <u>If the UE does not require compressed mode (refer ICS/IXIT), then goto step 1c.</u>
1a		←	<u>PHYSICAL CHANNEL RECONFIGURATION</u>	<u>Compressed mode pattern sequence parameters are loaded to UE.</u>
1b		→	<u>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</u>	
1c		←	<u>MEASUREMENT CONTROL</u>	<u>SS provides GSM RSSI measurement control parameters to UE. Compressed mode for GSM RSSI measurement is started.</u>
1d		→	<u>MEASUREMENT REPORT</u>	<u>UE reports measurement results of GSM RSSI measurement to SS.</u>
2	SS			The SS configures cell 9 2 as a GSM cell but without any traffic channel.
3		←	HANDOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM FR which does not exist in the GSM cell.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5		→	HANDOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of via <u>the old UTRAN-cell configuration.</u>
5a		→	<u>MEASUREMENT REPORT</u>	<u>The SS shall verify that the UE resumes periodic measurement reporting for GSM RSSI measurements</u>

Specific message contents

When not stated use the same as the message contents of clause 8.3.7.1 for Execution M = 3.

PHYSICAL CHANNEL RECONFIGURATION (Step 1a)

Use the same message sub-type as in TS 34.108 titled "Speech in CS", with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>Downlink information common for all radio links</u>	
- <u>DPCH compressed mode info</u>	
- <u>TGPSI</u>	<u>1</u>
- <u>TGPS Status Flag</u>	<u>Deactivate</u>
- <u>TGCFN</u>	<u>Not present</u>
- <u>Transmission gap pattern sequence</u>	
<u>configuration parameters</u>	
- <u>TGMP</u>	<u>GSM Carrier RSSI Measurement</u>
- <u>TGPRC</u>	<u>Infinity</u>
- <u>TGSN</u>	<u>4</u>
- <u>TGL1</u>	<u>7</u>
- <u>TGL2</u>	<u>Not present</u>
- <u>TGD</u>	<u>Undefined</u>
- <u>TGPL1</u>	<u>12</u>
- <u>TGPL2</u>	<u>Not present</u>
- <u>RPP</u>	<u>Mode 0</u>
- <u>ITP</u>	<u>Mode 0</u>
<u>CHOICE UL/DL Mode</u>	<u>UL&DL or UL-only or DL-only (depends on UE's Measurement capability)</u>
- <u>Downlink compressed mode method</u>	<u>SF/2</u>
- <u>Uplink compressed mode method</u>	<u>SF/2</u>
- <u>Downlink frame type</u>	<u>A</u>
- <u>DeltaSIR1</u>	<u>2.0</u>
- <u>DeltaSIRAfter1</u>	<u>1.0</u>
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIR2After2</u>	<u>Not Present</u>
- <u>N identify abort</u>	<u>Not Present</u>
- <u>T Reconfirm abort</u>	<u>Not Present</u>
- <u>TGPSI</u>	<u>2</u>
- <u>TGPS Status Flag</u>	<u>Deactivate</u>
- <u>TGCFN</u>	<u>Not present</u>
- <u>Transmission gap pattern sequence</u>	
<u>configuration parameters</u>	
- <u>TGMP</u>	<u>GSM Initial BSIC identification</u>
- <u>TGPRC</u>	<u>Infinity</u>
- <u>TGSN</u>	<u>4</u>
- <u>TGL1</u>	<u>7</u>
- <u>TGL2</u>	<u>Not present</u>
- <u>TGD</u>	<u>0</u>
- <u>TGPL1</u>	<u>8</u>
- <u>TGPL2</u>	<u>Not present</u>
- <u>RPP</u>	<u>Mode 0</u>
- <u>ITP</u>	<u>Mode 0</u>
<u>CHOICE UL/DL Mode</u>	<u>UL&DL or UL-only or DL-only (depends on UE's Measurement capability)</u>
- <u>Downlink compressed mode method</u>	<u>SF/2</u>
- <u>Uplink compressed mode method</u>	<u>SF/2</u>
- <u>Downlink frame type</u>	<u>A</u>
- <u>DeltaSIR1</u>	<u>2.0</u>
- <u>DeltaSIRAfter1</u>	<u>1.0</u>
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIR2After2</u>	<u>Not Present</u>
- <u>N identify abort</u>	<u>128</u>
- <u>T Reconfirm abort</u>	<u>Not Present</u>

MEASUREMENT CONTROL (Step 1c)

<u>Information Element</u>	<u>Value/remark</u>
<u>Measurement Identity</u>	<u>15</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	<u>Acknowledged Mode RLC</u>

- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Deactivate
- TGCFN	Not present

MEASUREMENT REPORT (Step 1d and step 5a)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to "1"

- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to "7"
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

HANDOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the [HANDOVER FROM UTRAN COMMAND-GSM](#) message specified in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Inter-system message	GSM
- System type	Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"
- Frequency Band	Single GSM message
- CHOICE GSM message	GSM HANDOVER COMMAND formatted as BIT STRING (1..512). The contents of the HANDOVER COMMAND see next table.
- Message	

HANDOVER COMMAND

[Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1 and that the indicated target channel for GSM FR does not exist in the GSM cell](#)

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the [HANDOVER FROM UTRAN FAILURE](#) message specified in [9] TS 34.108 clause 9.

Information Element	Value/remark
Message-Type	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND-GSM message
RRC transaction identifier	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Integrity check info	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- Message authentication code	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
- RRC Message sequence number	
Inter-RAT handover failure	physical channel failure
-Inter-RAT handover failure cause	
Inter-system message	Not Checked

8.3.7.5.5 Test requirement

After step ~~4n+1~~ the SS shall receive [HANDOVER FROM UTRAN FAILURE](#) message ~~on the old channel of the~~ [using the old UTRAN configuration cell](#).

[After step 5 the UE shall correctly report the GSM RSSI value.](#)

8.3.7.6 Inter system handover from UTRAN/To GSM/Speech/Failure (L2 Establishment)

8.3.7.6.1 Definition

8.3.7.6.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology , as is unable to obtain L2 establishment it shall

- resume the connection to UTRAN using the resources used before receiving the HANDOVER FROM UTRAN COMMAND message; and
- transmit the HANDOVER FROM UTRAN FAILURE message on uplink DCCH using AM RLC.

Reference(s)

3GPP TS 25.331 clause 8.3.7

TS 04.06 Clause 5.4.1.3

TS 04.08 Clause 3.1.5

8.3.7.6.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "physical channel failure" in IE "Inter_RAT HO failure cause", when it receives a HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover cannot be established due to failure in L2 establishment.

8.3.7.6.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 92 is GSM. GSM 51010-1 section 26.6.5.1 shall be referenced for the default parameters of cell 92.

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. SS activates a dedicated GSM traffic channel then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. When the UE does not succeed in establishing the connection to the target radio access technology it shall revert back to UTRA configuration establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND transmit the HANDOVER FROM UTRAN FAILURE.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2		SS		The SS configures cell 29 as a GSM cell with traffic channel.
3		←	HANDOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5		→	HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 92 (GSM cell) It implies that the UE has switched to GSM cell.
6		→	HANDOVER ACCESS	
7		→	HANDOVER ACCESS	
8		→	HANDOVER ACCESS	
9		←	PHYSICAL INFORMATION	Allows a proper transmission by the MS. Sent in unacknowledged mode as soon as the SS has detected a HANDOVER ACCESS. As soon as MS detects it then it stops T3124. On SS side T3105 could be started N times at the maximum as long as the step 8 is not performed
10		→	SABM	To establish L2 connection
11		SS		SS does not sent UA frame
12	UE			On T200 expiration, SS sends N200 times the SABM frame (steps 10) Then MS deactivates new channels and reactivates old UTRA resources it had before receiving the handover command
13		→	HANDOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell. Sent in acknowledge mode The cause in the IE "inter-RAT change failure" is set to "physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	physical channel failure
Inter-system message	Not Checked

8.3.7.6.5 Test requirement

The SS shall receive HANOVER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.7.7 Inter system handover from UTRAN/To GSM/Speech/Failure (L1 Synchronization)

8.3.7.7.1 Definition

8.3.7.7.2 Conformance requirement

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

1> revert back to the UTRA configuration;

1> establish the UTRA physical channel(s) used at the time for reception of HANOVER FROM UTRAN COMMAND;

...

1> transmit the HANOVER FROM UTRAN FAILURE message setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the HANOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "Inter-RAT handover failure" to "physical channel failure".

1> When the HANOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:

2> the procedure ends.

~~If the UE does not succeed to establish the connection to the other radio access technology, as is unable to obtain L1 synchronization it shall~~

~~—resume the connection to UTRAN using the resources used before receiving the HANOVER FROM UTRAN COMMAND message; and~~

~~—transmit the HANOVER FROM UTRAN FAILURE message on uplink DCCH using AM RLC.~~

Reference(s)

TS 25.331 Clause 8.3.7.5

~~TS 04.06 Clause 5.4.1~~

8.3.7.7.3 Test purpose

To ~~T~~test that the UE shall keep its old configuration and transmit a HANOVER FROM UTRAN FAILURE message, which is set to "physical channel failure" in IE "Inter-~~R~~andover~~o~~ failure cause", when it receives a HANOVER FROM UTRAN COMMAND and the connection to GSM for handover cannot be established due to failure in L1 Synchronization.

8.3.7.7.4 Method of test

Initial conditions

System Simulator : 2 cell - Cell 1 is UTRAN, Cell ~~92~~92 is GSM. GSM 51.010-~~version 4.4.0~~ section 26.6.5.1 shall be referenced for the default parameters of cell ~~92~~92.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10). The SS starts GSM cell activating dedicated channel in the cell, then sends HANOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH ~~of the serving using the UTRAN cell configuration. The power level of target GSM cell is kept at very low level.~~ The UE receives the command, ~~and~~ configures itself accordingly ~~and sends the HANOVER ACCESS burst. Upon receiving this burst, the SS turns off the dedicated channel indicated to the UE, so the UE~~ ~~but~~ cannot complete the handover. The SS checks that the ~~UE reverts to the old UTRA configuration handover is failed~~ by checking that the UE transmits the HANOVER FROM UTRAN FAILURE message to the SS ~~in~~ ~~via the old UTRAN cell configuration.~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		The SS brings the UE into UTRAN U10 state in cell 1.
2		SS		The SS configures cell 92 as a GSM cell with a traffic channel.
3		←	HANOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM FR in GSM Cell.
4		UE		The UE accepts the handover command and switches to the GSM traffic channel specified in the HANOVER FROM UTRAN COMMAND-GSM
5		→	HANOVER ACCESS	The SS receives this burst on the traffic channel of cell 92 (GSM cell) It implies that the UE has switched to GSM cell.
6		→	HANOVER ACCESS	
7		SS		The target GSM Traffic Channel is Switched off
8		→	HANOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of via the old UTRAN cell configuration. The cause in the IE "inter-RAT change failure" is set to "physical channel failure"

Specific message contents

~~Same as the message contents of clause 8.3.7.1 for ExecutionM=3:~~

HANOVER FROM UTRAN COMMAND-GSM

The contents of this message is identical to the HANOVER FROM UTRAN COMMAND-GSM message specified in [9] TS 34.108 clause 9 with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>Inter-system message</u> <u>- System type</u> <u>- Frequency Band</u> <u>- CHOICE GSM message</u> <u>- Message</u>	<u>GSM</u> <u>Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"</u> <u>Single GSM message</u> <u>GSM HANDOVER COMMAND formatted as BIT STRING (1..512). The contents of the HANDOVER COMMAND see next table.</u>

HANDOVER COMMAND

<u>Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1</u>
--

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9.

<u>Information Element</u>	<u>Value/remark</u>
Message Type RRC transaction identifier Integrity check info — Message authentication code — RRC Message sequence number Inter-RAT handover failure — Inter-RAT handover failure cause Inter-system message	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND GSM message The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. physical channel failure Not Checked

8.3.7.7.5 Test requirement

After step 7 t~~The SS shall receive HANDOVER FROM UTRAN FAILURE message on the old channel of~~ via the old UTRAN cell configuration.

<End of modified section>

<Start of next modified section>

8.3.7.9 Inter system handover from UTRAN/To GSM/Speech/Failure (Unsupported configuration)

8.3.7.9.1 Definition

8.3.7.9.2 Conformance requirement:

If:

...

- the UTRAN instructs the UE to use a non-supported configuration; or

...

the UE shall:1> transmit a HANOVER FROM UTRAN FAILURE message, setting the information elements as specified below;2> include the IE "RRC transaction identifier"; and2> set it to the value of "RRC transaction identifier" in the entry for the HANOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and2> clear that entry;2> set the IE "Inter-RAT handover failure" to "configuration unacceptable";2> when the HANOVER FROM UTRAN FAILURE message has been submitted to lower layers for transmission;3> resume normal operation as if the invalid HANOVER FROM UTRAN COMMAND message has not been received;3> and the procedure ends.~~If the UE does not succeed to establish the connection to the other radio access technology, as the configuration specified in the Inter-RAT message is not supported, it shall~~~~— resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANOVER COMMAND message; and~~~~— transmit the INTER-SYSTEM HANOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.~~

Reference

3GPP TS 25.331 clause 8.3.7.8

8.3.7.9.3 Test purpose

To test that the UE shall keep its old configuration and transmit a HANOVER FROM UTRAN FAILURE message, which is set to "configuration ~~unsupported~~unacceptable" in IE "Inter-RAT Handover failure cause", when it receives a HANOVER FROM UTRAN COMMAND ~~Handover From UTRAN~~ message, with the IE "~~Inter-RAT-GSM~~ message" ~~received within the HANOVER FROM UTRAN COMMAND message~~ containing a HANOVER COMMAND message including a cConfiguration not sSupported by the UE.

8.3.7.9.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS then sends an HANOVER FROM UTRAN COMMAND message –including a ~~c~~Configuration not ~~s~~upported by the UE in ~~the~~ [HANOVER COMMAND that is contained in the IE inter-RAT handover-“GSM message”](#), to the UE through DCCH ~~of the serving using the~~ UTRAN ~~cell~~configuration. The UE receives the command and finds that the configuration given in Inter Rat message is not supported. The SS checks that the ~~UE reverts to the old UTRA configuration~~ ~~handover is failed~~ by checking that the UE transmits the ~~INTER SYSTEM~~ HANOVER FROM UTRAN FAILURE message to the SS ~~in-using the old~~ UTRAN ~~cell~~configuration.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2		←	HandoverFromUTRAN Command HANOVER FROM UTRAN COMMAND-GSM	Send using the on-cell 1 (UTRAN cell configuration) and the message carries an unsupported configuration.
3		→	InterSystemHandoverFailure HANOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of via the old UTRAN cell configuration.

Specific message contents

HANOVER FROM UTRAN COMMAND-GSM

[The contents of this message is identical to the HANOVER FROM UTRAN COMMAND-GSM message specified in \[9\] TS 34.108 clause 9 with the following exceptions:](#)

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info — Message authentication code — RRC Message sequence number Activation time RAB Info Inter-system message - System type - Frequency Band - CHOICE GSM message - Message	Arbitrarily selects one integer between 0 to 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. New Not present GSM GSM/DCS-1800 Band Set to "GSM/PCS 1900" if GSM/PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band" Single GSM message GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

~~Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that Contains a Configuration not supported by the UE (Handover to the frequency band is set to a value Band not supported by the UE).~~

HANDOVER FROM UTRAN FAILURE

[The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in \[9\] TS 34.108 clause 9 with the following exceptions:](#)

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info — Message authentication code — RRC Message sequence number Inter-RAT handover failure - Inter-RAT handover failure cause Inter-system message	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND GSM message The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. configuration unsupported unacceptable Not checked

8.3.7.9.5 Test requirement

~~After~~ [In step 23 the SS shall receive a INTER-SYSTEM HANDOVER FROM UTRAN FAILURE message on the old channel of via the old UTRAN cell configuration.](#)

<End of modified section>

<Start of next modified section>

8.3.7.12 Inter system handover from UTRAN/To GSM/Speech/Failure (Physical channel Failure and Reversion Failure)

8.3.7.12.1 Definition

8.3.7.12.2 Conformance requirement:

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

1> revert back to the UTRA configuration;

1> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND;

1> if the UE does not succeed to establish the UTRA physical channel(s):

2> perform a cell update procedure according to subclause 8.3.1 in TS 25.331 with cause "Radio link failure";

2> when the cell update procedure has completed successfully:

3> proceed as below.

1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "Inter-RAT handover failure" to "physical channel failure".

1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:

2> the procedure ends.

~~If the UE does not succeed to establish the connection to the other radio access technology and fail to resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANDOVER COMMAND message, it shall~~

~~—perform a cell update procedure; and~~

~~—transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.~~

Reference

3GPP TS 25.331 clause 8.3.7.5

8.3.7.12.3 Test purpose

The UE shall perform a cell update when the UE fails to revert to the old configuration after the detection of physical channel failure in the target RAT cell as given in the HANDOVER FROM UTRAN COMMAND message procedure. After the UE completes the cell update procedure, the UE shall transmit a HANDOVER FROM UTRAN FAILURE message on the DCCH using AM RLC, ~~which is set including~~ IE "failure cause" set to "physical channel failure".

8.3.7.12.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell ~~92~~ is GSM. GSM 11.10-1 section 26.6.5.1 shall be referenced for the default parameters of cell ~~92~~.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS starts GSM cell without activating any dedicated channel in the cell, then sends ~~INTER-SYSTEM~~ a HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH ~~of the serving~~ using the UTRAN ~~cell~~ configuration. The UE receives the command and configures itself accordingly but cannot complete the handover and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS ~~shall not use~~ released the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits the ~~INTER-SYSTEM~~ HANDOVER FROM UTRAN FAILURE message to the SS ~~in~~ using the new UTRAN ~~cell~~ configuration, on the DCCH using AM RLC, setting the value of IE "failure cause" to "physical channel failure".

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2		SS		The SS configures cell 9 as a GSM cell but without any traffic channel.
3		←	HandoverFromUTRAN Command <u>HANDOVER FROM UTRAN COMMAND-GSM</u>	Send on cell 1 (using the old UTRAN configuration cell) and the message indicates: t The target channel for GSM FR, which does not exist in the GSM cell.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the <u>HANDOVER COMMAND message that is contained within the HANDOVER FROM UTRAN COMMAND InterSystemHandoverCommand-GSM message</u>
5		SS →	<u>HANDOVER ACCESS</u>	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell. Upon receiving this burst, SS removes both the target GSM Traffic Channel and the UTRA the p Physical channel (DPCH) allocated to the mobile before handover command transmission. <u>As a result not only the handover will fail, but also the reversion to the old UTRA configuration.</u>
6		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
7		←	CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
8				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10		→	InterSystemHandoverFailure <u>HANDOVER FROM UTRAN FAILURE</u>	The IE "failure cause" shall be set to "physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for Execution M= 3.

CELL UPDATE (Step 6n+4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 7n+2) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
 - UARFCN uplink (Nu)	Reference to TS34.108 clause 5.1 Test frequencies
 - UARFCN downlink (Nd)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	33dBm
<u>CHOICE channel requirement</u>	<u>Uplink DPCH info</u>
<u>-UplinkDPCH Info</u>	<u>Same as RRC CONNECTION SETUP message used to move to initial condition</u>
<u>- DPCCH power offset</u>	<u>-6dB</u>
<u>- PC Preamble</u>	<u>1 frame</u>
<u>- SRB delay</u>	<u>7 frames</u>
<u>- Power Control Algorithm</u>	<u>Algorithm1</u>
<u>- TPC step size</u>	<u>1dB</u>
<u>- Scrambling code type</u>	<u>Long</u>
<u>- Scrambling code number</u>	<u>0 (0 to 16777215)</u>
<u>- Number of DPDCH</u>	<u>Not Present(1)</u>
<u>- spreading factor</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- TFCI existence</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- Number of FBI bit</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- Puncturing Limit</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>Downlink information common for all radio links</u>	<u>Same as RRC CONNECTION SETUP message used to move to initial condition</u>
CHOICE Mode	FDD
<u>- Downlink DPCH info common for all RL</u>	
<u>- Timing indicator</u>	<u>Initialise</u>
<u>- CFN-targetSFN frame offset</u>	<u>Not Present</u>
<u>- Downlink DPCH power control information</u>	
<u>- DPC mode</u>	<u>0 (single)</u>
<u>- CHOICE mode</u>	<u>FDD</u>
<u>- Power offset PPilot-DPDCH</u>	<u>0</u>
<u>- DL rate matching restriction information</u>	<u>Not Present</u>
<u>- Spreading factor</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- Fixed or Flexible Position</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- TFCI existence</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- CHOICE SF</u>	<u>Reference to TS34.108 clause 6.10 Parameter Set</u>
<u>- DPCH compressed mode info</u>	<u>Not Present</u>
<u>- TX Diversity mode</u>	<u>None</u>
<u>- SSDT information</u>	<u>Not Present</u>
<u>- Default DPCH Offset Value</u>	<u>Arbitrary set to value 0..306688 by step of 512</u>
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	2
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	a Not present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

CELL UPDATE CONFIRM (Step 7A+2) (3.84 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	Not Present
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common timeslot info	Not Present (default)
- Downlink DPCH timeslots and codes	Not Present (default)
- UL CCTrCh TPC List	Not Present (default)

CELL UPDATE CONFIRM (Step [7A+2](#)) (1.28 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD indicator	FALSE
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common timeslot info	Not Present (default)
- Downlink DPCH timeslots and codes	Not Present (default)
- UL CCTrCh TPC List	Not Present (default)

[HANDOVER FROM UTRAN COMMAND](#)

[The contents of this message is identical to the HANDOVER FROM UTRAN COMMAND-GSM message specified in \[9\] TS 34.108 clause 9 with the following exceptions:](#)

<u>Information Element</u>	<u>Value/remark</u>
<u>Inter-system message</u> <u>- System type</u> <u>- Frequency Band</u> <u>- CHOICE GSM message</u> <u>- Message</u>	<u>GSM</u> <u>Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"</u> <u>Single GSM message</u> <u>GSM HANDOVER COMMAND formatted as BIT STRING (1..512). The contents of the HANDOVER COMMAND see next table.</u>

HANDOVER COMMAND

<u>Same as the HANDOVER COMMAND for M = 2 in clause 26.6.5.1 of GSM 51.010, except that the CHANNEL MODE IE is included with value = speech full rate or half rate version 1</u>
--

HANDOVER FROM UTRAN FAILURE

The contents of this message is identical to the HANDOVER FROM UTRAN FAILURE message specified in [9] TS 34.108 clause 9.

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u>	<u>Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND - GSM message</u>
<u>Integrity check info</u>	<u>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub IEs shall be absent.</u>
<u>— Message authentication code</u>	<u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u>
<u>— RRC Message sequence number</u>	<u>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</u>
<u>Inter-RAT handover failure</u> <u>— Inter-RAT handover failure cause</u>	<u>physical channel failure</u>
<u>Inter-system message</u>	<u>Not Checked</u>

8.3.7.12.5 Test requirement

After step 5 the SS shall receive an CELL UPDATE message.

After step 8 the SS shall receive an PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

After step 9 the SS shall receive an INTER-SYSTEM HANDOVER FAILURE message via the new UTRA configuration.

~~In step 3 the SS shall receive RRC Status message in the UTRAN cell.~~

8.3.7.13 Inter system handover from UTRAN/To GSM/ success / call under establishment

8.3.7.13.1 Definition

8.3.7.13.2 Conformance requirement:

The UE shall be able to receive a HANDOVER FROM UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target cell.

The UE shall:

- 1> establish the connection to the target radio access technology, by using the contents of the IE "Inter-RAT message". This IE contains a message specified in another standard, as indicated by the IE "System type", and carries information about the candidate/ target cell identifier(s) and radio parameters relevant for the target radio access technology. The correspondence between the value of the IE "System type", the standard to apply and the message contained within IE "Inter RAT message" is shown in the following:

<u>Value of the IE "System type"</u>	<u>Standard to apply</u>	<u>Inter RAT Message</u>
<u>GSM</u>	<u>GSM TS 04.18, version 8.5.0 or later</u>	<u>HANDOVER COMMAND</u>
<u>cdma2000</u>	<u>TIA/EIA/IS-2000 or later, TIA/EIA/IS-833 or later, TIA/EIQ/IS-834 or later</u>	

- 1> if the IE "System type" has the value "GSM":

- 2> if the IE "Frequency band" has the value "GSM /DCS 1800 band used":
3> set the BAND_INDICATOR [45] to "ARFCN indicates 1800 band".

- 2> if the IE "Frequency band" has the value " GSM /PCS 1900 band used":

- 3> set the BAND_INDICATOR [45] to "ARFCN indicates 1900 band".

- 1> apply the "Inter RAT Message" according to the "standard to apply" in the table above.

- 1> if the IE "RAB information List" is included in the HANDOVER FROM UTRAN COMMAND message:

- 2> if the IE "RAB information List" includes one IE "RAB Info" with the IE "CN domain Identity" set to "CS domain":

- 3> connect upper layer entities corresponding to the indicated CS domain RAB to the radio resources indicated in the inter-RAT message.

NOTE: In this version of the specification the maximum number of CS domain RABs which may be included in the IE "RAB information List" is limited to 1.

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification.

....

Upon successfully completing the handover, UTRAN should:

- 1> release the radio connection; and
1> remove all context information for the concerned UE.

Upon successfully completing the handover, the UE shall:

- 1> if the USIM is present:
2> store the current START value for every CN domain in the USIM [50];
2> if the "START" stored in the USIM [50] for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:
3> delete the ciphering and integrity keys that are stored in the USIM for that CN domain;
3> inform the deletion of these keys to upper layers.

1> if the SIM is present:

2> store the current START value for every CN domain in the UE:

2> if the "START" stored in the UE for a CN domain is greater than or equal to the value "THRESHOLD" of the variable START_THRESHOLD:

3> delete the ciphering and integrity keys that are stored in the SIM for that CN domain:

3> inform the deletion of these keys to upper layers.

1> if there are any NAS messages with the IE "CN domain identity" set to "CS domain" for which the successful delivery of the INITIAL DIRECT TRANSFER message or UPLINK DIRECT TRANSFER message on signalling radio bearer RB3 or signalling radio bearer RB4 that have not yet been confirmed by RLC:

2> retransmit those NAS messages to the network on the newly established radio connection to the target radio access technology.

1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

NOTE: The release of the UMTS radio resources is initiated from the target RAT.

~~When the UE receives an HANOVER FROM UTRAN COMMAND message from UTRAN the UE shall take the following actions:~~

- ~~— Establish the connection to the other radio access system, by using the contents of the IE "Inter system message". This IE contains candidate/ target cell identifier(s) and radio parameters relevant for the other radio access system.~~
- ~~— For each IE "Remaining radio access bearer", associate the radio access bearer given by the IE "RAB info" to the radio resources in the target system given by the IE "Inter system message". Other information for making the association may be included in the IE "Inter system message" and requirements may be stated in the specifications relevant for the target system [FFS].~~
- ~~— Switch the current call under establishment to the other radio access system.~~

Reference

3GPP TS 25.331 clause 8.3.7.3, [8.3.7.4](#)

[8.3.7.13.3](#) Test purpose

To test that the UE supporting both GSM and UTRAN ~~performs~~ handovers from ~~a~~ UTRAN ~~servicing cell~~ to the indicated channel of GSM target cell when the UE ~~is in call establishment phase and~~ receives an HANOVER FROM UTRAN COMMAND ~~in call establishment phase~~.

To ~~T~~test that the UE continues the call in ~~the~~ GSM cell, after ~~s~~Successful completion of the Handover.

8.3.7.13.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell.

UE : CC State U+0 ([NULL state](#)) in cell 1.

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U+0 ([NULL](#)) on cell 1.

Test Procedure

The SS activates the UTRAN cell and GSM Cell. The UE is triggered to initialise an MO speech call. During the call establishment phase, the SS is configured to not transmit the RLC Acknowledgment for SETUP message. SS configures a dedicated channel in GSM Cell, then sends the UE an HANOVER FROM UTRAN COMMAND indicating the dedicated channel in the target GSM cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANOVER COMPLETE message to the SS in GSM cell. The SS checks MS correctly retransmits CC SETUP message, that was not acknowledged by UTRAN RLC Layer before the Handover, following completion of the handover to GSM cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			To trigger the UE to initialise an MO call
2	→		SETUP	SS does not Acknowledge it
3	SS			The SS starts the GSM cell and configure a dedicated channel SDCCH.
4	←		HANOVER FROM UTRAN COMMAND_GSM	Send on cell 1 via the (UTRAN configuration cell) and the message indicates: the dedicated channel SDCCH.
5	UE			The UE accepts the handover command and switches to the GSM dedicated channel specified in the HANOVER FROM UTRAN COMMAND-GSM
6	→		HANOVER ACCESS	The SS receives this burst on the dedicated channel of cell 92 (GSM cell) It implies that the UE has switched to GSM cell.
7	→		HANOVER ACCESS	
8	→		HANOVER ACCESS	
9	→		HANOVER ACCESS	
10	←		PHYSICAL INFORMATION	
11	→		SABM Void	
12	←		UA Void	
13	→		HANOVER COMPLETE	The SS receives the message on the dedicated channel of GSM cell.
14	->		SETUP	The SS receives the message on the dedicated channel of GSM cell.
15	<-		CHANNEL RELEASE	

Specific message contents

HANOVER FROM UTRAN COMMAND-GSM

[The contents of this message is identical to the HANOVER FROM UTRAN COMMAND-GSM message specified in \[9\] TS 34.108 clause 9 with the following exceptions:](#)

Information Element	Value/remark
<p>Message Type RRC transaction identifier Integrity check info</p> <p>— Message authentication code</p> <p>— RRC Message sequence number</p> <p>Activation time RAB Info</p> <p>Inter-system message</p> <ul style="list-style-type: none"> - System type - Frequency Band <p>- CHOICE GSM message</p> <ul style="list-style-type: none"> - Message 	<p>Arbitrarily selects one integer between 0 to 3</p> <p>The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs are omitted.</p> <p>SS calculates the value of MAC-I for this message and writes to this IE.</p> <p>SS provides the value of this IE, from its internal counter.</p> <p>now</p> <p>Not present</p> <p>GSM</p> <p><u>GSM/DCS-1800 Band Set to "GSM/ PCS 1900" if GSM/ PCS 1900 is used in this test. Otherwise set to "GSM/DCS 1800 Band"</u></p> <p>Single GSM message</p> <p>GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.</p>

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.2 of GSM 11.10-1 version 8.2.0 Release 1999

8.3.7.13.5 Test requirement

At step 14 the SS shall receive SETUP message on the dedicated channel of the GSM cell, ~~and at step~~.

3GPP TSG-T1 Meeting #18
San Antonio, TX, USA, 10th – 14th February 2003

Tdoc # T1030079

3GPP TSG-T1 SIG Meeting #27
San Antonio, TX, USA, 10th – 14th February 2003

Tdoc # T1S030082

CR-Form-v7

CHANGE REQUEST

⌘ TS 34.123-1 CR 427 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 REL-5; Corrections to package 4 test cases on RRC Direct transfer
Source:	⌘ Ericsson
Work item code:	⌘ TEI Date: ⌘ 31/01/2003
Category:	⌘ F Release: ⌘ REL-5
Use <u>one</u> of the following categories:	
F (correction)	
A (corresponds to a correction in an earlier release)	
B (addition of feature),	
C (functional modification of feature)	
D (editorial modification)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	
Use <u>one</u> of the following releases:	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
Rel-4 (Release 4)	
Rel-5 (Release 5)	
Rel-6 (Release 6)	

Reason for change:	⌘ 8.1.6.1 and 8.1.6.2 1. Conformance requirement not up to date. 2. It is more likely that a UE receives a message with a critical extension compared to a message with no IEs included.
Summary of change:	⌘ 8.1.6.1 and 8.1.6.2 1. Part of the conformance requirement moved to have the same order as the core specification. 2. First DOWNLINK DIRECT TRANSFER message is changed to include a critical extension. This also implies that the error cause in step 2 is changed to "Message extension not comprehended". This is also reflected in conformance requirement where parts of section 9.3b from 25.331 is included. Message content of step 2 is also corrected to include the received message type IEs. Additional editorial and reference corrections are also done.
Consequences if not approved:	⌘ Test cases on Direct transfer are not aligned with core requirements.

Clauses affected:	⌘ 8.1.6.1 and 8.1.6.2
	<input type="checkbox"/> Y <input type="checkbox"/> N

Other specs affected:	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	
		<input checked="" type="checkbox"/>	Test specifications		
		<input checked="" type="checkbox"/>	O&M Specifications		
Other comments:	⌘	Affects Rel 99, Rel 4 and Rel 5 test cases.			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.6 Direct Transfer

8.1.6.1 Direct Transfer in CELL DCH state (invalid message reception and no signalling connection exists)

8.1.6.1.1 Definition

8.1.6.1.2 Conformance requirement

If the UE receives a DOWNLINK DIRECT TRANSFER message, and the signalling connection identified with the IE "CN domain identity" does not exist according to the variable ESTABLISHED_SIGNALLING_CONNECTIONS, the UE shall:

1> ignore the content of the DOWNLINK DIRECT TRANSFER message;

1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;

1> include the IE "Identification of received message"; and

1> set the IE "Received message type" to DOWNLINK DIRECT TRANSFER; and

1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the DOWNLINK DIRECT TRANSFER message in the table "Accepted transactions" in the variable TRANSACTIONS; and

1> clear that entry;

1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".

...

If the UE receives a DOWNLINK DIRECT TRANSFER message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows:

1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;

1> include the IE "Identification of received message"; and

1> set the IE "Received message type" to DOWNLINK DIRECT TRANSFER; and

1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the DOWNLINK DIRECT TRANSFER message in the table "Rejected transactions" in the variable TRANSACTIONS; and

1> clear that entry;

1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.

~~If the UE receives a DOWNLINK DIRECT TRANSFER message, and the signalling connection identified with the IE "CN domain identity" does not exist according to the variable ESTABLISHED_SIGNALLING_CONNECTIONS, the UE shall:~~

~~1> ignore the content of the DOWNLINK DIRECT TRANSFER message;~~

~~1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;~~

~~1> include the IE "Identification of received message"; and~~

~~1> set the IE "Received message type" to DOWNLINK DIRECT TRANSFER; and~~

~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the DOWNLINK DIRECT TRANSFER message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~1> clear that entry;~~

~~1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".~~

When the RRC STATUS message has been submitted to lower layers for transmission, the UE shall:

1> continue with any ongoing processes and procedures as if the DOWNLINK DIRECT TRANSFER message has not been received.

...

If the UE receives an RRC message on the DCCH, or addressed to the UE on the CCCH or on the SHCCH, or sent via a radio access technology other than UTRAN, containing an undefined critical message extension, the UE shall:

1> set the variable PROTOCOL_ERROR_REJECT to TRUE;

1> set the IE "Protocol error cause" in the variable PROTOCOL_ERROR_INFORMATION to "Message extension not comprehended";

Reference

3GPP TS 25.331 clause 8.1.9.3a, 8.1.9.4, 9.3b.

8.1.6.1.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message with a non comprehended critical extension ~~which does not include any IEs except IE "Message Type"~~. To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which includes an invalid IE "CN domain identity".

8.1.6.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_DCH (state 6-9 or state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in the CELL_DCH state. The SS transmits an invalid DOWNLINK DIRECT TRANSFER message to the UE. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "Message extension not comprehended ~~ASN.1 violation or encoding error~~" shall ~~also~~ be indicated in IE "Protocol error cause". The SS transmits a DOWNLINK DIRECT TRANSFER message that contains an invalid IE "CN domain identity" to the UE. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "Message not compatible with receiver state" shall ~~also~~ be indicated in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER	Only message type is provided. See specific message content
2		→	RRC STATUS	
3		←	DOWNLINK DIRECT TRANSFER	Sent from a new CN domain.
4		→	RRC STATUS	

Specific Message Contents

DOWNLINK DIRECT TRANSFER (Step 1)

Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
All IEs Critical extensions	Not Present 01H

RRC STATUS (Step 2)

~~Check to see if same message~~ Message content is the same type as found in clause 9 of TS 34.108 Annex A is received, with the following exceptions:

Information Element	Value/remark
Protocol error information -- Protocol error cause	-ASN.1 violation or encoding error
<u>Identification of received message type</u> <u>- Received message type</u> <u>- RRC transaction identifier</u>	<u>DOWNLINK DIRECT TRANSFER</u> <u>Same value in the DOWNLINK DIRECT TRANSFER message in step 1.</u>
<u>Protocol error information</u> <u>- Protocol error cause</u>	<u>Message extension not comprehended</u>

DOWNLINK DIRECT TRANSFER (Step 3)

Use the same message content type as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain as unselected domain Arbitrary message.

RRC STATUS (Step 4)

~~Check to see if same m~~Message content is the same type as found in clause 9 of TS 34.108 Annex A is received, with the following exceptions:

Information Element	Value/remark
<p>Message Type</p> <p>Identification of received message type</p> <ul style="list-style-type: none"> - Received message type - RRC transaction identifier <p>Protocol error information</p> <ul style="list-style-type: none"> - Protocol error cause 	<p>DOWNLINK DIRECT TRANSFER</p> <p>Same value in the DOWNLINK DIRECT TRANSFER message in step 3.</p> <p>Message not compatible with receiver state</p>

8.1.6.1.5 Test requirement

After step 1 the UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting "[Message extension not comprehended](#) ~~ASN.1 violation or encoding error~~" in IE "Protocol error cause" [and "DOWNLINK DIRECT TRANSFER" in IE "Received message type"](#).

After step 3 the UE shall transmit a n RRC STATUS message on the DCCH using AM RLC setting "Message not compatible with receiver state" in IE "Protocol error cause" [and "DOWNLINK DIRECT TRANSFER" in IE "Received message type"](#).

8.1.6.2 Direct Transfer in CELL FACH state (invalid message reception and no signalling connection exists)

8.1.6.2.1 Definition

8.1.6.2.2 Conformance requirement

If the UE receives a DOWNLINK DIRECT TRANSFER message, and the signalling connection identified with the IE "CN domain identity" does not exist according to the variable ESTABLISHED_SIGNALLING_CONNECTIONS, the UE shall:

1> ignore the content of the DOWNLINK DIRECT TRANSFER message;

1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;

1> include the IE "Identification of received message"; and

1> set the IE "Received message type" to DOWNLINK DIRECT TRANSFER; and

1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the DOWNLINK DIRECT TRANSFER message in the table "Accepted transactions" in the variable TRANSACTIONS; and

1> clear that entry;

1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".

...

If the UE receives a DOWNLINK DIRECT TRANSFER message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows:

1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;

1> include the IE "Identification of received message"; and

1> set the IE "Received message type" to DOWNLINK DIRECT TRANSFER; and

1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the DOWNLINK DIRECT TRANSFER message in the table "Rejected transactions" in the variable TRANSACTIONS; and

1> clear that entry;

1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.

~~If the UE receives a DOWNLINK DIRECT TRANSFER message, and the signalling connection identified with the IE "CN domain identity" does not exist according to the variable ESTABLISHED_SIGNALLING_CONNECTIONS, the UE shall:~~

~~1> ignore the content of the DOWNLINK DIRECT TRANSFER message;~~

~~1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;~~

~~1> include the IE "Identification of received message"; and~~

~~1> set the IE "Received message type" to DOWNLINK DIRECT TRANSFER; and~~

~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the DOWNLINK DIRECT TRANSFER message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~1> clear that entry;~~

~~1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".~~

When the RRC STATUS message has been submitted to lower layers for transmission, the UE shall:

1> continue with any ongoing processes and procedures as if the DOWNLINK DIRECT TRANSFER message has not been received.

...

If the UE receives an RRC message on the DCCH, or addressed to the UE on the CCCH or on the SHCCH, or sent via a radio access technology other than UTRAN, containing an undefined critical message extension, the UE shall:

1> set the variable PROTOCOL_ERROR_REJECT to TRUE;

1> set the IE "Protocol error cause" in the variable PROTOCOL_ERROR_INFORMATION to "Message extension not comprehended";

Reference

3GPP TS 25.331 clause 8.1.9.3a, 8.1.9.4, 9.3b.

8.1.6.2.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which does not include any IEs except IE "Message Type". To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which includes an invalid IE "CN domain identity".

8.1.6.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_FACH (state 6-6) or PS_DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. ~~UE: CELL_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

Test Procedure

The UE is in the CELL_FACH state. The SS transmits an invalid DOWNLINK DIRECT TRANSFER message to the UE ~~and does not include all IEs except IE "Message Type"~~. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "Message extension not comprehended ~~ASN.1 violation or encoding error~~" shall ~~also~~ be indicated in IE "Protocol error cause". The SS transmits a DOWNLINK DIRECT TRANSFER message that contains an invalid IE "CN domain identity" to the UE. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "Message not compatible with receiver state" shall ~~also~~ be indicated in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER	Only message type is provided See specific message content
2		→	RRC STATUS	
3		←	DOWNLINK DIRECT TRANSFER	Sent from a new CN domain.
4		→	RRC STATUS	

Specific Message Contents

DOWNLINK DIRECT TRANSFER (Step 1)

Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
All IEs <u>Critical extensions</u>	Not Present <u>01H</u>

RRC STATUS (Step 2)

~~Check to see if the same message~~ Message content is the same ~~type as~~ found in Clause 9 of TS 34.108 Annex A is received, with the following exceptions:

Information Element	Value/remark
Protocol error information – Protocol error cause	–ASN.1 violation or encoding error
<u>Identification of received message type</u> <u>- Received message type</u> <u>- RRC transaction identifier</u>	<u>DOWNLINK DIRECT TRANSFER</u> <u>Same value in the DOWNLINK DIRECT TRANSFER message in step 1.</u>
<u>Protocol error information</u> <u>– Protocol error cause</u>	<u>Message extension not comprehended</u>

DOWNLINK DIRECT TRANSFER (Step 3)

Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain as unselected domain Arbitrary message.

RRC STATUS (Step 4)

~~Check to see if the same m~~ Message content is the same ~~type as~~ found in Clause 9 of TS 34.108 Annex A is received, with the following exceptions:

Information Element	Value/remark
<u>Identification of received message type</u> <u>- Received message type</u> <u>- RRC transaction identifier</u>	<u>DOWNLINK DIRECT TRANSFER</u> <u>Same value in the DOWNLINK DIRECT TRANSFER message in step 3.</u>
<u>Protocol error information</u> <u>– Protocol error cause</u>	<u>Message not compatible with receiver state</u>

8.1.6.2.5 Test requirement

After step 1 the UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting "[Message extension not comprehended](#) ~~ASN.1 violation or encoding error~~" in IE "Protocol error cause" [and "DOWNLINK DIRECT TRANSFER" in IE "Received message type"](#).

After step 3 the UE shall transmit a n RRC STATUS message on the DCCH using AM RLC setting "Message not compatible with receiver state" in IE "Protocol error cause" [and "DOWNLINK DIRECT TRANSFER" in IE "Received message type"](#).

CR-Form-v5.1

CHANGE REQUEST

⌘ **34.123-1 CR 428** ⌘ rev **-** ⌘ Current version: **5.2.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ CR to 34.123-1 REL-5; Correction to package 1 RRC Test Case 8.1.1.7 (Revision of T1S030124)		
Source:	⌘ Anite Telecoms		
Work item code:	⌘ TEI Date: ⌘ 31/1/2003		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) </td> </tr> </table>	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)		

Reason for change:	⌘ Paging with IMSI is not identified as a specific test purpose. The conformance requirement relating to setting of IDNNS is not specified. The conformance requirement for the tested error condition is not specified. Routing basis in INITIAL DIRECT TRANSFER is incorrect. Specific Message Contents contain unnecessary repeat of detail from TS 34.108.
Summary of change:	⌘ Corrections to specified UE initial conditions and expected message contents. Add Paging with IMSI as specific Test Purpose. Added conformance requirement for tested error behaviour and setting of IDNNS. Removed unnecessary detail from specific message contents where it was the same as the default message contents in TS 34.108 Correct routing basis in INITIAL DIRECT TRANSFER.
Consequences if not approved:	⌘ Test case will not correctly test UEs.

Clauses affected:	⌘ 8.1.1.7
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications

Other comments: ☞ Affects R99, REL-4 and REL-5 test cases.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Information Element	Value/remark
- PRACH system information - PRACH info - CHOICE mode - Available Signature	FDD '1111 1111 0000 0000'B

PAGING TYPE 1 (Step 4)

Information Element	Value/remark
Message Type	Only 1 entry
Paging record list	
Paging record	UTRAN identity Equal to the U-RNTI assigned earlier.
- CHOICE Used paging identity	
- U-RNTI	
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 5)

Check to see if the same message type found in TS 34.108, clause 9 is received, with the following exceptions:

Information Element	Value/remark
U-RNTI	Checked to see if it is set to the same values as in step 4
- SRNC identity	
- S-RNTI	
Cell update cause	Paging response

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in TS 34.108, clause 9 with the following exceptions.

Information Element	Value/Remarks
RRC State indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

8.1.1.6.5 Test requirement

After step 4, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response", using an allowed signature according to modified IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 6.

8.1.1.7 Paging for Connection in connected mode (CELL_DCH)

8.1.1.7.1 Definition

8.1.1.7.2 Conformance requirement

When the UE receives a PAGING TYPE 2 message, it shall not affect the state of any other ongoing RRC procedures, when not stated otherwise elsewhere.

The UE shall:

- 1> indicate reception of paging; and
- 1> forward the IE "Paging cause" and the IE "Paging record type identifier" to upper layers.

...

In the UE, the initial direct transfer procedure shall be initiated, when the upper layers request establishment of a signalling connection. This request also includes a request for the transfer of a NAS message.

The UE shall, in the INITIAL DIRECT TRANSFER message:

- 1> set the IE "NAS message" as received from upper layers; and
- 1> set the IE "CN domain identity" as indicated by the upper layers; and
- 1> set the IE "Intra Domain NAS Node Selector" as follows:
 - 2> derive the IE "Intra Domain NAS Node Selector" from TMSI/PMTSI, IMSI, or IMEI; and
 - 2> provide the coding of the IE "Intra Domain NAS Node Selector" according to the following priorities:
 - 1. derive the routing parameter for IDNNS from TMSI (CS domain) or PTMSI (PS domain) whenever a valid TMSI/PTMSI is available;
 - 2. base the routing parameter for IDNNS on IMSI when no valid TMSI/PTMSI is available;
 - 3. base the routing parameter for IDNNS on IMEI only if no (U)SIM is inserted in the UE.

...

The UE shall:

- 1> transmit the INITIAL DIRECT TRANSFER message on the uplink DCCH using AM RLC on signalling radio bearer RB3;
- 1> when the INITIAL DIRECT TRANSFER message has been submitted to lower layers for transmission:
 - 2> confirm the establishment of a signalling connection to upper layers; and
 - 2> add the signalling connection with the identity indicated by the IE "CN domain identity" in the variable ESTABLISHED_SIGNALLING_CONNECTIONS.
- 1> when the successful delivery of the INITIAL DIRECT TRANSFER message has been confirmed by RLC:
 - 2> ~~2>~~—the procedure ends.

If the UE receives an RRC message on the DCCH, or addressed to the UE on the CCCH or on the SHCCH, or sent via a radio access technology other than UTRAN, with a mandatory IE having a value, including choice, reserved for future extension (spare) or a value not used in this version of the specification (e.g. a dummy value), the UE shall:

- 1> if a default value of the IE is defined:
 - 2> treat the rest of the message using the default value of the IE.
- 1> if no default value of the IE is defined:
 - 2> set the variable PROTOCOL_ERROR_REJECT to TRUE;
 - 2> set the IE "Protocol error cause" in the variable PROTOCOL_ERROR_INFORMATION to "Information element value not comprehended";
 - 2> perform procedure specific error handling according to clause 8.

Reference

3GPP TS 25.331 clause 8.1.8.2, 8.1.11, 9.4.

8.1.1.7.3 Test purpose

To confirm that the UE responds to a PAGING TYPE 2 message which includes the IE "Paging Cause" and the IE "Paging Record Type Identifier".

To confirm that the UE responds with a RRC STATUS message after it has received an invalid PAGING TYPE 2 message.

[To Page with the Paging Record Type Identifier set to "IMSI", in order to test the UEs behaviour to this situation which may occur when details of the temporary identity have been lost in the core network.](#)

8.1.1.7.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_DCH state (state 6-9 or state 6-10) as specified in clause 7.4 of TS 34.108, ~~depending on the CN domain(s) supported by the UE, after executing a location registration and/or attach procedure followed by the release of the TMSI of P-TMSI allocated.~~ The UE has been registered in both CS and PS domains.

Test Procedure

The SS transmits an invalid PAGING TYPE 2 message. UE shall respond by transmitting a RRC STATUS message on the uplink DCCH using RLC-AM mode. Finally, SS transmits a PAGING TYPE 2 message, which includes a matched Paging Record Type Identifier. Then the UE shall respond to this message by the transmission of an INITIAL DIRECT TRANSFER message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2		←	PAGING TYPE 2	SS pages UE from a new CN domain, see specific message contents.
3		→	RRC STATUS	The UE shall respond by reporting the protocol error to the SS.
4		←	PAGING TYPE 2	SS pages the UE with a matched identifier and with a valid "paging cause" IE from a new CN Domain.
5		→	INITIAL DIRECT TRANSFER	The UE shall respond to the paging message sent in step 4.

Specific Message Contents

PAGING TYPE 2 (Step 2)

SS sends a message containing a protocol error causing the UE to perform procedure specific error handling.

[Use the same message type found in clause 9 of TS 34.108, with the following exceptions.](#)

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info — Message authentication code — RRC Message sequence number Paging Cause CN Domain Identity Paging Record Type Identifier	Arbitrarily selects an integer between 0 and 3 The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. Set to value "Spare" Set to a new CN Domain Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

RRC STATUS (Step 3)

Use the same message type found in TS 34.108, clause 9, with the following exception.

Information Element	Value/remark
Identification of received message - Received message type - RRC transaction identifier Protocol error information - Protocol Error Cause	PAGING TYPE 2 Checked to see if the value is identical to the same IE in the PAGING TYPE 2 message. Information element value not comprehended

PAGING TYPE 2 (Step 4)

Use the same message type found in TS 34.108, clause 9, with the following exception.

Information Element	Value/remark
Paging cause CN domain identity Paging record type identifier	Terminating Call supported by the UE in the new domain New Domain supported by the UE Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

INITIAL DIRECT TRANSFER (Step 5) – for UEs supporting GSM-MAP core networks

[Check to see if the same message type found in TS 34.108 clause 9 is received, with the following exceptions:](#)

Information Element	Value/remark
Message Type Integrity check info --- Message authentication code --- RRC Message sequence number CN domain identity Intra Domain NAS Node Selector - CHOICE version -- CHOICE CN type --- CHOICE Routing basis ---- Routing parameter --- Entered parameter NAS message START Measured results on RACH	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub IEs are omitted. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>CS domain or PS domain as specified in the PAGING TYPE 2 message in Step 4.</p> <p>R99 GSM TMSI of same PLMN – if CS Domain IMSI (response to IMSI paging) - if PS Domain</p> <p>If the IE “CN domain identity” is equal to “CS domain”, this bit string is set to bits b14 through b23 of the TMSI. The TMSI bits are numbered from b0 to b31, with bit b0 being the least significant. If the IE “CN domain identity” is equal to “PS domain”, bBit string (10) consisting of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.</p> <p>FALSE Not checked Not checked Not checked</p>

INITIAL DIRECT TRANSFER (Step 5) – for UEs supporting ANSI-41 core networks

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number CN domain identity Intra Domain NAS Node Selector - CHOICE version NAS message START Measured results on RACH	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>CS domain or PS domain as specified in the PAGING TYPE 2 message in Step 4.</p> <p>ANSI-41 : Bitstring(14), all bits set to 0 Not checked Not checked Not checked</p>

8.1.1.7.5 Test requirement

After step 2 the UE shall respond to the paging message by transmitting RRC STATUS on the DCCH, stating the protocol error as " Information element value not comprehended ".

After step 4 the UE shall respond to the paging message by transmitting an INITIAL DIRECT TRANSFER message on the uplink DCCH.

CHANGE REQUEST

¶ **TS 34.123-1 CR 429** ¶ rev - ¶ Current version: **5.2.0** ¶

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the ¶ symbols.

Proposed change affects: UICC apps¶ ME Radio Access Network Core Network

Title:	¶ CR to 34.123-1 Rel 5; Corrections to package 4 test cases on RRC connection establishment and release as revision of T1S030191.		
Source:	¶ Ericsson		
Work item code:	¶ TEI	Date:	¶ 12/02/2003
Category:	¶ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release:	¶ Rel 5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change: ¶ The reasons for the changes proposed in this CR are indicated in the following section, summary of change

Summary of change: ¶ Changes in this version compared to T1S030081 marked in yellow.
Changes in this version compared to T1S030191 marked in green.

This CR includes the following changes:

General/ several TCs

- Editorials: Several small editorials including update of conformance requirements with later revision of core specification, correction of references to default messages.

TC 8.1.2.4

- Specific message content, RRC CONNECTION REJECT: Additional clarification is added that the wait time applies after failure of the inter frequency cell re- selection, which is not verified in this test case.

TC 8.1.3.4

- Expected message sequence, step 3: The comment that SS shall not acknowledge the RRC CONNECTION RELEASE COMPLETE message is reworded in order not to constrain the TTCN implementation (which seems to

- be different from what current wording suggests)
- Expected message sequence, step 5 (New): Generic procedure C.1 is called to verify that the UE is in idle mode.

TC 8.1.3.5

- General: A critical message extension is used to verify this invalid message scenario. This involved changes to several parts e.g. inclusion of relevant text from clause 9 should be introduced in conformance requirement. The omission of IEs that is currently in this TC will result in invalid ASN.1 syntax which will not trigger procedure specific error handling.
- Test procedure: the first 6 steps covering transition from idle to CELL_FACH state are proposed to be removed since they are not relevant for this specific test scenario. Likewise, the proposal is to use generic procedure C.2 to verify that the UE is in CELL_FACH after step 9.
- **UE should send RRC CONNECTION RELEASE COMPLETE instead of RRC STATUS.**

TC 8.1.3.8 (TBR)

This TC is removed.

TC 8.1.3.9

- General: See previous
- **UE shall actually send an UPLINK DIRECT TRANSFER message, this editorial in the test requirements was corrected.**
- **The specific message content for ACTIVE SET UPDATE message merged with Panasonics CR T1S030027. This was actually not done as there were no conflict between the CRs and the changes could be taken from Panasonics CR T1S030027 instead.**

Consequences if not approved: ☞ The test cases remain inconsistent, ambiguous and/ or misaligned with core specifications

Clauses affected: ☞ 8.1.2.4, 8.1.3.4, 8.1.3.5, 8.1.3.8, 8.1.3.9

Other specs affected:	☞	<input type="checkbox"/> Y	<input type="checkbox"/> N	Other core specifications	☞	34.123-2	
		<input checked="" type="checkbox"/> X	<input type="checkbox"/>				Test specifications
		<input type="checkbox"/>	<input checked="" type="checkbox"/> X				O&M Specifications

Other comments: ☞ Affects R99, Rel 4 and Rel 5 UEs.
The clauses marked TBR in the above are proposed to be removed. They are anyhow not part of package 4 anymore and hence should be included in a sperate document. For covenience of the review, everything is currently kept in one document

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.2 RRC Connection Establishment

.....

8.1.2.3 RRC Connection Establishment: Failure (V300 is greater than N300)

8.1.2.3.1 Definition

8.1.2.3.2 Conformance requirement

The UE shall initiate the procedure when upper layers in the UE requests the establishment of a signalling connection and the UE is in idle mode (no RRC connection exists).

Upon initiation of the procedure, the UE shall:

- 1> set the IE "Initial UE identity" in the variable INITIAL_UE_IDENTITY according to TS 25.331 subclause 8.5.1;
- 1> submit the RRC CONNECTION REQUEST message for transmission on the uplink CCCH;
- 1> set counter V300 to 1; and
- 1> start timer T300 when the MAC layer indicates success or failure to transmit the message;
- 1> select a Secondary CCPCH according to TS 25.304;
- 1> start receiving all FACH transport channels mapped on the selected Secondary CCPCH.

The UE shall, in the transmitted RRC CONNECTION REQUEST message:

- 1> set the IE "Initial UE identity" to the value of the variable INITIAL_UE_IDENTITY;

...

- 1> if the UE has not yet received an RRC CONNECTION SETUP message with the value of the IE "Initial UE identity" equal to the value of the variable INITIAL_UE_IDENTITY; and

- 1> if cell re-selection or expiry of timer T300 occurs:

the UE shall:

- 1> check the value of V300; and
 - 2> if V300 is equal to or smaller than N300:
 - ...
 - 3> set the IEs in the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.3;
 - ...
 - 3> submit a new RRC CONNECTION REQUEST message to lower layers for transmission on the uplink CCCH;
 - 3> increment counter V300;
 - 3> restart timer T300 when the MAC layer indicates success or failure to transmit the message.
 - ...
 - 2> if V300 is greater than N300:
 - 3> enter idle mode.

3> consider the procedure to be unsuccessful;

3> Other actions the UE shall perform when entering idle mode from connected mode are specified in TS 25.331 subclause 8.5.2;

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.3.3 Test purpose

To confirm that the UE stops retrying to establish the RRC connection if V300 is greater than N300 and goes back to idle mode.

8.1.2.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Before the test starts, SS initializes an internal counter K to 0. The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation. SS shall not respond to any RRC CONNECTION REQUEST message, instead the counter K is increased by 1 every time such a message is received. To arrive at the verdict, the SS checks that a total of (N300+1) such messages are received. SS calls for generic procedure C.1 to check that UE is in Idle Mode state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initializes counter K to 0 and then prompts the operator to make an outgoing call.
2	→		RRC CONNECTION REQUEST	
3				SS increments K by 1.
4				If K is greater than N300, goes to step 5 else proceed to step 2.
5				SS monitor the uplink CCCH for a time period enough for UE to goes back to idle state. SS waits for 5s.
6	↔		CALL C.1	If the test result of C.1 indicates that UE is in Idle Mode state, the test passes, otherwise it fails.

Specific Message Contents

None

8.1.2.3.5 Test requirement

After step 5, counter K shall be equal to (N300+1) and there shall be no uplink transmission in the monitoring period specified in step 5.

8.1.2.4 RRC Connection Establishment: Reject ("wait time" is not equal to 0)

8.1.2.4.1 Definition

8.1.2.4.2 Conformance requirement

When the UE receives an RRC CONNECTION REJECT message on the downlink CCCH, it shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION REJECT message with the value of the variable INITIAL_UE_IDENTITY:

If the values are different, the UE shall ignore the rest of the message;

If the values are identical, the UE shall stop timer T300 and:

1> if the IE "wait time" \neq '0'; and

1> if the IE "frequency info" is present and:

2> if V300 is equal to or smaller than N300:

3> initiate cell selection on the designated UTRA carrier;

3> after having selected and camped on a cell:

4> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

4> set the contents of the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.3;

4> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;

4> transmit an RRC CONNECTION REQUEST message on the uplink CCCH;

4> reset counter V300;

4> start timer T300 when the MAC layer indicates success or failure in transmitting the message;

4> disable cell reselection to original carrier until the time stated in the IE "wait time" has elapsed;

3> if a cell selection on the designated carrier fails:

4> wait for the time stated in the IE "wait time";

4> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

4> set the IEs in the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.3;

4> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;

4> then submit a new RRC CONNECTION REQUEST message to the lower layers for transmission on the uplink CCCH of the original serving cell;

4> increment counter V300;

4> restart timer T300 when the MAC layer indicates success or failure to transmit the message;

2> if V300 is greater than N300:

3> enter idle mode;

3> perform the actions specified in TS 25.331 subclause 8.5.2 when entering idle mode from connected mode;

3> consider the RRC establishment procedure to be unsuccessful;

3> the procedure ends.

...

1> If the IEs "frequency info" not present.....:

2> if V300 is equal to or smaller than N300:

3> wait at least the time stated in the IE "wait time";

3> set the IEs in the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.2;

3> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;

3> submit a new RRC CONNECTION REQUEST message to the lower layers for transmission on the uplink CCCH;

3> increment counter V300;

3> restart timer T300 when the MAC layer indicates success or failure to transmit the message;

2> if V300 is greater than N300:

3> enter idle mode;

3> perform the actions specified in TS 25.331 subclause 8.5.2 when entering idle mode from connected mode;

3> consider the RRC establishment procedure to be unsuccessful;

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.3.9.

8.1.2.4.3 Test purpose

To confirm that the UE retries to establish the RRC connection after the "wait time" elapses, if the UE receives an RRC CONNECTION REJECT message which includes the IE "wait time" not set to 0.

To confirm that the UE performs a cell reselection when receiving an RRC CONNECTION REJECT message, containing relevant frequency information of the target cell to be re-selected.

8.1.2.4.4 Method of test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 4 are active and suitable for camping, but cell 1 is transmitted using a larger power. Cell 1 and cell 4 are being transmitted from different 2 UARFCNs. The transmission power of cell 4 is 15 dB smaller than cell 1.

Table 8.1.2.4

Parameter	Unit	Cell 1	Cell 4
UTRA RF Channel Number		Ch. 1	Ch. 2
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75
P-CCPCH (TDD)	dBm	-60	-75

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation in cell 1. SS rejects the first request by transmitting an RRC CONNECTION REJECT message which indicates a non-zero wait time. In this message, frequency information for cell 4 is available. SS then waits for RRC CONNECTION REQUEST message on the uplink CCCH of cell 4. SS will also monitor the uplink of cell 1 simultaneously to ensure that all transmission activities from cell 1 have ceased. When the UE has successfully camp onto cell 4, it shall send an RRC CONNECTION REQUEST with the same establishment cause as its previous attempt in cell 1. SS responds with an RRC CONNECTION REJECT message, indicating a non-zero "wait time" and omitting the IE "Redirection Info". The UE shall observe the wait time period indicated. After the wait time has elapsed, the UE shall re-transmit RRC CONNECTION REQUEST again. Finally, SS transmits an RRC CONNECTION SETUP message to establish an RRC connection with the UE, and the UE replies with an RRC CONNECTION SETUP COMPLETE message and enters CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	SS prompts the operator to make an outgoing call in cell 1.
2		←	RRC CONNECTION REJECT	This message shall include the IE "wait time" set to 15 seconds and IE "frequency info" set to the UARFCN of cell 4. Note: this wait time would apply after failure of the inter frequency cell re-selection, which is not verified in this test case
3				SS waits for a period of time sufficient for UE to reselect to cell 4. At the same time, it monitors the uplink of cell 1 to make sure that all transmissions have ceased.
4		→	RRC CONNECTION REQUEST	UE shall attempt to re-start an RRC connection establishment procedure in cell 4. The establishment cause shall remain unchanged.
5		←	RRC CONNECTION REJECT	This message shall include the IE "wait time" set to 15 seconds, but with IE "Redirection Info" absent.
6		→	RRC CONNECTION REQUEST	SS waits until the duration specified in IE "wait time" has elapsed and then listens to the uplink CCCH for a second RRC CONNECTION REQUEST message.
7		←	RRC CONNECTION SETUP	SS sends the message to UE to setup an RRC connection with the UE.
8				The UE shall configure the layer 2 and layer 1 in order to access the uplink and downlink DCCH assigned.
9		→	RRC CONNECTION SETUP COMPLETE	

Specific Message Contents

RRC CONNECTION REQUEST (Step 1, [step 4 and step 6](#))

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Initial UE Identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Must be "Originating Call"

RRC CONNECTION REJECT (Step 2) - FDD

Use the same message type found in [clause 9 of TS 34.108 Annex A](#), with the following exception.

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
-Frequency Info	
-CHOICE mode	FDD
-UARFCN uplink (Nu)	Not present
-UARFCN downlink (Nd)	Set to the UARFCN for uplink carrier of cell 4

RRC CONNECTION REJECT (Step 2) – TDD

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
Frequency Info	
CHOICE Mode	TDD
UARFCN (Nt)	Set to a different UARFCN from the carrier of cell 1

~~RRC CONNECTION REQUEST (Step 4 and step 6)~~

~~Same requirement as in step 1.~~

RRC CONNECTION REJECT (Step 5)

Use the same message type found in [clause 9 of TS 34.108 Annex A](#), with the following exception.

Information Element	Value/remark
Wait time	15 seconds

8.1.2.4.5 Test requirement

After step 3 the UE shall have successfully re-selected to cell 4, ~~using information transmitted in IE "frequency info" of RRC CONNECTION REJECT message.~~ UE shall trigger the start of RRC connection establishment by transmitting RRC CONNECTION REQUEST. The establishment cause shall be [originating call](#) ~~similar to the message sent in step 1.~~

After step 5 the UE shall observe the period specified in IE "wait time" of ~~the an~~ RRC CONNECTION REJECT message and not transmit an RRC CONNECTION REQUEST message in this period.

After step 7 the UE shall transmit an RRC CONNECTION SETUP COMPLETE message to SS on uplink DCCH and then establish an RRC connection.

.....

8.1.3 RRC Connection Release

.....

8.1.3.4 RRC Connection Release in CELL_FACH state: Failure

8.1.3.4.1 Definition

8.1.3.4.2 Conformance requirement

When acknowledged mode was used and RLC does not succeed in transmitting the RRC CONNECTION RELEASE COMPLETE message, the UE shall:

- 1> release all its radio resources;
- 1> indicate the release of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
- 1> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
- 1> clear the variable ESTABLISHED_RABS;
- 1> enter idle mode;
- 1> perform the actions specified in TS 25.331 subclause 8.5.2 when entering idle mode;
- 1> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.4.9.

8.1.3.4.3 Test purpose

To confirm that the UE releases all its radio resources and enters idle mode when the UE does not succeed in transmitting the RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS (i.e. the UE-RLC ~~cannot~~ does not receive an acknowledgement for the transmission of the RRC CONNECTION RELEASE COMPLETE message from SS).

8.1.3.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH state (state 6-2 or state 6-4) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the RRC connection has been established, the SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the radio link. When the UE receives this message the UE transmits an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS. The SS ignores the message and does not transmit an RLC STATUS PDU ~~of RLC to acknowledge~~ for this message. SS checks to see that UE continues to release all its radio resources and then enters idle mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought into CELL_FACH state by asking the operator to perform an outgoing call attempt.
2		←	RRC CONNECTION RELEASE	SS ask to disconnect the radio link
3		→	RRC CONNECTION RELEASE COMPLETE	The UE transmits this message using acknowledged mode. The SS ignores this message and shall not transmit an RLC STATUS PDU of RLC to acknowledge for this message.
4				SS checks to make sure that UE releases its all its radio resources and enters idle mode.
<u>5</u>		↔	<u>CALL C.1</u>	<u>If the test result of C.1 indicates that UE is in Idle Mode state, the test passes, otherwise it fails.</u>

Specific Message Contents

None

8.1.3.4.5 Test requirement

After step 3 the UE shall release its L2 signalling radio bearers and radio resources then it shall go to idle mode.

8.1.3.5 RRC Connection Release in CELL_FACH state: Invalid message

8.1.3.5.1 Definition

8.1.3.5.2 Conformance requirement

If the RRC CONNECTION RELEASE message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, and if the "protocol error cause" in PROTOCOL_ERROR_INFORMATION is set to any cause value except "ASN.1 violation or encoding error", the UE shall perform procedure specific error handling as follows:

The UE shall:

- 1> ignore any IE(s) causing the error but treat the rest of the RRC CONNECTION RELEASE message as normal according to TS 25.331 subclause 8.1.4.3, with an addition of the following actions:
- 2> if the RRC CONNECTION RELEASE message was received on the DCCH:
 - 3> set the IE "RRC transaction identifier" in the RRC CONNECTION RELEASE COMPLETE message to the value of "RRC transaction identifier" in the entry for the RRC CONNECTION RELEASE message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - 3> include the IE "Error indication" in the RRC CONNECTION RELEASE COMPLETE message with:
 - 4> the IE "Failure cause" set to the cause value "Protocol error"; and
 - 4> the IE "Protocol error information" set to the value of the variable PROTOCOL_ERROR_INFORMATION.

...

If the UE receives an RRC message on the DCCH, or addressed to the UE on the CCCH or on the SHCCH, or sent via a radio access technology other than UTRAN, containing an undefined critical message extension, the UE shall:

1> set the variable `PROTOCOL_ERROR_REJECT` to `TRUE`;

1> set the IE "Protocol error cause" in the variable `PROTOCOL_ERROR_INFORMATION` to "Message extension not comprehended";

1> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable `TRANSACTIONS`:

2> store the IE "Message type" of the received message in the table "Rejected transactions" in the variable `TRANSACTIONS`; and

2> set the IE "RRC transaction identifier" to zero in that table entry.

1> perform procedure specific error handling according to TS 25.331 clause 8.

Reference

3GPP TS 25.331 clause 8.1.4 [and 9.3b](#)

8.1.3.5.3 Test purpose

When the UE receives an invalid RRC CONNECTION RELEASE message on the downlink DCCH, it shall transmit an RRC **CONNECTION RELEASE COMPLETE STATUS** message that includes the appropriate error cause on the uplink DCCH.

8.1.3.5.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: `CS-DCCH_FACH` (state 6-6) or `PS_DCCH_FACH` (state 6-8) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

~~UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).~~

Test Procedure

The UE is initially in `CELL_FACH` state at idle mode. ~~The System Information Block type 11 messages are modified with respect to the default. In the System Information type 11 messages, reporting of CPICH RSCP is required for intra-frequency reporting when transmitting RACH messages.~~

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall transmit a RRC CONNECTION REQUEST message on the uplink CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH physical channels for uplink and downlink usage. UE shall then enter CELL_FACH state. SS starts timer T305 and waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measurement reading of current cell CPICH RSCP values in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH. Then SS transmits an ~~invalid~~ RRC CONNECTION RELEASE message containing an unexpected critical message extension on the DCCH to request the UE to disconnect the RRC connection. The UE shall transmit an RRC CONNECTION RELEASE COMPLETE STATUS message on the uplink DCCH, which includes the IE "Protocol Error Information". This IE shall contain "Protocol error information" IE which is set to "~~ASN.1 violation or encoding error~~ Message extension not comprehended". Then SS waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measurement reading of current cell CPICH RSCP values in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	Void Master Information Block System Information Block type 1, System Information Block type 11	The UE is idle mode and camped onto cell 1. System Information Block type 1 and 11 to be transmitted are different from the default settings (see specific message contents)
2		↔	Void SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
3		↔	Void SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	Void SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5			Void	SS waits for 5 minutes (for the expiry of T305 timer).
6		→	Void CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the readings of CPICH RSCP for current cell.
7		←	Void CELL UPDATE CONFIRM	
8		←	RRC CONNECTION RELEASE	See specific message contents for this message
9		→	RRC CONNECTION RELEASE COMPLETE STATUS	The IE "Protocol error cause" found in IE "Protocol error information" shall be set to " ASN.1 violation or encoding error <u>Message extension not comprehended</u> ". This message is sent using acknowledged mode.
10			Void	SS waits for 5 minutes (for the expiry of T305 timer).
11		→	Void CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the readings of CPICH RSCP for current cell.
12		←	Void CELL UPDATE CONFIRM	
13		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

~~Master Information Block (Step 1)~~

Information Element	Value/Remarks
MIB Value tag	2

~~System Information Block type 1 (Step 1)~~

Information Element	Value/Remarks
UE Timers and constants in connected mode	
T305	5 minutes.

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	
— FACH Measurement occasion cycle length coefficient	2
— Inter-frequency FDD measurement indicator	FALSE
— Inter-frequency TDD measurement indicator	FALSE
— Inter-RAT measurement indicators	Not Present
Measurement control system information	
— Intra-frequency measurement system information	
— Intra-frequency measurement identity	5
— Intra-frequency cell info list	
— CHOICE intra-frequency cell removal	Not Present
— New intra-frequency info list	
— Intra-frequency cell id	2
— Cell info	
— Cell individual offset	Not Present
— Reference time difference to cell	Not Present
— Read SFN Indicator	FALSE
— CHOICE mode	FDD
— Primary CPICH Info	
— Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
— Primary CPICH TX power	Not Present
— TX Diversity Indicator	FALSE
Cell selection and Re-selection info	
— $Q_{offset_{s,n}}$	0 dB
— Maximum allowed UL TX power	0 dBm
— HCS neighbouring cell information	Not Present
— $Q_{qualmin}$	-20dB
— $Q_{rxlevmin}$	-115dBm
— Cells for measurement	Not Present
— Intra-frequency Measurement quantity	
— Filter Coefficient	Not Present
— CHOICE mode	FDD
— Measurement quantity	CPICH-RSCP
— Intra-frequency measurement for RACH reporting	
— SFN-SFN observed time difference	No report
— Reporting quantity	CPICH-RSCP
— Maximum number of reported cells on RACH	Current cell
— Reporting information for state CELL_DCH	
— Intra-frequency reporting quantity	
— Reporting quantities for active set cells	
— SFN-SFN observed time difference reporting indicator	No report
— Cell synchronisation information reporting indicator	FALSE
— Cell identity reporting indicator	FALSE
— CPICH Ec/No reporting indicator	FALSE
— CPICH-RSCP reporting indicator	FALSE
— Pathloss reporting indicator	FALSE
— Reporting quantities for monitored set cells	
— SFN-SFN observed time difference reporting indicator	No report
— Cell synchronisation information reporting indicator	FALSE
— Cell identity reporting indicator	TRUE
— CPICH Ec/No reporting indicator	FALSE
— CPICH-RSCP reporting indicator	TRUE
— Pathloss reporting indicator	FALSE
— Reporting quantities for detected set cells	Not present
— Measurement Reporting Mode	
— Measurement Reporting Transfer Mode	Acknowledged mode-RLC
— Periodic Reporting/Event Trigger Reporting Mode	Periodic Reporting
— CHOICE report criteria	Intra-frequency measurement reporting criteria
— Parameters required for each event	

Intra-frequency event identity	4a
Triggering condition 1	Not Present
Triggering condition 2	Not Present
Reporting Range Constant	20.0 dB
Cells forbidden to affect reporting range	Not Present
CHOICE mode	FDD
Primary CPICH info	
Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
W	0.0
Hysteresis	1.0 dB
Threshold used frequency	-85 dBm
Reporting deactivation threshold	0
Replacement activation threshold	Not Present
Time to trigger	0msec
Amount of reporting	Infinity
Reporting interval	12 seconds
Reporting Cell Status	
CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
Maximum number of reported cells	2
Inter-frequency measurement system information	Not Present
Traffic volume measurement system information	Not Present

CELL UPDATE (Step 6 and 11)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI value assigned in the execution of procedure P6.
Cell update cause	Check to see if set to 'Periodic cell updating'
Protocol error indicator	Check to see if set to 'FALSE'
Measured results on RACH	
Measurement result for current cell	
CHOICE measurement quantity	Check to see if set to 'CPICH RSCP'
CPICH RSCP	Checked to see if set to within an acceptable range.
Measurement results for monitored cells	Checked to see if this IE is absent.
Protocol error information	Check to see if set to 'FALSE'

RRC CONNECTION RELEASE (Step 8)

Use the RRC CONNECTION RELEASE message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
All IEs	Not Present
Critical extensions	'01'H

RRC CONNECTION RELEASE COMPLETE STATUS (Step 9)

Check to see if the same message type found in clause 9 of TS 34.108A is received, with the following exceptions:

Information Element	Value/remark
Protocol error information	
Protocol error cause	ASN.1 violation or encoding error Message extension not comprehended

8.1.3.5.5 Test requirement

After step 5 and 10, the UE shall initiate cell update procedure by transmitting CELL UPDATE message on CCCH. In this message, IE "cell update cause" shall be set to "periodic cell updating". It shall include IE "measured results on RACH", containing the measurement value for current cell CPICH RSCP.

After step 8 the UE shall transmit an RRC **CONNECTION RELEASE COMPLETE**STATUS message which includes the appropriate cause values in IE "Protocol error information".

After step 12 the UE shall be in CELL_FACH state.

.....

~~8.1.3.8 RRC Connection Release in CELL_FACH state (Network Authentication Failure): Success~~

~~8.1.3.8.1 Definition~~

~~8.1.3.8.2 Conformance requirement~~

~~If the upper layers request the release of the RRC connection, the UE shall:~~

- ~~1> release all its radio resources;~~
- ~~1> enter idle mode;~~
- ~~1> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;~~
- ~~1> if the UE was in CELL_FACH or CELL_PCH or URA_PCH state prior to entering idle mode:

 - ~~2> consider the cell on which the UE was camped prior to entering idle mode to be barred according to TS 25.304; and~~
 - ~~2> consider the barred cell as using the value "allowed" in the IE "Intra-frequency cell re-selection indicator", and the maximum value in the IE "T_{barred}".~~~~

~~Reference~~

~~3GPP TS 25.331 clause 8.1.4a.2.~~

~~8.1.3.8.3 Test purpose~~

~~To confirm that when the upper layers request the release of the RRC connection, the UE releases signalling radio bearer and its radio resources and goes back to the idle.~~

~~To confirm that the UE enters into idle mode by performing cell selection to a non-barred cell.~~

~~8.1.3.8.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 2 cells—Cell 1 and 2 are active.~~

~~UE: "CS_CELL_FACH_Initial" (state 6-2) or "PS_CELL_FACH_Initial" (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.~~

~~Test Procedure~~

Table 8.1.3.8

Parameter	Unit	Cell 1	Cell 2
		T0	T0
UTRA-RF-Channel Number		Ch. 1	Ch. 1
CPICH-Ec	dBm/3.84 MHz	-60	-65

Table 8.1.3.8 illustrates the downlink power to be applied for the 2 cells during the test execution. The UE is in CELL_FACH mode of cell 1. The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain or AUTHENTICATION AND CIPHERING REQUEST for PS domain) and an invalid SQN. The UE shall transmit an UPLINK DIRECT TRANSFER message using AM on DCCH. After SS acknowledges the UPLINK DIRECT TRANSFER message, SS shall wait for T3216 or T3320 to expire in the UE. The SS shall wait for 5s, and then transmit PAGING TYPE 1 message to the UE. The UE shall respond with RRC CONNECTION REQUEST message. SS then transmit RRC CONNECTION REJECT message back to UE. SS then waits for 22 minutes before SS execute generic procedure C.1 in cell 1 to check that UE is in idle mode in cell 1.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER	Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.
2		→	UPLINK DIRECT TRANSFER	After SS acknowledged this message, SS waits for T3216 or T3320 to expire.
3				The SS waits for 5s
4		←	PAGING TYPE 1	SS sends this message in cell 2.
5		→	RRC CONNECTION REQUEST	
6		←	RRC CONNECTION REJECT	
7				SS waits 22 minutes for T _{barred} to expire.
8		↔	CALL C.1	SS execute this generic procedure in cell 1. If the test result of C.1 indicates that UE is in idle mode, the test passes; otherwise it fails.

Specific Message Content

DOWNLINK DIRECT TRANSFER (Step 1)

Use the same message sub-type as found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION REQUEST (CS domain) or AUTHENTICATION AND CIPHERING REQUEST (PS domain)

~~UPLINK DIRECT TRANSFER (Step 2)~~

Information Element	Value/remark
Message Type Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION FAILURE (CS domain) or AUTHENTICATION AND CIPHERING FAILURE (PS domain)
Measured results on RACH	Not checked

~~8.1.3.8.5 Test requirement~~

~~After step 1 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.~~

~~After step 4, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 2.~~

~~After step 7 the UE shall be in idle mode of cell 1.~~

8.1.3.9 RRC Connection Release in CELL_DCH state (Network Authentication Failure): Success

8.1.3.9.1 Definition

8.1.3.9.2 Conformance requirement

[1. TS 25.331](#)

If the upper layers request the release of the RRC connection, the UE shall:

- 1> release all its radio resources;
- 1> enter idle mode;
- 1> perform other actions when entering idle mode from connected mode as specified in subclause 8.5.2;
- 1> if the UE was in CELL_DCH state prior to entering idle mode:
 - 2> consider all cells that were in the active set prior to entering idle mode to be barred according to [4]; and
 - 2> consider the barred cells as using the value "allowed" in the IE "Intra-frequency cell re-selection indicator", and the maximum value in the IE "T_{barred}".

[2. TS 24.008](#)

[Following a UMTS authentication challenge, the MS may reject the core network, on the grounds of an incorrect AUTN parameter \(see 3GPP TS 33.102\). This parameter contains two possible causes for authentication failure:](#)

...

[SQN failure:](#)

If the MS considers the SQN (supplied by the core network in the AUTN parameter) to be out of range, it shall send a AUTHENTICATION FAILURE message to the network, with the reject cause 'Synch failure' and a re-synchronization token AUTS provided by the SIM (see 3GPP TS 33.102). The MS shall then follow the procedure described in clause 4.3.2.6 (d) of TS 24.008.

....

Authentication failure (reject cause 'synch failure'):

The MS shall send an AUTHENTICATION FAILURE message, with reject cause 'synch failure,' to the network and start the timer T3216.

.....

If the timer T3216 expires, then the MS shall behave as described in clause 4.3.2.6.1 of TS 24.008.

Reference

3GPP TS 25.331 clause 8.1.4a-2.

[3GPP TS 24.008 clause 4.3.2.5.1, 4.3.2.6](#)

8.1.3.9.3 Test purpose

To confirm that when the upper layers request the release of the RRC connection, the UE releases signalling radio bearer and its radio resources and goes back to ~~the~~ idle mode.

To confirm that the UE enters ~~into~~ idle mode, bars the cell for a period T_{barred} ~~by and hence~~ performs cell-selection to another (non-barred) cell.

8.1.3.9.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1,2 and 3 are active.

UE: "CS-DCCH+DTCH_DCH" (state 6-9) or " PS-DCCH+DTCH_DCH " (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.1.3.9 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.1.3.9

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm/3.84 MHz	-60	-60	-85	-65	-85	-70

SS switches the downlink transmission power of the 3 cells to the columns "T1" in Table 8.1.3.9. UE transmits a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 and 3 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE in cell 1 an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information", indicating the addition of cell 2 into the active set, on DCCH using AM RLC.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain or AUTHENTICATION AND CIPHERING REQUEST for PS domain) and an invalid SQN. The UE shall transmit an UPLINK DIRECT TRANSFER message using AM on DCCH. After SS acknowledges the UPLINK DIRECT TRANSFER message, SS shall wait for T3216 or T3320 to expire in the UE. The UE shall then deem that the network has failed the authentication check, release the RRC connection, enter idle mode, bar cell 1 and 2 and perform cell re-selection. Then SS wait for 5 s. SS transmits PAGING TYPE 1 message ~~in cell 3~~. The UE shall respond with RRC CONNECTION REQUEST message in cell 3. SS then transmit RRC CONNECTION REJECT message back to UE. SS then waits for T_{barred} to expire (22 minutes) before SS execute generic procedure C.1 in cell 1 to check that UE is in idle mode in cell 1.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	MEASUREMENT REPORT	See specific message contents for this message.
2		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information" for cell 2.
3		→	ACTIVE SET UPDATE COMPLETE	The UE adds the radio link in cell 2.
4		←	DOWNLINK DIRECT TRANSFER	Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.
5		→	UPLINK DIRECT TRANSFER	After SS acknowledged this message, SS waits for T3216 or T3320 to expire.
6				The SS waits for 5s.
7		←	PAGING TYPE 1	SS sends this message in cell 3.
8		→	RRC CONNECTION REQUEST	<u>SS checks that the UE sends this message in cell 3</u>
9		←	RRC CONNECTION REJECT	
10				SS waits 22 minutes for T _{barred} to expire.
11		↔	CALL C.1	SS execute this generic procedure in cell 1. If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT REPORT (Step 1)

Information Element	Value/remark
<p>Message Type Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Measurement identity Measured Results</p> <ul style="list-style-type: none"> - Intra-frequency measured results <ul style="list-style-type: none"> - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss <p>Measured results on RACH Additional measured results Event results</p> <ul style="list-style-type: none"> - Intra-frequency measurement event results <ul style="list-style-type: none"> - Intra-frequency event identity - Cell measurement event results <ul style="list-style-type: none"> - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code 	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</p> <p>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>1</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is present</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is present and includes IE COUNT-C-SFN frame difference</p> <p>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is present</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is present and includes IE COUNT-C-SFN frame difference</p> <p>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is present</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absent</p> <p>1a</p> <p>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108</p>

ACTIVE SET UPDATE (Step 2)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - DPCH frame offset	Set to same code as assigned for cell 2 Calculated value from Cell synchronisation information

ACTIVE SET UPDATE COMPLETE (Step 3)

Only the message type of this message is checked.

DOWNLINK DIRECT TRANSFER (Step 4)

Use the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION REQUEST (CS domain) or AUTHENTICATION AND CIPHERING REQUEST (PS domain) <u>with an invalid SQN value.</u>

UPLINK DIRECT TRANSFER (Step 5)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION FAILURE(CS domain) or AUTHENTICATION AND CIPHERING FAILURE (PS domain)
Measured results on RACH	Not checked

8.1.3.9.5 Test requirement

At step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 2 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 4 the UE shall transmit an UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 7, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 3.

After step 10 the UE shall be in idle mode in cell 1.

CR-Form-v7

CHANGE REQUEST

TS 34.123-1 CR 430 # rev **-** # Current version: **5.2.0**

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# CR to 34.123-1 R5; Corrections to package 4 test cases on Physical Channel Reconfiguration				
Source:	# Ericsson				
Work item code:	# TEI	Date:	# 12/02/2003		
Category:	# F	Release:	# Rel 5		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	F (correction)		2 (GSM Phase 2)		
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)		
	B (addition of feature),		R97 (Release 1997)		
	C (functional modification of feature)		R98 (Release 1998)		
	D (editorial modification)		R99 (Release 1999)		
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)		
			Rel-5 (Release 5)		
			Rel-6 (Release 6)		

Reason for change:	# 8.2.6.3. - The current TC changes the UL scrambling code. This will normally not be detected by the UE as a synchronisation failure. 8.2.6.4. - Editorial changes. 8.2.6.11. - A "Modify" measurement command is indicated, but the indicated measurement identity does not exist yet. - There is an inconsistency between the Uplink Transport channel type "RACHorCPCH" and the measurement validity "All states". 8.2.6.12. - Editorial changes. 8.2.6.37. - Details regarding triggering of 2b event for non-used frequency are incorrect. - Details regarding triggering of 1a event are incorrect (step 14). 8.2.6.38. - Detailed message contents is missing - Cell signal levels do not necessarily trigger the indicated events.
Summary of change:	# 8.2.6.3. - The physical channel reconfiguration is used to execute a change of the DL

scrambling code instead of the UL scrambling code. The change of DL scrambling code will result in a synchronisation failure.

8.2.6.11.

- The measurement command is changed to a "setup" measurement command.
- The measurement validity is updated to "all states except CELL_DCH".

8.2.6.37.

- Details regarding triggering of 2b event for non-used frequency are corrected (e.g. addition of "threshold non-used frequency").
- UL UARFCN is removed in steps 10 and 17 since the duplex distance will depend on the frequency band.
- Signal level of cell5 is changed at T2 in order to avoid that cell2 triggers the event in step 9.
- The CIO for cell5 is increased to 10dB in order to make sure that cell5 will trigger event 1a in step14.
- Steps 15/16 are indicated as not applicable to UEs which do not require CM.

8.2.6.38.

- Detailed message contents is added.
- Where required, cell signal levels are adapted to ensure meeting triggering/leaving conditions.

Consequences if not approved: ☹ Indicated errors will remain in the TC's.

Clauses affected: ☹ 8.2.6.3; 8.2.6.4; 8.2.6.11; 8.2.6.12; 8.2.6.37; 8.2.6.38

	Y	N		☹
Other specs Affected:		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ☹ Affects R99, Rel4 and Rel5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.6.3 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and reversion to old channel)

8.2.6.3.1 Definition

8.2.6.3.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a PHYSICAL CHANNEL RECONFIGURATION message:

...

2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.6.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message before timer T312 expiry.

8.2.6.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes new **DUL** scrambling code . However, the SS keeps its current dedicated physical channel configuration. The UE fails to synchronise with the SS on the new physical channel and after T312 timer expires the UE shall revert to the old configuration. Finally, the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC specifies "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new DUL scrambling code for FDD and First timeslot code list for TDD.
2				The SS does not reconfigure the physical channel so that the UE fails to synchronise on the new physical channel.
3		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expires, the UE shall revert to the old configuration and transmits this message.
4		→	MEASUREMENT REPORT	

Specific Message Contents

[MEASUREMENT CONTROL \(Step 0a\)](#)

[Use the MEASUREMENT CONTROL message as defined in \[9\] TS 34.108 clause 9, with the following exceptions:](#)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Measurement Identity</u>	<u>7</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement reporting mode</u>	<u>Acknowledged mode RLC</u>
- <u>Measurement Report Transfer Mode</u>	<u>Periodical Reporting</u>
- <u>Periodical Reporting / Event Trigger Reporting Mode</u>	
<u>Additional measurement list</u>	<u>Not Present</u>
<u>CHOICE measurement type</u>	<u>Traffic Volume Measurement</u>
- <u>Traffic volume measurement object list</u>	
- <u>Uplink transport channel type</u>	<u>DCH</u>
- <u>UL Target Transport Channel ID</u>	<u>5</u>
- <u>Traffic volume measurement quantity</u>	
- <u>Measurement quantity</u>	<u>RLC Buffer Payload</u>
- <u>Time Interval to take an average or a variance</u>	<u>Not Present</u>
- <u>Traffic volume reporting quantity</u>	
- <u>RLC Buffer Payload for each RB</u>	<u>True</u>
- <u>Average of RLC Buffer Payload for each RB</u>	<u>False</u>
- <u>Variance of RLC Buffer Payload for each RB</u>	<u>False</u>
- <u>Measurement validity</u>	
- <u>UE state</u>	<u>All states</u>
- <u>CHOICE Reporting criteria</u>	<u>Periodical Reporting Criteria</u>
- <u>Amount of reporting</u>	<u>Infinity</u>
- <u>Reporting interval</u>	<u>8000</u>
<u>DPCH compressed mode status</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

<u>Information Element</u>	<u>Value/Remarks</u>
<u>Measurement identity</u>	<u>7</u>
<u>Measured Results</u>	
- <u>CHOICE measurement</u>	<u>Traffic volume measured results list</u>
- <u>Traffic volume measurement results</u>	
- <u>RB identity</u>	<u>1</u>
- <u>RLC buffer payload</u>	<u>Check to see if this IE is present</u>
- <u>RLC buffer payload average</u>	<u>Check to see if this IE is absent</u>
- <u>RLC buffer payload variance</u>	<u>Check to see if this IE is absent</u>
- <u>RB identity</u>	<u>2</u>
- <u>RLC buffer payload</u>	<u>Check to see if this IE is present</u>
- <u>RLC buffer payload average</u>	<u>Check to see if this IE is absent</u>
- <u>RLC buffer payload variance</u>	<u>Check to see if this IE is absent</u>
- <u>RB identity</u>	<u>3</u>
- <u>RLC buffer payload</u>	<u>Check to see if this IE is present</u>
- <u>RLC buffer payload average</u>	<u>Check to see if this IE is absent</u>
- <u>RLC buffer payload variance</u>	<u>Check to see if this IE is absent</u>
- <u>RB identity</u>	<u>4</u>
- <u>RLC buffer payload</u>	<u>Check to see if this IE is present</u>
- <u>RLC buffer payload average</u>	<u>Check to see if this IE is absent</u>
- <u>RLC buffer payload variance</u>	<u>Check to see if this IE is absent</u>
<u>Measured results on RACH</u>	<u>Check to see if this IE is absent</u>
<u>Additional measured results</u>	<u>Check to see if this IE is absent</u>
<u>Event results</u>	<u>Check to see if this IE is absent</u>

PHYSICAL CHANNEL RECONFIGURATION (FDD) (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	4
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain
Downlink information for each radio links	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to different value than default setting in TS34.108 clause 6.1 (FDD)
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value : Default DPCH Offset Value mod 38400
- Power offset P _{Pilot-DPCH}	0
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	5
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	0
- Scrambling code change	No change
- TPC combination index	0
- SSTD Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

PHYSICAL CHANNEL RECONFIGURATION (TDD) (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.6.3.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.6.4 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and cell reselection)

8.2.6.4.1 Definition

8.2.6.4.2 Conformance requirement

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.

...

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a PHYSICAL CHANNEL RECONFIGURATION message:

...

- 2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

8.2.6.4.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message after UE completes a cell update procedure when the UE fails synchronise on the old physical channel after the UE cannot synchronise on the new physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new UL scrambling code, but the SS does not configure the new physical channel and release the old configuration. The UE fails to synchronise on the new dedicated physical channel and tries to revert to the old configuration. But the SS already deleted the old physical channel configuration and the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3		←	PHYSICAL CHANNEL RECONFIGURATION	The message includes new UL scrambling code for FDD and First timeslot code list for TDD .
4				SS does not configure any dedicated physical channel and at the same time, it deletes the old configuration so the UE cannot reconfigure the new physical channel and cannot revert to the old configuration.
5		→	CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
7				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
9		→	PHYSICAL CHANNELRECONGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [Annex A Clause 9 of TS 34.108](#), with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [Clause 9 of TS 34.108](#)~~Annex A~~, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [Clause 9 of TS 34.108 Annex A](#) for FDD ~~or and Annex A for~~ TDD with the following exceptions:

Information Element	Value/remark
U-RNTI	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 6) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 4
RRC State indicator	CELL_DCH
UplinkDPCH Info	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 6) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 4
RRC State Indicator	CELL_DCH
Uplink DPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

PHYSICAL CHANNEL RECONGURATION FAILURE (Step 9)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.6.4.5 Test requirement

After step 4 the UE shall transmits a CELL UPDATE message using RLC-TM mode on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

After step 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.6.11 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.6.11.1 Definition

8.2.6.11.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a PHYSICAL CHANNEL RECONFIGURATION message:

...

2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.6.11.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message before the T312 expiry.

8.2.6.11.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: [PS-DCCH+DTCH_DCH](#) (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_FACH to CELL_DCH. However, the SS keeps its current physical channel configuration and then the UE cannot synchronise with the SS. After T312 expires, the UE attempt to revert to the old configuration. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
3a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
3b		→	MEASUREMENT REPORT	
4		←	PHYSICAL CHANNEL RECONFIGURATION	
5				The SS does not reconfigure the physical channel, hence the UE shall detect a failure to reconfigure to the new physical channel.
6		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expires the UE reverts to the old configuration and transmits this message.
7		→	MEASUREMENT REPORT	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [Annex A clause 9 of TS 34.108](#) for FDD [and Annex A](#) for TDD.

MEASUREMENT CONTROL (Step 3a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states except CELL_DCH
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 3b and 7)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in ~~Annex A~~[clause 9 of TS 34.108](#) for FDD [or](#) ~~Annex A~~ for TDD..

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 6)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.6.11.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 3a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying "physical channel failure" in IE "failure cause".

After step 6, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.6.12 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.6.12.1 Definition

8.2.6.12.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and

- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

- 1> transmit no response message.

...

The UE shall:

- 1> in case of reception of a PHYSICAL CHANNEL RECONFIGURATION message:

...

- 2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4

8.2.6.12.3 Test purpose

To confirm that the UE initiates a cell update procedure after it fails to reconfigure the new physical channel and selects another cell.

To confirm that UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message after UE completes cell update procedure.

8.2.6.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108 in cell 1

Test Procedure

Table 8.2.6.12

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.6.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_DCH state in cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, but the SS does not reconfigure L1 accordingly. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.6.12. As a result, the UE fails to synchronise on the new physical channel before timer T312 expires and reselect cell 2 and then the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "Cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	PHYSICAL CHANNEL RECONFIGURATION	
5				The SS does not configure the new dedicated physical channel in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.6.12.
6			Void	
7		→	CELL UPDATE	This message includes the value "cell reselection" set in IE "Cell update cause".
8		←	CELL UPDATE CONFIRM	
9			Void	
10		→	PHYSICAL CHANNEL RECONGURATION FAILURE	UE shall transmit this message in the cell 2.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [Clause 9 of TS 34.108 Annex A](#) for FDD [or Annex A](#) for TDD.

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#) for FDD [or Annex A](#) for TDD.

CELL UPDATE (Step 7)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [Clause 9 of TS 34.108 Annex A](#) for FDD [or Annex A](#) for TDD with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [Clause 9 of TS 34.108 Annex A](#).

PHYSICAL CHANNEL RECONGURATION FAILURE (Step 10)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.6.12.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 6 the UE shall transmit a CELL UPDATE message using RLC-TM mode on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 9 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.6.37 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing re-initialised)

8.2.6.37.1 Definition

8.2.6.37.2 Conformance requirement

In case the reconfiguration procedure is used to remove all existing RL(s) in the active set while new RL(s) are established the UE shall:

- 1> perform the physical layer synchronisation procedure A as specified in TS_25.214
- 1> apply the hard handover procedure as specified (below);
- 1> be able to perform this procedure even if no prior UE measurements have been performed on the target cell and/or frequency.

...

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

...

When performing hard handover with change of frequency, the UE shall:

- 1> stop all intra-frequency and inter-frequency measurements on the cells listed in the variable CELL_INFO_LIST ~~until a MEASUREMENT CONTROL message is received from UTRAN.~~ Each stopped measurement is restarted when a MEASUREMENT CONTROL message is received with the corresponding measurement identity.

...

When the UE is in CELL_DCH state and receives any of the messages causing the UE to perform a hard handover, the UE shall check the IE "Timing indication" in that message and:

- 1> if IE "Timing indication" has the value "initialise" (i.e. timing re-initialised hard handover):
 - 2> read SFN on target cell identified by the first radio link listed in the IE "Downlink information per radio link list" included in that message;
 - 2> set the CFN according to the following formula:
 - 3> for FDD:

$$CFN = (SFN - (DOFF \text{ div } 38400)) \text{ mod } 256$$

where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN.

...

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):

2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" received in this message, when the new configuration received in this message is taken into use;

...

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell_DCH to Cell_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

1> set the 20 MSB of the HFN component of COUNT-C for TM-RLC to the value of the latest transmitted IE "START" or "START List" for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and

1> set the remaining LSBs of the HFN component of COUNT-C to zero;

1> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN;

1> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now" for this IE;

1> calculate the START value according to subclause 8.5.9;

1> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;

1> at the CFN value as indicated in the response message in the IE "COUNT-C activation time":

2> set the 20 MSB of the HFN component of the COUNT-C variable to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and

2> set the remaining LSBs of the HFN component of COUNT-C to zero;

2> increment the HFN component of the COUNT-C variable by one;

2> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;

2> step the COUNT-C variable, as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

Reference

3GPP TS 25.331 clauses 8.2.2.3, [8.2.2.4](#), 8.3.5, 8.5.15.2, 8.6.6.15, 8.6.6.28

8.2.6.37.3 Test Purpose

To confirm that the UE is able to perform a hard-handover with change of frequency, with and without prior measurements on the target frequency.

To confirm that the UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message when the procedure has been initiated with the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE stops intra-frequency measurements after the inter-frequency handover has been performed, until a MEASUREMENT CONTROL message is received from the SS.

To confirm that the UE computes as it shall the CFN to be used after the handover.

To confirm that the UE deactivates compressed mode ([if required](#)) when it has been ordered to do so in the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE includes the IE "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info") in the response message if ciphering is active for any radio bearer using RLC-TM.

8.2.6.37.4 Method of test

Initial Condition

System Simulator: 5 cells – Cell 1 and cell 2 on frequency f_1 , cell 4 and cell 5 on frequency f_2 , and cell 6 on frequency f_3 . Cells 2 and 5 shall have the same primary scrambling code.

UE: "CS-DCCH+DTCH_DCH" (state 6-9) or "PS-DCCH+DTCH_DCH" (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the test case shall be run twice, once starting from state 6-9, once starting from state 6-10. Ciphering shall be activated.

[Related ICS/IXIT statements](#)

- [Compressed mode required yes/no](#)

Test Procedure

Table 8.2.6.37-1 illustrates the downlink power to be applied for the 5 cells, as well as the frequency and scrambling code for each cell.

Table 8.2.6.37-1

Parameter	Unit	Cell 1			Cell 2			Cell 4			Cell 5			Cell 6		
Frequency		f_1			f_1			f_2			f_2			f_3		
Scrambling code		Scrambling code 1			Scrambling code 2			Scrambling code 3			Scrambling code 2			Scrambling code 4		
		T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2
CPICH Ec	dBm/3.8 4 MHz	-60	-60	-75	-95	-	-	-	-	-	-60	-60	-	-50	-	-50
						60	75	60	60	60			65 70		50	

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

At instant T1, the downlink power is changed according to what is shown in table 8.2.6.37-1. Cell 2 should then trigger event 1a as has been configured through the default System Information Block Type 11. The UE shall thus send a MEASUREMENT REPORT to the SS, triggered by cell 2.

The SS adds then cell 2 to the active set of the Ue, by sending an ACTIVE SET UPDATE message to the UE. The UE shall answer with an ACTIVE SET UPDATE COMPLETE message.

The SS configures then compressed mode ([if required](#)), to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message ([if required](#)).

At instant T2, the downlink power is changed according to what is shown in table 8.2.6.37-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 4 on frequency f_2 . The UE is also ordered to stop compressed mode ([if required](#)) after the handover.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering. The SS shall restart incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

The SS then waits for 20 seconds, and checks that no MEASUREMENT REPORT is received from the UE.

The SS sends then a MEASUREMENT CONTROL message to the UE, to modify the intra-frequency cell info list of the UE. About 640 ms after, a MEASUREMENT REPORT message shall be received from the UE, triggered by cell 5. Subsequent MEASUREMENT REPORT messages shall be received at 4 seconds interval.

Only if the UE requires compressed mode for performing interfrequency measurements, ~~t~~The SS sends ~~then~~ a MEASUREMENT CONTROL message to the UE that sets up inter-frequency measurements, but does not activate compressed mode in that message. It waits then for 20 seconds, and checks that no MEASUREMENT REPORT message triggered by cell 6 is received.

Independent of the UE requiring compressed mode, ~~t~~The SS then continues by sendings a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 6 on frequency f_3 .

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS changes the power of the cells according to column T1 in table 8.2.6.37-1
2		→	MEASUREMENT REPORT	Event 1a is triggered by cell 2 in the UE, which sends a MEASUREMENT REPORT message to the SS
3		←	ACTIVE SET UPDATE	The SS adds cell 2 to the active set of the UE.
4		→	ACTIVE SET UPDATE COMPLETE	The UE answers with an ACTIVE SET UPDATE COMPLETE message to the SS
5		←	PHYSICAL CHANNEL RECONFIGURATION	The SS downloads the compressed mode parameters in the UE <u>(if required)</u> .
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of the compressed mode parameters <u>(only if compressed mode was configured)</u> .
7		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE, and activates compressed mode <u>(if required)</u> .
8				The SS changes the power of the cells according to column T2 in table 8.2.6.37-1.
9		→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

10	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 4 on frequency f_2 .
11	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.
12			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
13	←	MEASUREMENT CONTROL	The SS updates the list of intra-frequency cells in the UE.
14	→	MEASUREMENT REPORT	Cell 5 triggers event 1a in the UE, which sends a MEASUREMENT REPORT message to the SS. Subsequent MEASUREMENT REPORT messages shall be received from the UE at 4 seconds interval.
15	←	MEASUREMENT CONTROL	The SS sets up an inter-frequency measurement in the UE (if compressed mode is required), but does not activate compressed mode.
16			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
17	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 6 on frequency f_3 .
18	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

MEASUREMENT REPORT (Step 2)

Information Element	Value/Remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss	1 Check that this IE is absent Check that this IE is absent Check that this IE is absent Scrambling code 1 (or scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that this IE is present and includes IE COUNT-C-SFN frame difference Scrambling code 2 (or scrambling code 1 if the previous scrambling code included by the UE was scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent
Measured results on RACH Additional measured results	Check that this IE is absent Check that this IE is absent
Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	1a Scrambling code 2

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/Remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - SSDT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - SCCPCH information for FACH	Scrambling code 2 Reference to TS34.108 clause 6.10 Parameter Set FDD P-CPICH can be used. Calculated value from Cell synchronisation information Not Present Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" Any value between 0 and Spreading factor-1 (use different values for each DPCH in case several DPCHs are allocated to the UE). Not Present 0 Not Present Not Present Not Present Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 5 for the CS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information per radio link list	2 radio links
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 1
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0

- Secondary CPICH info	Not present
- DL channelisation code	Not present
- Secondary scrambling code	Reference to TS34.108 clause 6.10
- Spreading factor	Parameter Set
- Code number	Same as the code currently allocated to the UE in cell 1
- Scrambling code change	Code change
- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 2
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0
- Secondary CPICH info	Not present
- DL channelisation code	Not present
- Secondary scrambling code	Reference to TS34.108 clause 6.10
- Spreading factor	Parameter Set
- Code number	Same as the code currently allocated to the UE in cell 2
- Scrambling code change	No code change
- TPC combination index	0

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 5 for the PS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	(Current CFN+(256 - TTI/10msec)) mod 256 Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 7)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm

- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 mseconds
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	
- Inter-frequency measured results list	
- Frequency info	FDD
-CHOICE mode	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance 190 MHz)
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- UARFCN downlink	Check that this IE is absent
- UTRA carrier RSSI	Check that the value of this IE is set to 2 cells reported
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (or scrambling code 2)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 2 (or scrambling code 3 if the previous scrambling code included by the UE was scrambling code 2)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent

<p>Event results</p> <ul style="list-style-type: none"> - Inter-frequency measurement event results - Interra-frequency event identity - <u>Inter-frequency cells</u> - Cell measurement event results <u>Frequency info</u> - <u>CHOICE mode</u> - <u>UARFCN uplink</u> - <u>UARFCN downlink</u> - <u>Non freq related measurement event results</u> - Primary CPICH info - Primary scrambling code 	<p>2b</p> <p><u>FDD</u> <u>Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)</u> <u>Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2</u></p> <p>Check that the value of this IE is set to Scrambling code 3</p>
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PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	FDD
- CHOICE mode	UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is 190 MHz) <u>Not present</u>
- UARFCN uplink (Nu)	
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	Initialise
- Downlink DPCH info common for all RL	0
- Timing indication	Not Present
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	Reference to TS34.108 clause 6.10
- Downlink rate matching restriction information	Parameter Set
- Spreading factor	Reference to TS34.108 clause 6.10
- Fixed or flexible position	Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10
- CHOICE SF	Parameter Set
- DPCH compressed mode info	Reference to TS34.108 clause 6.10
- TGPSI	Parameter Set
- TGPS Status Flag	1
- TGCFN	Deactivate
- Transmission gap pattern sequence configuration parameters	Not present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Arbitrary value between 0..306688 by step of 512
Downlink information per radio link list	1 radio link
Downlink information for each radio link	FDD
- CHOICE mode	Scrambling code 3
- Primary CPICH info	Not present
- Cell ID	Not present

- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value of DPCH Frame Offset modulo 38400
- Secondary CPICH info	Not present
- DL channelisation code	Reference to TS34.108 clause 6.10 Parameter Set
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Any value between 0 and Spreading factor-1
- Scrambling code change	Not Present
- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Steps 11 and 18 for the CS case)

Information Element	Value/Remark
Message Type	
RRC transaction identifier	Checked to see if it is set to identical value of the same IE in the downlink PHYSICAL CHANNEL RECONFIGURATION message
Integrity check info	The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Uplink integrity protection activation info	Check that not present
CHOICE mode	FDD
COUNT-C activation time	Check that this IE shall be present
Radio bearer uplink ciphering activation time info	Check that not present
Uplink counter synchronisation info	Check that present
>RB with PDCP information list	Check that absent
>START list	Check that this IE is set to 1
>>CN Domain identity	Check that this IE is set to CS Domain
>>START	Not checked

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Steps 11 and 18 for the PS case)

Information Element	Value/Remark
Message Type	
RRC transaction identifier	Checked to see if it is set to identical value of the same IE in the downlink PHYSICAL CHANNEL RECONFIGURATION message
Integrity check info	The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Uplink integrity protection activation info	Check that not present
CHOICE mode	FDD
COUNT-C activation time	Check that not present

Radio bearer uplink ciphering activation time info	Check that not present
Uplink counter synchronisation info	Check that not present

MEASUREMENT CONTROL (Step 13)

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Not present
Additional measurements list	Not present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove all intra-frequency cells
- New intra-frequency info list	2 new intra-frequency cells
- Intra-frequency cell id	4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3 (for cell 4)
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Intra-frequency cell id	5
- Cell info	
- Cell individual offset	10 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 2 (for cell 5)
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- CHOICE report criteria	Not Present

MEASUREMENT REPORT (Step 14)

Information Element	Value/Remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check that this IE is absent

<ul style="list-style-type: none"> - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/NO - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/NO - CPICH RSCP - Pathloss <p>Measured results on RACH Additional measured results Event results</p> <ul style="list-style-type: none"> - Intra-frequency measurement event results <ul style="list-style-type: none"> - Intra-frequency event identity - Cell measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	<p>Check that this IE is absent Check that this IE is absent</p> <p>Check that this IE is set to Scrambling code 2 (or scrambling code 3) Check that this IE is absent Check that this IE is present Check that this IE is absent</p> <p>Check that this IE is absent Check that this IE is absent Check that this IE is present and includes IE COUNT-C-SFN frame difference</p> <p>Check that this IE is set to Scrambling code 3 (or scrambling code 2 if scrambling code 3 was indicated first) Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent</p> <p>1a</p> <p>Check that this IE is set to Scrambling code 2</p>
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MEASUREMENT CONTROL (Step 15)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	1
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_1
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_1
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_1
- Cell info	
- Cell individual offset	0 dB

- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	100 ms seconds
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	1 frequency
- Threshold non used frequency	-90 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 17)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present

Downlink counter synchronisation info	Not Present
Frequency info	FDD
- CHOICE mode	UARFCN for the uplink corresponding to f_3 (Could be absent in case the duplex distance is 190 MHz) <u>Not Present</u>
- UARFCN uplink (Nu)	
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- Timing indication	Initialise
- CFN-targetSFN frame offset	0
- Downlink DPCH power control information	Not Present
- Downlink rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or flexible position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	Not present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Arbitrary set to value 0..306688 by step of 512
Downlink information per radio link list	1 radio link
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 4
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value of DPCH Frame Offset modulo 38400
- Secondary CPICH info	Not present
- DL channelisation code	Reference to TS34.108 clause 6.10 Parameter Set
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Any value between 0 and Spreading factor-1
- Scrambling code change	Not Present
- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

8.2.6.37.5 Test Requirement

After step 1, the UE shall send a MEASUREMENT REPORT message triggered by event 1a for cell 2.

After step 3, the UE shall send an ACTIVE SET UPDATE COMPLETE message to acknowledge that it has added cell 2 to its active set.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters (only if compressed mode is required), that were

sent in the PHYSICAL CHANNEL RECONFIGURATION message of step 4.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . In that message, cell 4 shall be the only cell included in the IE event results.

After step 10, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 4 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message. The UE shall also start incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

After step 11, the UE shall not send any MEASUREMENT REPORT message triggered by event 1a for cell 5.

After step 13, the UE send a MEASUREMENT REPORT message triggered by event 1a for cell 5.

[For UE's that require compressed mode for performing interfrequency measurements.](#) After step 15, the UE shall not send any MEASUREMENT REPORT message triggered by event 2c for frequency 1.

After step 17, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 4 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message.

8.2.6.38 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing re-initialised): Failure (Physical channel failure and reversion to old channel)

8.2.6.38.1 Definition

8.2.6.38.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a PHYSICAL CHANNEL RECONFIGURATION message:

...

2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.6.38.3 Test purpose

To confirm that the UE reverts to the old configuration (including measurement configurations, ciphering procedures and compressed mode configurations if required) and transmits a PHYSICAL CHANNEL RECONFIGURATION

FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message before timer T312 expiry.

8.2.6.38.4 Method of test

Initial Condition

System Simulator: 4 cells – Cell 1 and cell 2 on frequency f_1 , cell 4 [on frequency \$f_2\$](#) and cell 5 on frequency f_3 .

UE: "CS-DCCH+DTCH_DCH" (state 6-9) or "PS-DCCH+DTCH_DCH" (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the test case shall be run twice, once starting from state 6-9, once starting from state 6-10. Ciphering shall be activated.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.2.6.38-1 illustrates the downlink power to be applied for the 4 cells, as well as the frequency and scrambling code for each cell.

Table 8.2.6.38-1a

Parameter	Unit	Cell 1					Cell 2				
Frequency		f_1					f_1				
Scrambling code		Scrambling code 1					Scrambling code 2				
		T0	T1	T2	T3	T4	T0	T1	T2	T3	T4
CPICH E_c	dBm/3.8 4 MHz	-60	-60	-75	-60	-75	-95	-60	-75	-60	-75

Table 8.2.6.38-1b

Parameter	Unit	Cell 4					Cell 5				
Frequency		f_2					f_3				
Scrambling code		Scrambling code 3					Scrambling code 4				
		T0	T1	T2	T3	T4	T0	T1	T2	T3	T4
CPICH E_c	dBm/3.8 4 MHz	-60	-60	-60	-	-	-60	-60	-	-	-60
					122	706 5			706 5	122	

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

At instant T1, the downlink power is changed according to what is shown in table 8.2.6.38 -1. Cell 2 should then trigger event 1a as has been configured through the default System Information Block Type 11. The UE shall thus send a MEASUREMENT REPORT to the SS, triggered by cell 2.

The SS adds then cell 2 to the active set of the UE, by sending an ACTIVE SET UPDATE message to the UE. The UE shall answer with an ACTIVE SET UPDATE COMPLETE message.

The SS then configures compressed mode, (if required by the UE) to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message, (if required).

At instant T2, the downlink power is changed according to what is shown in table 8.2.6.38-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

At instance T3, the downlink power is changed according to what is shown in table 8.2.6.38-1.

SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 4 on frequency f_2 .

The UE shall revert to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message to the SS on the DCCH using AM RLC, with the value "physical channel failure" in the IE "failure cause".

At instant T4, the downlink power is changed according to what is shown in table 8.2.6.38-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
0		←	MEASUREMENT CONTROL	The SS configures intra-frequency measurements in the UE.
1				The SS changes the power of the cells according to column T1 in table 8.2.6.38-1.
2		→	MEASUREMENT REPORT	Event 1a is triggered by cell 2 in the UE, which sends a MEASUREMENT REPORT message to the SS.
3		←	ACTIVE SET UPDATE	The SS adds cell 2 to the active set of the UE.
4		→	ACTIVE SET UPDATE COMPLETE	The UE answers with an ACTIVE SET UPDATE COMPLETE message to the SS.
5		←	PHYSICAL CHANNEL RECONFIGURATION	The SS downloads the compressed mode parameters in the UE, (if required).
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of the compressed mode parameters (only if compressed mode was configured).
7		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE, and activates compressed mode (if required).
8				The SS changes the power of the cells according to column T2 in table 8.2.6.38-1.
9		→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
				The SS changes the power of the cells according to column T3 in table 8.2.6.38-1.

10	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 4 on frequency f_2 .
11	→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expires, the UE shall revert to the old channel and transmits this message.
12			The SS changes the power of the cells according to column T4 in table 8.2.6.38-1.
13	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

[All messages indicated below shall use the same content as described in default message content, with the following exceptions:](#)

MEASUREMENT REPORT (Step 2)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Message Type</u> <u>Integrity check info</u> - <u>Message authentication code</u> - <u>RRC Message sequence number</u> <u>Measurement identity</u> <u>Measured Results</u> - <u>Intra-frequency measured results</u> - <u>Cell measured results</u> - <u>Cell Identity</u> - <u>SFN-SFN observed time difference</u> - <u>Cell synchronisation information</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u> - <u>CPICH Ec/N0</u> - <u>CPICH RSCP</u> - <u>Pathloss</u> - <u>Cell measured results</u> - <u>Cell Identity</u> - <u>SFN-SFN observed time difference</u> - <u>Cell synchronisation information</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u> - <u>CPICH Ec/N0</u> - <u>CPICH RSCP</u> - <u>Pathloss</u> <u>Measured results on RACH</u> <u>Additional measured results</u> <u>Event results</u> - <u>Intra-frequency measurement event results</u> - <u>Intra-frequency event identity</u> - <u>Cell measurement event results</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u>	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 1 Check that this IE is absent Check that this IE is absent Check that this IE is absent Scrambling code 1 (or scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that this IE is present and includes IE COUNT-C-SFN frame difference Scrambling code 2 (or scrambling code 1 if the previous scrambling code included by the UE was scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent 1a Scrambling code 2

ACTIVE SET UPDATE (Step 3)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Radio link addition information</u> - <u>Primary CPICH Info</u> - <u>Primary Scrambling Code</u> - <u>Downlink DPCH info for each RL</u> - <u>CHOICE mode</u> - <u>Primary CPICH usage for channel estimation</u> - <u>DPCH frame offset</u> - <u>Secondary CPICH info</u> - <u>DL channelisation code</u> - <u>Secondary scrambling code</u> - <u>Spreading factor</u> - <u>Code Number</u>	Scrambling code 2 Reference to TS34.108 clause 6.10 <u>Parameter Set</u> <u>FDD</u> P-CPICH can be used. Calculated value from Cell synchronisation information Not Present Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" Any value between 0 and Spreading factor-1 (use different values for each DPCH in case several DPCHs are allocated to the UE).

- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 5 for the CS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information per radio link list	2 radio links
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 1

<ul style="list-style-type: none"> - Cell ID - PDSCH with SHO DCH info - PDSCH code mapping - Downlink DPCH info for each RL - CHOICE mode <ul style="list-style-type: none"> - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT cell identity - Closed loop timing adjustment mode Downlink information for each radio link <ul style="list-style-type: none"> - CHOICE mode <ul style="list-style-type: none"> - Primary CPICH info - Cell ID - PDSCH with SHO DCH info - PDSCH code mapping - Downlink DPCH info for each RL - CHOICE mode <ul style="list-style-type: none"> - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index 	<p>Not present</p> <p>Not present</p> <p>Not present</p> <p>FDD</p> <p>Primary CPICH may be used</p> <p>0</p> <p>Not present</p> <p>Not present</p> <p>Reference to TS34.108 clause 6.10</p> <p>Parameter Set</p> <p>Same as the code currently allocated to the UE in cell 1</p> <p>Code change</p> <p>0</p> <p>Not present</p> <p>Not present</p> <p>FDD</p> <p>Scrambling code 2</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>FDD</p> <p>Primary CPICH may be used</p> <p>0</p> <p>Not present</p> <p>Not present</p> <p>Reference to TS34.108 clause 6.10</p> <p>Parameter Set</p> <p>Same as the code currently allocated to the UE in cell 2</p> <p>No code change</p> <p>0</p>
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PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 5 for the PS case)

<u>Information Element</u>	<u>Value/Remark</u>
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	

- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 7)

<u>Information Element</u>	<u>Value/Remark</u>
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f ₂
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f ₂
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f ₃
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f ₃
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE

- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
- CHOICE reporting criteria	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	FALSE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm
- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 - TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 - TTI/10msec))mod 256

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	

<ul style="list-style-type: none"> - Inter-frequency measured results list - Frequency info -CHOICE mode - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss <p>Measured results on RACH Additional measured results Event results</p> <ul style="list-style-type: none"> - Inter-frequency measurement event results - Inter-frequency event identity - Inter-frequency cells - Frequency info -CHOICE mode - UARFCN uplink - UARFCN downlink - Non freq related measurement event results - Primary CPICH info - Primary scrambling code 	<p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 Check that this IE is absent Check that the value of this IE is set to 1 cell reported</p> <p>Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3 Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>2b</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2</p> <p>Check that the value of this IE is set to Scrambling code 3</p>
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PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indication	Initialise
- CFN-targetSFN frame offset	0
- Downlink DPCH power control information	Not Present
- Downlink rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or flexible position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCl existence	Reference to TS34.108 clause 6.10

<ul style="list-style-type: none"> - CHOICE SF - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TX Diversity mode - SSDT information - Default DPCH Offset Value <p>Downlink information per radio link list</p> <p>Downlink information for each radio link</p> <ul style="list-style-type: none"> - CHOICE mode - Primary CPICH info - Cell ID - PDSCH with SHO DCH info - PDSCH code mapping - Downlink DPCH info for each RL <ul style="list-style-type: none"> - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT cell identity - Closed loop timing adjustment mode 	<p>Parameter Set Reference to TS34.108 clause 6.10 Parameter Set</p> <p>1 Deactivate Not present</p> <p>Not present Not Present Not Present Arbitrary value between 0..306688 by step of 512 1 radio link</p> <p>FDD Scrambling code 3 Not present Not present Not present</p> <p>FDD Primary CPICH may be used</p> <p>Set to value of DPCH Frame Offset modulo 38400 Not present Reference to TS34.108 clause 6.10 Parameter Set Not present Reference to TS34.108 clause 6.10 Parameter Set Any value between 0 and Spreading factor-1 Not Present 0 Not present Not present</p>
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MEASUREMENT REPORT (Step 13)

<u>Information Element</u>	<u>Value/Remark</u>
<p>Message Type Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Measurement identity Measured Results</p> <ul style="list-style-type: none"> - Inter-frequency measured results list - Frequency info <ul style="list-style-type: none"> - CHOICE mode - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results <ul style="list-style-type: none"> - Cell measured results - Cell Identity - SFN-SFN observed time difference 	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 2</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f₃ (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f₃ Check that this IE is absent Check that the value of this IE is set to 1 cell reported Check that this IE is absent Check that this IE is absent</p>

- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 4
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_3 (Could be absent in case the duplex distance is the default duplex distance)
	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_3
- UARFCN downlink	
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 4

~~EPS~~

8.2.6.38.5 Test Requirement

After step 1, the UE shall send a MEASUREMENT REPORT message triggered by event 1a for cell 2.

After step 3, the UE shall send an ACTIVE SET UPDATE COMPLETE message to acknowledge that it has added cell 2 to its active set.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters that were sent in the PHYSICAL CHANNEL RECONFIGURATION message of step 4 (only if compressed mode was required).

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . In that message, cell 4 shall be the only cell included in the IE event results.

After step 10, the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE [message](#).

After step 12, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 . In that message, cell 5 shall be the only cell included in the IE event results.

CHANGE REQUEST

№ **TS 34.123-1 CR 431** № rev **-** № Current version: **5.2.0** №

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the № symbols.

Proposed change affects: UICC apps№ ME Radio Access Network Core Network

Title:	№ CR to 34.123-1 Rel 5; Corrections to package 4 test cases on RB establishment		
Source:	№ Ericsson		
Work item code:	№ TEI	Date:	№ 12/02/2003
Category:	№ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release:	№ Rel 5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change: № The reasons for the changes proposed in this CR are indicated in the following section, summary of change

Summary of change: № This CR includes the following changes:

General/ several TCs

- The initial state and the referenced RADIO BEARER SETUP message are changed to make the test cases for transition from CELL_DCH to CELL_DCH applicable both for CS and PS domain mobiles
- Specific message content, MEASUREMENT CONTROL: The command is changed from modify to setup since the measurement is used to configure a new measurement
- Specific message content, MEASUREMENT CONTROL: The conditions for presence of IE "Time interval to take an average or a variance" are not met, so it need not be included as "not present"
- Specific message content, RADIO BEARER SETUP: For the test cases for transition from CELL_DCH to CELL_DCH, clarification is added that the message should include a change of the physical channel configuration, which is needed to detect physical channel failure
- Editorials: Several small editorials including update of conformance requirements with later revision of core specification, correction of references to default messages

TC 8.2.1.4

- Only general

TC 8.2.1.5 (TBR)

- Specific message content, RADIO BEARER SETUP: Upon re-establishment, the complete physical channel configuration is cleared so all PhyCh parameters should be included in this message. Therefore the IE Downlink information common for all radio links is added

TC 8.2.1.7

- Additional clarification is added concerning the inclusion of a critical message extension
- Specific message content, RADIO BEARER SETUP: The currently used trigger for invalid configuration (a mismatch of DOFF and DPCH frame offset) only applies in case of a timing re- initialised hard handover, which is not used in this TC. Therefore a more basic error is proposed to be used instead (simultaneous addition of PS and CS domain RAB)

TC 8.2.1.12 (TBR)

- Only general

TC 8.2.1.13 (TBR)

- Test procedure: To facilitate encryption of new identities, the SS should transmit the CELL UPDATE CONFIRM message on the DCCH rather than on CCCH

Consequences if not approved:

⌘ The test cases remain inconsistent, ambiguous and/ or misaligned with core specifications

Clauses affected:

⌘ 8.2.1.4, 8.2.1.5, 8.2.1.7, 8.2.1.12, 8.2.1.13

Other specs affected:

Y	N		
	X	Other core specifications	⌘
X		Test specifications	34.123-2?
	X	O&M Specifications	

Other comments:

⌘ Affects R99, Rel 4 and Rel 5 UEs.
The clauses marked TBR in the above are proposed to be removed. They are anyhow not part of package 4 anymore and hence should be included in a sperate document. For covenience of the review, everying is currently kept in one document

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2 Radio Bearer control procedure

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8.2.1.4 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.4.1 Definition

8.2.1.4.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a RADIO BEARER SETUP message:

...

2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.1.4.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the radio bearer according to the RADIO BEARER SETUP message before timer T312 expires.

8.2.1.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER SETUP message to the UE and SS keeps its old dedicated channel configuration. Then after T312 expiry, the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	The SS keeps its old L1 configuration after transmitting this message.
2				The UE does not configure the new radio access bearer and reverts to the old configuration.
3		→	RADIO BEARER SETUP FAILURE	UE shall transmit this message using the old configuration.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of the RADIO BEARER SETUP message in this test case is indicated as "Non-speech to CELL_DCH from CELL_DCH in CS", "Speech to CELL_DCH from CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in ~~annex A or the RADIO BEARER SETUP message as found in~~ clause 9 of TS 34.108. The occurrence of physical channel failure requires that the RADIO BEARER SETUP message includes a change of the physical channel configuration e.g. spreading factor. E.g. this means the new configuration should be different from

[“Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH”](#) since the physical channel configuration is the same as for the initial Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.

RADIO BEARER SETUP FAILURE (Step ~~2~~3)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.1.4.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.1.5 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and cell reselection)

8.2.1.5.1 Definition

8.2.1.5.2 Conformance requirement

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
 - ...
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

....

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a RADIO BEARER SETUP message:

...

- 2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

8.2.1.5.3 Test purpose

To confirm that UE transmits RADIO BEARER SETUP FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer establishment procedure.

8.2.1.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its dedicated physical channel in accordance with the settings in the message and release the old configuration after the RLC acknowledgement. The UE recognizes that it cannot synchronise on the new physical channel and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH ~~after receiving a CELL UPDATE message~~. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value of IE "failure cause" to "physical channel failure". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	
2				The SS does not configure new radio access bearer and shall release the configuration.
3		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
5				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	7
Measurement Command	Setup
Measurement reporting mode	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical Reporting
- Periodical Reporting / Event Trigger Reporting Mode	
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 8)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	7
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech from CELL_DCH to CELL_DCH in CS", "Speech to CELL_DCH from CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [clause 9 of TS 34.108 Annex A](#) or the ~~RADIO BEARER SETUP message as found in clause 9 of TS 34.108~~. The occurrence of physical channel failure requires that the RADIO BEARER SETUP message includes a change of the physical channel configuration e.g. spreading factor. E.g. this means the new configuration should be different from "Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH" since the physical channel configuration is the same as for the initial Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement -UplinkDPCH Info	Uplink DPCH info Same as RRC CONNECTION SETUP message used to move to initial condition
Downlink information common for all radio links	Same as RRC CONNECTION SETUP message used to move to initial condition
Downlink information for each radio links	Same as RRC CONNECTION SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_DCH
Uplink DPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

RADIO BEARER SETUP FAILURE (Step 7)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Message Type	"RADIO BEARER SETUP FAILURE"
Failure cause	"physical channel failure"

8.2.1.5.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 5 the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

.....

8.2.1.7 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.1.7.1 Definition

8.2.1.7.2 Conformance requirement

If the received reconfiguration message contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to `TRUE` according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable `TRANSACTIONS`; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to the cause value "protocol error";
 - 2> include the IE "Protocol error information" with contents set to the value of the variable `PROTOCOL_ERROR_INFORMATION`.

....

If the variable `INVALID_CONFIGURATION` is set to `TRUE` the UE shall:

- 1> keep the configuration existing before the reception of the message;
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable `TRANSACTIONS`; and
 - 3> clear that entry.
 - 2> set the IE "failure cause" to "invalid configuration".
- 1> set the variable `INVALID_CONFIGURATION` to `FALSE`;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

....

If the UE receives an RRC message on the DCCH, or addressed to the UE on the CCCH or on the SHCCH, or sent via a radio access technology other than UTRAN, containing an undefined critical message extension, the UE shall:

- 1> set the variable `PROTOCOL_ERROR_REJECT` to `TRUE`;
- 1> set the IE "Protocol error cause" in the variable `PROTOCOL_ERROR_INFORMATION` to "Message extension not comprehended";
- 1> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable `TRANSACTIONS`;

2> store the IE "Message type" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> set the IE "RRC transaction identifier" to zero in that table entry.

1> perform procedure specific error handling according to TS 25.331 clause 8.

....

If the IE "RAB information for setup" is included, the procedure is used to establish radio bearers belonging to a radio access bearer, and the UE shall:

1> if several IEs "RAB information for setup" are included and the included IEs "CN domain identity" in the IE "RAB info" does not all have the same value:

2> set the variable INVALID_CONFIGURATION to TRUE.

....

The UE shall:

1> in case of reception of a RADIO BEARER SETUP message:

...

2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9, [8.6.4.2](#) and [9.3b](#).

8.2.1.7.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER SETUP message which contains an unexpected critical message extension~~does not include any IEs except IE "Message Type"~~.

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message including ~~some IEs set to give~~ an invalid configuration.

8.2.1.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid RADIO BEARER SETUP message to the UE which contains an unexpected critical message extension. The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause", and is set to "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. The UE keeps current configuration after SS transmits a RADIO BEARER SETUP message including ~~some IEs set to give~~ an invalid configuration. Then UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	See specific message content.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change its configuration.
2a		→	MEASUREMENT REPORT	
3		←	RADIO BEARER SETUP	This message includes IE set to an invalid value.
4		→	RADIO BEARER SETUP FAILURE	The UE does not change its configuration.
5		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 2a and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

Use the RADIO BEARER SETUP message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

RADIO BEARER SETUP FAILURE (Step 2)

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Message extension not comprehended
Other information element	Not checked

RADIO BEARER SETUP (Step 3)

The contents of RADIO BEARER SETUP message in this test case is identical as "Non-speech [from CELL_DCH to CELL_DCH in CS](#)" , [Speech to CELL_DCH from CELL_DCH in CS](#)" or "[Packet to CELL_DCH from CELL_DCH in PS](#)" as found in ~~Annex A or the RADIO BEARER SETUP message as found in~~ clause 9 of TS 34.108 with the following exceptions:

RADIO BEARER SETUP (Step 3) (FDD)

Information Element	Value/remark
Default DPCH Offset Value	542
DPCH frame offset	4024
RAB information for setup list	This IE is set as defined in message "RADIO BEARER SETUP message: AM or UM (Speech in CS)"
- RAB information for setup	This IE is set as defined in message "RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)"
- RAB information for setup	This IE is set as defined in message "RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)"

RADIO BEARER SETUP (Step 3) (TDD)

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER SETUP FAILURE (Step 4)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Invalid configuration

8.2.1.7.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause" and set to "Message extension not comprehended" in IE "Protocol error cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 3 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

.....

8.2.1.12 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.12.1 Definition**8.2.1.12.2 Conformance requirement**

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

....

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

....

The UE shall:

1> in case of reception of a RADIO BEARER SETUP message:

...

2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.1.12.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message when the UE fails to configure the new radio bearer after it detects physical channel failure, followed by the T312 expiry.

8.2.1.12.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER SETUP message to the UE and keeps its old physical channel configuration. After T312 expiry, the UE shall perform cell reselection procedure and detect the same serving cell only. Then the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The content of the message shall indicate "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	The SS keep its old configuration.
2		→	RADIO BEARER SETUP FAILURE	The UE does not configure a new radio bearer and reverts to the old configuration.
3		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is identical [to](#) the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [clause 9 of TS 34.108 Annex A](#).

RADIO BEARER SETUP FAILURE (Step 2)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure

8.2.1.12.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 1 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.1.13 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and cell reselection)

8.2.1.13.1 Definition

8.2.1.13.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

....

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

....

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or

- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

....

The UE shall:

- 1> in case of reception of a RADIO BEARER SETUP message:

...

- 2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, [8.5.4](#).

8.2.1.13.3 Test purpose

To confirm that the UE transmit a RADIO BEARER SETUP FAILURE message after it completes a cell update for the physical channel failure in the radio bearer establishment procedure.

8.2.1.13.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.1.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPICH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.1.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies reverse of the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its DL dedicated physical channel in accordance with the setting in the message and release its current configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.1.13. The UE recognize that it cannot synchronize

with the SS on the new radio bearer. The UE performs cell re-selection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" which is set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink DCCH after receiving a CELL UPDATE message. The UE transmits a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	
2				The SS does not configure the new radio bearer in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.1.13.
3			Void	
4				The UE select the cell 2.
5		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	This message include IE "new U-RNTI" and IE "new C-RNTI".
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"
9		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 9)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type "Packet to CELL_DCH from CELL_FACH in PS" found in [clause 9 of TS 34.108 Annex A](#).

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM" message as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 5
New U-RNTI	
- SRNC Identity	'0000 0000 0000 0001'
- S-RNTI	Different from previous S-RNTI
New C-RNTI	Different from previous C-RNTI

RADIO BEARER SETUP FAILURE (Step 8)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	"physical channel failure"

8.2.1.13.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 8, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

CR-Form-v7

CHANGE REQUEST

¶ **TS 34.123-1 CR 432** ¶ rev - ¶ Current version: **5.2.0** ¶

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the ¶ symbols.

Proposed change affects: UICC apps¶ ME Radio Access Network Core Network

Title:	¶ CR to 34.123-1 Rel 5; Corrections to package 4 test cases on TrCH reconfiguration
Source:	¶ Ericsson
Work item code:	¶ TEI Date: ¶ 12/02/2003
Category:	¶ F Release: ¶ Rel 5
Use <u>one</u> of the following categories:	
F (correction)	
A (corresponds to a correction in an earlier release)	
B (addition of feature),	
C (functional modification of feature)	
D (editorial modification)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	
Use <u>one</u> of the following releases:	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
Rel-4 (Release 4)	
Rel-5 (Release 5)	
Rel-6 (Release 6)	

Reason for change:	¶ The reasons for the changes proposed in this CR are indicated in the following section, summary of change
Summary of change:	¶ This CR includes the following changes: TC 8.2.4.12 (TBR) <ul style="list-style-type: none">• <u>Specific message content, MEASUREMENT CONTROL</u>: The command is changed from modify to setup since the measurement is used to configure a new measurement• <u>Specific message content, MEASUREMENT CONTROL</u>: The conditions for presence of IE "Time interval to take an average or a variance" are not met, so it need not be included as "not present". TC 8.2.4.13(TBR) <ul style="list-style-type: none">• Only editorial
Consequences if not approved:	¶ The test cases remain inconsistent, ambiguous and/ or misaligned with core specifications

Clauses affected:	¶ 8.2.4.12, 8.2.4.13
--------------------------	-----------------------------

Other specs affected:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘ TS 34.123-2?
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	
Other comments:	⌘	Affects R99, Rel 4 and Rel 5 UEs. The clauses marked TBR in the above are proposed to be removed. They are anyhow not part of package 4 anymore and hence should be included in a sperate document. For convenience of the review, everying is currently kept in one document		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.4 Transport channel reconfiguration

.....

8.2.4.12 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old channel)

8.2.4.12.1 Definition

8.2.4.12.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a TRANSPORT CHANNEL RECONFIGURATION message:

...

2> transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.4.12.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the new channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.12.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes the new transport channel parameters, to the UE. However, SS keeps its current physical channel configuration.. Hence, the UE shall experience a failure in the reconfiguration process. After T312 expires, the UE shall revert to the old channel configuration. Then the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	TRANSPORT CHANNEL RECONGURATION	Message includes IE "Downlink DPCH Info" and IE "Uplink DPCH Info"
2				SS does not reconfigure the channel causing the UE to detect a physical channel failure.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expires the UE shall revert to the old configuration and transmit this message.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#).

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the ~~TRANSPORT CHANNEL RECONFIGURATION FAILURE~~ message ~~as~~ found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.4.12.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.4.13 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.4.13.1 Definition

8.2.4.13.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

- 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

....

The UE shall:

- 1> in case of reception of a TRANSPORT CHANNEL RECONFIGURATION message:

...

- 2> transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.4.13.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message after it completes a cell update procedure, when the UE cannot reconfigure the new channel before timer T312 expires.

8.2.4.13.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.4.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.4.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE in cell 1. The message includes a new configuration parameters. However, the SS does not reconfigure the specified configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.13. As a result, the UE cannot synchronise with the SS on the new DPCH before T312 expires. The UE initiates the cell re-selection procedure and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2				The SS does not reconfigure L1 and transport channel in accordance with the settings in the message, and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.13.
3			Void	
4				The UE shall find cell 2, camp onto it.
5		→	CELL UPDATE	This message include the value "cell reselection" set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	See message content.
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#).

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as ~~the "Contents of CELL UPDATE message"~~ as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in clause [Clause 9 of TS 34.108 Annex A](#), with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 8)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the ~~TRANSPORT CHANNEL RECONFIGURATION FAILURE~~ message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.4.13.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 6 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 7 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

<small>CR-Form-v7</small>
<h2 style="margin: 0;">CHANGE REQUEST</h2>
TS 34.123-1 CR 433 # rev - # Current version: 5.2.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# CR to 34.123-1 R5; Corrections to package 4 test cases on RRC Connection mobility		
Source:	# Ericsson		
Work item code:	# TEI Date: # 12/02/2003		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> # F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: # Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	# F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: # Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
# F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: # Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change:	# 8.3.1.12 1. Conformance requirement do not have clauses describing the setting of cause values although this is part of the test requirement. 2. Not clear how counter K should be incremented. 8.3.1.15 3. Test procedure seems too detailed related to exactly how long the SS shall wait related to the UE sending (MaxRST-1) reset PDUs. 4. Step 3 in the expected sequence erroneously talks about one AM PDU. 8.3.1.17 5. Expected sequence could use general test procedure instead. 8.3.1.18 6. Step 10 unnessecary mention CELL_FACH, but RRC states are not really visible in the test and it could be discussed if the UE really is in CELL_FACH state since there is no C_RNTI assigned to the UE. 8.3.2.2 7. Since Step 6 is removed, the Conformance requirement or test procedure do not need to cover UTRAN MOBILITY INFORMATION. 8. Also since Step 6 is removed the second URA UPDATE CONFIRM message shall not include new U-RNTI.
---------------------------	---

	8.3.2.9 9. General procedure C.1 could be used to check that the UE is in idle mode.
Summary of change: ⌘	8.3.1.12 1. Parts from conformance requirements 8.3.1.2 and 8.3.1.3 is added. 2. Clarified that counter K is incremented with 1. 8.3.1.15 3. SS wait time of (MaxRST-1)*Timer_RST is replaced with a fixed time of 5 seconds. 4. It is clarified that several RLC AM PDUs could be sent and that the SS shall ignore all of them. 8.3.1.17 5. Step 5 and 6 is replaced with CALL C.1. Related suprefluos paging message is removed. Test requirement with conserning RRC connection request can also be removed. 8.3.1.18 6. Mentioning of CELL_FACH state is removed. 8.3.2.2 7. UTRAN MOBILITY INFORMATION CONFIRM related text is removed. 8. New U-RNTI is not included in second CELL UPDATE CONFIRM message and the message is sent on CCCH instead. 8.3.2.9 9. Call C.1 is added as step 5. Additional editorials and correction of refernces are also done.
Consequences if not approved: ⌘	Test cases on CELL and URA UPDATE are not aligned with core requirements.

Clauses affected: ⌘	8.3.1.12, 8.3.1.15, 8.3.1.17, 8.3.1.18, 8.3.2.2, 8.3.2.9									
Other specs affected:	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	Y	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other core specifications ⌘ Test specifications O&M Specifications
Y	N									
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<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Other comments: ⌘	Affects Rel 99, Rel 4 and Rel 5 UEs.									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 RRC connection mobility procedure

8.3.1 Cell Update

.....

8.3.1.12 Cell Update: Failure (After Maximum Re-transmissions)

8.3.1.12.1 Definition

8.3.1.12.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

...

1> Periodical cell update:

...

2> if the UE is in CELL_FACH or CELL_PCH state; and

2> if the timer T305 expires; and

2> if the criteria for "in service area" as specified in subclause 8.5.5.2 in TS 25.331 is fulfilled; and

2> if periodic updating has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity":

3> perform cell update using the cause "periodical cell update".

...

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

...

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in subclause 8.3.1.2 in TS 25.331 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

...

If any or several of the following conditions are true:

- expiry of timer T302;

...

the UE shall:

1> stop T302 if it is running;

...

1> check whether it is still in "in service area" (see subclause 8.5.5.2) in TS 25.331;

...

1> in case of a cell update procedure:

- 2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS.

...

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:

...

- 1> if V302 is greater than N302, the UE shall:

...

- 2> in case of a cell update procedure:

- 3> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

- 2> release all its radio resources;

- 2> enter idle mode;

- 2> other actions the UE shall perform when entering idle mode from connected mode are specified in TS 25.331 subclause 8.5.2;

- 2> and the procedure ends.

Reference

3GPP TS 25.331 clause [8.3.1.2](#), [8.3.1.3](#), [8.3.1.12](#).

8.3.1.12.3 Test purpose

1. To confirm that the UE repeats the cell update procedure upon the expiry of timer T302 and moves to idle state when its internal counter V302 is greater than N302.

8.3.1.12.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodic cell updating procedure. The SS ignores this message, and the UE shall attempt to re-transmit a CELL UPDATE message up to a maximum of (N302) times after the expiry of timer T302. After (N302) attempts of retransmission, the UE shall return to idle state. SS waits for 5s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS sets its internal counter K=0 and waits for a period equals to timer value T305.
2		→	CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause".
3				SS transmits no response to the UE and increments counter K <u>with 1</u> .
4				SS waits for an additional period equal to T302 timer and if K is not greater than N302, then next step is step 2. Else the next step is step 5.
5				The UE shall enter idle mode state.
6		↔	CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Periodical cell <u>updating</u> ' <u>update</u> '

8.3.1.12.5 Test requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodical cell update" into IE "Cell update cause".

After step 3 and if K is not greater than N302, the UE shall retry to transmit a CELL UPDATE message.

After step 3 and if K is greater than N302, the UE shall stop transmitting CELL UPDATE message and then enters idle state.

8.3.1.15 Cell Update: Unrecoverable error in Acknowledged Mode RLC SRB

8.3.1.15.1 Definition

8.3.1.15.2 Conformance Requirement

A UE shall initiate the cell update procedure in the following cases:

...

1> RLC unrecoverable error:

...

2> if the UE detects RLC unrecoverable error in an AM RLC entity:

3> perform cell update using the cause "RLC unrecoverable error".

...

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

...

The UE shall set the IEs in the CELL UPDATE message as follows:

...

1> if an unrecoverable error in any of the AM RLC entities for the signalling radio bearers RB2, RB3 or RB4 is detected:

2> set the IE "AM_RLC error indication (RB2, RB3 or RB4)" to TRUE.

1> otherwise:

2> set the IE "AM_RLC error indication (RB2, RB3 or RB4)" to FALSE.

...

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

...

1> initiate an RRC connection release procedure ([see subclause 8.1.4 in TS 25.331](#)) by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH. In particular UTRAN should:

2> if the CELL UPDATE message was sent because of an unrecoverable error in RB2, RB3 or RB4:

3> initiate an RRC connection release procedure by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

Reference

3GPP TS 25.331 clause 8.3.1.[2](#), [8.3.1.3](#), [8.3.1.5](#)

8.3.1.15.3 Test Purpose

- To confirm that the UE reports the occurrence of an unrecoverable error in a C-plane AM RLC entity by initiating cell update procedure.
- To confirm that UE enters idle mode state after receiving RRC CONNECTION RELEASE message on the downlink CCCH.

8.3.1.15.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE

Test Procedure

The UE is initially in CELL_DCH state. SS sends a UE CAPABILITY ENQUIRY message on the DCCH using AM mode. The UE shall reply with a UE CAPABILITY INFORMATION message, sent using AM RLC on the DCCH.

-SS does not acknowledge the AM PDUs carrying this message. The UE shall continue to re-transmit the AM PDU carrying UE CAPABILITY INFORMATION message until the maximum re-transmission count is reached.

-Thereafter, the UE shall start sending RESET PDUs to request that the AM RLC entity for RRC signalling be re-initialized. SS ignores all RESET PDUs from the UE, ~~the requests and wait for a duration equivalent to (MAX_RST-1) times expiry of Timer_RST.~~

-At this point, the UE shall initiate a cell update procedure by transmitting a CELL UPDATE message on the uplink CCCH. The CELL UPDATE message shall specify the value "TRUE" in IE "AM_RLC error indicator (RB2, RB3 or RB4)" and "RLC unrecoverable error" as the cell update cause.

-SS sends RRC CONNECTION RELEASE message on the downlink CCCH to UE. SS waits for 5 s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is initially in CELL_DCH state.
2		←	UE CAPABILITY ENQUIRY	
3		→	UE CAPABILITY INFORMATION	SS does not acknowledge <u>any of this-the</u> AM PDUs carrying the UE CAPABILITY INFORMATION message. The UE shall re-transmit <u>this-these</u> AM PDUs until the maximum number has been reached.
4				UE shall start to transmit a RESET PDU. SS does not respond to any RESET PDU frames originated from the UE, and it waits for a period equivalent to (MAX_RST-1) times expiry of Timer_RST.
5		→	CELL UPDATE	UE shall send this message on CCCH <u>within a maximum time of 5 seconds after the first RESET PDU is sent</u> . IE "AM_RLC Error Indication (RB2, RB3 or RB4)" shall be set to 'TRUE'
6		←	RRC CONNECTION RELEASE	Sends this message on the downlink CCCH and includes UE's UTRAN identity. After SS sent this message, SS waits for 5s.
7		↔	CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.

Specific Message Contents

UE CAPABILITY ENQUIRY (Step 2)

Use the same message found in TS 34.108 clause 9.

UE CAPABILITY INFORMATION (Step 3)

Only the message type IE is checked for this message.

CELL UPDATE (Step 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
AM_RLC error indicator (RB2, RB3 or RB4)	Check to see if set to 'TRUE'
Cell update cause	Check to see if set to 'RLC unrecoverable error'

RRC CONNECTION RELEASE (Step 6)

Use the same message found in TS 34.108 clause 9.

8.3.1.15.5 Test Requirement

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH to report the occurrence of an unrecoverable error in AM RLC entity for RB2, RB3 or RB4 data as well as cell update cause set to "RLC unrecoverable error".

8.3.1.17 Cell Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)

8.3.1.17.1 Definition

8.3.1.17.2 Conformance requirement

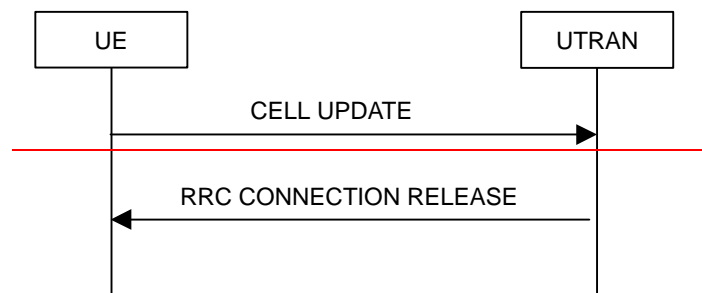


Figure 8.3.1-7: Cell update procedure, failure case

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

1> ... or

1> initiate an RRC connection release procedure (see subclause 8.1.4 [in TS 25.331](#)) by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

...

The UE shall receive and act on an RRC CONNECTION RELEASE message in states CELL_DCH and CELL_FACH. Furthermore this procedure can interrupt any ongoing procedures with the UE in the above listed states.

When the UE receives the first RRC CONNECTION RELEASE message; and

1> if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or

1> if the message is received on DCCH;

the UE shall:

...

1> in state CELL_FACH:

...

2> if the RRC CONNECTION RELEASE message was received on the CCCH:

3> ...

3> enter idle mode;

Reference

3GPP TS 25.331 clause 8.3.1.5, 8.1.4.3

8.3.1.17.3 Test purpose

To confirm that the UE moves to idle state upon the reception of [a](#) RRC CONNECTION RELEASE message on CCCH.

8.3.1.17.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11)

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodical cell updating procedure. The SS transmits a RRC CONNECTION RELEASE message on downlink CCCH. The UE shall return to idle mode after release of all current signalling flows and radio access bearers. [SS calls for generic procedure C.1 to check that UE is in Idle Mode state.](#) ~~SS verifies that UE is in idle mode state by paging the UE with CN identity, in which case the UE shall attempt to establish a RRC connection.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause" and this message shall be sent upon expiry of timer T305.
2		←	RRC CONNECTION RELEASE	SS transmits a RRC CONNECTION RELEASE message to the UE. After SS sent this message SS waits for 5 seconds.
3			Void	
4			Void	
5		←	PAGING TYPE 1	Page using TMSI for CS domain or P-TMSI for PS domain depending on CN domain supported by the UE. The UE shall enter idle mode state.
6		↔	RRC CONNECTION REQUEST CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 1)

The same message found in [Annex A Clause 9 of 34.108](#) shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Periodical cell updating'

RRC CONNECTION RELEASE (Step 2)

Use the same message sub-type found in [Clause 9 of TS 34.108 Annex A.](#)

PAGING_TYPE 1 (Step 5)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Used paging identity	CN identity
— Paging cause	Terminating Call with one of the supported services
— CN domain identity	Supported Domain (PS Domain or CS Domain)
— CHOICE UE Identity	IMSI
— IMSI	Set to the IMSI value stored in the TEST USIM card.

8.3.1.17.5 Test requirement

In step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodical cell update" into IE "Cell update cause".

~~After step 5 the UE transmit a RRC CONNECTION REQUEST message.~~

After step 4 the UE shall enter idle mode.

8.3.1.18 Cell Update: Radio Link Failure (T314>0, T315=0)

8.3.1.18.1 Definition

8.3.1.18.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; ~~and~~;

2> if the UE is in CELL_DCH state; and

~~2>~~ if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":

...

2> if the stored value of the timer T314 is equal to zero:

...

2> if the stored value of the timer T315 is equal to zero:

3> release all radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";

3> in the variable RB_TIMER_INDICATOR set the IE "T315 expired" to TRUE.

2> if the stored value of the timer T314 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":

4> start timer T314.

- 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":
 - 4> start timer T314.
- 2> if the stored value of the timer T315 is greater than zero:
 - ...
- 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.
 - 2> select a suitable UTRA cell according to TS 25.304;
 - 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> set the variable CELL_UPDATE_STARTED to TRUE;
- 1> ~~move to CELL_FACH state, if the UE is not already in CELL_FACH that state;~~
 - [2> move to CELL_FACH state;](#)
- 1> if the UE performs cell re-selection:
 - 2> clear the variable C_RNTI; and
 - 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.
- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> in case of a cell update procedure:
 - 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the CELL UPDATE message for transmission on the uplink CCCH.
- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.
- ...

If the received CELL UPDATE CONFIRM message would cause the UE to transit to CELL_DCH state;~~;~~**and**

[1> if the UE failed to establish the physical channel\(s\) indicated in the received CELL UPDATE CONFIRM message according to the criteria defined in subclause 8.5.4 in TS 25.331 are not fulfilled; or](#)

~~1> in case of a received CELL UPDATE CONFIRM message:~~

~~2> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message~~

...

the UE shall:

...

- 1> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:
- 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> if V302 is equal to or smaller than N302:
- 2> select a suitable UTRA cell according to TS 25.304;
- 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "Radio link failure";
- 2> submit the CELL UPDATE message for transmission on the uplink CCCH;
- 2> increment counter V302;
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302:
- ...

Reference

3GPP TS 25.331 clause 8.3.1.2, 8.3.1.7a

8.3.1.18.3 Test purpose

1. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T315 and try to find a new cell after detecting that a radio link failure has occurred.
2. To confirm that the UE performs a cell selection procedure when it fails to configure the physical channel(s) indicated in the CELL UPDATE CONFIRM message.

8.3.1.18.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 is active, Cell 2 is inactive).

UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) in cell 1, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.3.1.18

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS transmits a UTRAN MOBILITY INFORMATION message to the UE in order to change the value of T315 timer. UE shall respond with a UTRAN MOBILITY INFORMATION CONFIRM message.

-SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.18. The UE shall detect a radio link failure in cell 1 and indicate to the non-access stratum the release of the radio bearer which is associated with T315.

-Then it shall attempt to re-select to cell 2. After that, it shall ~~then enter CELL_FACH state and~~ transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated physical channel parameters. SS shall not configure according to this message. Instead, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.18. UE shall fail to establish the dedicated channel in cell 2.

-UE shall re-select to cell 1 and transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure". Then SS responds with a CELL UPDATE CONFIRM message to end the procedure. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0				In the initial set up procedure, the SS shall request UE to associate timer T315 with the new RAB.
1		←	UTRAN MOBILITY INFORMATION	T315=0
2		→	UTRAN MOBILITY INFORMATION CONFIRM	
3			Void	
4				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.18. SS starts to listen to the uplink CCCH of cell 2.
5			Void	
6				The UE detects the radio link failure which is associated with T315. The UE indicates to the non-access stratum the release of the radio bearer.
7		→	CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
8		←	CELL UPDATE CONFIRM	Including dedicated physical channel parameters.
9				SS does not configure according to the message in step 8. SS configures cell 1 and 2 according to column "T0" in table 8.3.1.18.
10		→	CELL UPDATE	UE shall select cell 1 and enter CELL_FACH state to transmit this message
11		←	CELL UPDATE CONFIRM	See message content.
12		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

UTRAN MOBILITY INFORMATION (Step 1)

The contents of UTRAN MOBILITY INFORMATION message in this test case is identical to those in TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode - T315	0

CELL UPDATE (Step 7)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'
RB timer indicator	
- T314 expired	FALSE
- T315 expired	TRUE

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in the RADIO BEARER SETUP message in initial condition.

CELL UPDATE (Step 10)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'

CELL UPDATE CONFIRM (Step 11)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.18.5 Test requirement

After step 1, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message.

After step 6, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 9, the UE shall transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure".

After step 11, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.2 URA Update

.....

8.3.2.2 URA Update: Periodical URA update and Reception of Invalid message

8.3.2.2.1 Definition

8.3.2.2.2 Conformance requirement

A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

1> URA reselection:

...

1> Periodic URA update:

- 2> if the criteria for performing URA update with the causes as specified above in the current subclause are not met; and
- 2> if the timer T305 expires while the UE is in the service area; and
- 2> if periodic updating has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity":
- 3> perform URA update using the cause "periodic URA update".

...

~~If the URA UPDATE CONFIRM message:~~

- ~~— includes "CN information elements"; or~~
- ~~— includes the IE "Ciphering mode info"; or~~
- ~~— includes the IE "Integrity protection mode info"; or~~
- ~~— includes any one or both of the IEs "New C-RNTI" and "New U-RNTI".~~

~~the UE shall:~~

- ~~1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.~~

If the UE receives an URA UPDATE CONFIRM message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows:

1> If V302 is equal to or smaller than N302, the UE shall:

- 2> set the variable PROTOCOL_ERROR_INDICATOR to TRUE;

...

2> in case of a URA update procedure:

- 3> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
- 3> submit the URA UPDATE message for transmission on the uplink CCCH.

- 2> increment counter V302;
 - 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:
- ...
 - 2> release all its radio resources;
 - 2> enter idle mode;
 - 2> Other actions the UE shall perform when entering idle mode from connected mode are specified in TS 25.331 subclause 8.5.2;
 - 2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.2, [8.3.1.7](#), [8.3.1.11](#)

8.3.2.2.3 Test purpose

1. To confirm that the UE executes a URA update procedure after the expiry of timer T305.
2. To verify that the UE handles an invalid URA UPDATE CONFIRM message correctly when executing the URA update procedure.

8.3.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of timer T305, set according to the value specified in system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". SS replies with an invalid URA UPDATE CONFIRM message sent on downlink CCCH, and check to see if the UE handles this event properly. The UE shall attempt to retransmit the identical URA UPDATE message. After the SS receives the second URA UPDATE message, it transmits a correct URA UPDATE CONFIRM message, ~~which includes the IE "new U-RNTI"~~, to the UE on the downlink DCCH. ~~Then the UE shall then transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.~~ The UE [then](#) returns to URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state. SS wait until T305 timer has expired.
2		→	URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3		←	URA UPDATE CONFIRM	See specific message content.
4		→	URA UPDATE	UE shall not return to idle mode immediately, but attempts to re-transmit this message.
5		←	URA UPDATE CONFIRM	
6			Void	
7		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

URA UPDATE (Step 2)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

[URA UPDATE CONFIRM \(Step 3\)](#)

[Use the URA UPDATE CONFIRM message as defined in \[9\] TS 34.108 clause 9, with the following exceptions:](#)

Information Element	Value/remark
Critical extensions	'01'H

URA UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
RRC Transaction identifier	Check to see if set to the value given in URA UPDATE CONFIRM message in step 3.
URA Update Cause	Check to see if set to 'Periodic URA update'
Protocol error indicator	TRUE
Protocol error information	
- Protocol error cause	Message extension not comprehended

URA UPDATE CONFIRM (Step 53)

Use the URA UPDATE CONFIRM message as defined in [9] TS 34.108 clause 9.2, ~~with the following exceptions:~~

Information Element	Value/remark
Critical extensions	'01'H

8.3.2.2.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, move to CELL_FACH state, and transmit a URA UPDATE message which sets the value "periodical cell update" into IE "URA update cause".

After step 3 the UE shall re-transmit URA UPDATE message with IE "Protocol error indicator" set to 'TRUE' and IE "Protocol error information" set to "Message extension not comprehended".

After step 5 the UE shall return to the URA_PCH state.

8.3.2.9 URA Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)

8.3.2.9.1 Definition

8.3.2.9.2 Conformance requirement

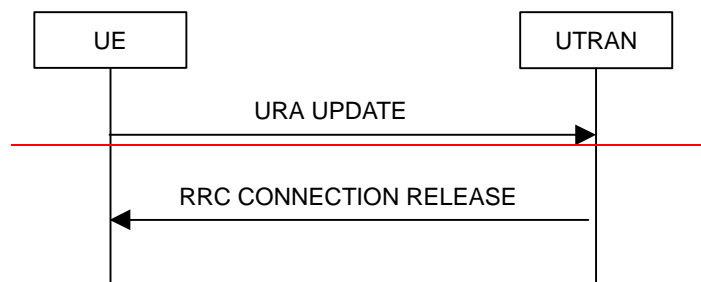


Figure 8.3.1-10: URA update procedure, failure case

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

1> ... or

1> initiate an RRC connection release procedure (see subclause 8.1.4 [in TS 25.331](#)) by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

...

The UE shall receive and act on an RRC CONNECTION RELEASE message in states CELL_DCH and CELL_FACH. Furthermore this procedure can interrupt any ongoing procedures with the UE in the above listed states.

When the UE receives the first RRC CONNECTION RELEASE message; and

1> if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or

1> if the message is received on DCCH:

the UE shall:

...

1> in state CELL_FACH:

2> if the RRC CONNECTION RELEASE message was received on the CCCH:

3> ...

3> enter idle mode;

Reference

3GPP TS 25.331 clause 8.3.1.5, [8.1.4.3](#)

8.3.2.9.3 Test purpose

To confirm that the UE moves to idle state upon the reception of RRC CONNECTION RELEASE message on downlink CCCH during a URA update procedure.

8.3.2.9.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of periodic URA updating timer T305, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". The SS transmits RRC CONNECTION RELEASE message on downlink CCCH. The UE shall return to idle mode after release of all current signalling flows and radio access bearers. [SS calls for generic procedure C.1 to check that UE is in Idle Mode state.](#)

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the URA_PCH state. SS wait until T305 timer has expired.
2		→	URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3		←	RRC CONNECTION RELEASE	SS transmits RRC CONNECTION RELEASE message to the UE on the downlink CCCH.
4				The UE releases L2 signalling radio bearer and radio resources then the UE goes to idle mode.
5		↔	CALL C.1	If the test result of C.1 indicates that UE is in Idle Mode state, the test passes, otherwise it fails.

Specific Message Contents

URA UPDATE (Step 2)

The same message found in [Clause 9 of TS 34.108 Annex A](#) shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

RRC CONNECTION RELEASE (Step 3)

Use the same message sub-type found in [Clause 9 of TS 34.108 Annex A](#)

8.3.2.9.5 Test requirement

After step 1 the UE shall transmit a URA UPDATE message on the uplink CCCH and set value "periodic URA update" into IE "Cell update cause".

After step 3 the UE shall enter idle state.

CHANGE REQUEST

TS 34.123-1 CR 434 # rev **-** # Current version: **5.2.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# CR to TS 34.123-1 REL-5; New RRC security test cases		
Source:	# Ericsson		
Work item code:	# TEI	Date:	# 13/02/2003
Category:	# F	Release:	# REL-5
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# Some RRC security cases are not tested.
Summary of change:	# <u>New test case: 8.1.7.1c Security mode control in CELL_DCH state (CN Domain switch and new keys at RRC message sequence number wrap around)</u> <ul style="list-style-type: none"> This test case verifies that newly generated keys for the PS domain can be applied correctly when previously using a CS domain security keyset Also a check is made that integrity protection is working for the case of new keys is applied when the RRC message sequence number is at wrap around. <u>New test case: 8.1.7.1d Security mode control in CELL_DCH state interrupted by a cell update</u> <ul style="list-style-type: none"> This test case verifies the UE aborts the Security procedure when interrupted by a cell update procedure. <u>New test case: 8.2.1.26 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (with ciphering on)</u> <ul style="list-style-type: none"> This test case verifies the UE that ciphering is working after the setup of a RLC-TM (speech).

Consequences if not approved:	⌘	Insufficient test coverage.									
Clauses affected:	⌘	8.1.7.1c (new), 8.1.7.1d (new), 8.2.1.26 (new)									
Other specs affected:	⌘	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td>X</td> <td>X</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> </table>	Y	N	X	X	X			X	Other core specifications Test specifications O&M Specifications
Y	N										
X	X										
X											
	X										
	⌘	TS 34.123-2									
Other comments:	⌘	Affects R99, REL-4 and REL-5.									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.7 Security mode command

8.1.7.1c Security mode control in CELL_DCH state (CN Domain switch and new keys at RRC message sequence number wrap around)

8.1.7.1c.1 Definition

8.1.7.1c.2 Conformance requirement

Upon reception of the SECURITY MODE COMMAND message, the UE shall:

...

2> set the variable LATEST_CONFIGURED_CN_DOMAIN equal to the IE "CN domain identity";

2> set the IE "Status" in the variable SECURITY_MODIFICATION for the CN domain indicated in the IE "CN domain identity" in the received SECURITY MODE COMMAND to the value "Affected";

...

If a new security key set (new ciphering and integrity protection keys) has been received from the upper layers [40] for the CN domain as indicated in the variable LATEST_CONFIGURED_CN_DOMAIN, the UE shall:

1> set the START value for the CN domain indicated in the variable LATEST_CONFIGURED_CN_DOMAIN to zero;

1> if the SECURITY MODE COMMAND message contained the IE "Integrity protection mode info":

2> for integrity protection in the downlink on each signalling radio bearer except RB2:

3> if IE "Integrity protection mode command" has the value "start":

...

3> else:

4> for the first message for which the RRC sequence number in a received RRC message for this signalling radio bearer is equal to or greater than the activation time as indicated in IE "Downlink integrity protection activation info" as included in the IE "Integrity protection mode info":

5> start using the new integrity key;

5> for this signalling radio bearer:

6> set the IE "Downlink RRC HFN" in the variable INTEGRITY_PROTECTION_INFO of the downlink COUNT-I to zero.

2> for integrity protection in the uplink on each signalling radio bearer except RB2:

3> for the first message for which the RRC sequence number in a to be transmitted RRC message for this signalling radio bearer is equal to the activation time as indicated in IE "Uplink integrity protection activation info" included in the transmitted SECURITY MODE COMPLETE message:

4> start using the new integrity key;

4> for this signalling radio bearer:

5> set the IE "Uplink RRC HFN" in the variable INTEGRITY_PROTECTION_INFO of the uplink COUNT-I to zero.

2> for integrity protection in the downlink on signalling radio bearer RB2:

3> at the received SECURITY MODECOMMAND:

4> start using the new integrity key;

4> set the IE "Downlink RRC HFN" in the variable INTEGRITY_PROTECTION_INFO of the downlink COUNT-I to zero.

2> for integrity protection in the uplink on signalling radio bearer RB2 :

3> at the transmitted SECURITY_MODE_COMPLETE:

4> start using the new integrity key;

4> set the IE "Uplink RRC HFN" in the variable INTEGRITY_PROTECTION_INFO of the uplink COUNT-I to zero.

1> if the SECURITY_MODE_COMMAND message contained the IE "Ciphering mode info":

2> for each signalling radio bearer and for each radio bearer for the CN domain indicated in the variable LATEST_CONFIGURED_CN_DOMAIN:

3> if the IE "Status" in the variable CIPHERING_STATUS has the value "Started" for this CN domain, then for ciphering on radio bearers using RLC-TM:

4> at the CFN as indicated in the IE "Ciphering activation time for DPCH" in the IE "Ciphering mode info":

5> start using the new key in uplink and downlink;

5> set the HFN component of the COUNT-C to zero.

3> if the IE "Status" in the variable CIPHERING_STATUS has the value "Started" for this CN domain, then for ciphering on radio bearers and signalling radio bearers using RLC-AM and RLC-UM:

4> in the downlink, at the RLC sequence number indicated in IE "Radio bearer downlink ciphering activation time info" in the IE "Ciphering mode info":

5> start using the new key;

5> set the HFN component of the downlink COUNT-C to zero.

4> in the uplink, at the RLC sequence number indicated in IE "Radio bearer uplink ciphering activation time info":

5> start using the new key;

5> set the HFN component of the uplink COUNT-C to zero.

1> consider the value of the latest transmitted START value to be zero.

...

If the IE "Ciphering mode info" is present and if the IE "Reconfiguration" in the variable CIPHERING_STATUS is set to FALSE, the UE shall:

1> apply the new ciphering configuration in the lower layers for all RBs that belong to a CN domain for which the IE "Status" of the variable SECURITY_MODIFICATION is set to "Affected" and all signalling radio bearers:

2> using the ciphering algorithm (UEA [40]) indicated by the IE "Ciphering algorithm" as part of the new ciphering configuration;

2> for each radio bearer that belongs to a CN domain for which the IE "Status" of the variable SECURITY_MODIFICATION is set to "Affected" and all signalling radio bearers:

3> using the value of the IE "RB identity" in the variable ESTABLISHED_RABS minus one as the value of BEARER [40] in the ciphering algorithm.

...

If the IE "Integrity protection mode info" is present and if the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO is set to FALSE, the UE shall:

1> set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to TRUE;

1> if IE "Integrity protection mode command" has the value "modify" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" and this IE was included in SECURITY_MODE_COMMAND:

...

2> start applying the new integrity protection configuration in the downlink at the RRC sequence number, for each signalling radio bearer n, indicated by the entry for signalling radio bearer n in the "RRC message sequence number list" in the IE "Downlink integrity protection activation info", included in the IE "Integrity protection mode info";

2> set the content of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO according to the following:

...

2> start applying the new integrity protection configuration in the uplink at the RRC sequence number, for each RBn, except for signalling radio bearer RB2, indicated by the entry for signalling radio bearer n in the "RRC message sequence number list" in the IE "Uplink integrity protection activation info", included in the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

2> start applying the new integrity protection configuration in the uplink at the RRC sequence number for signalling radio bearer RB2, as specified for the procedure initiating the integrity protection reconfiguration;

2> start applying the new integrity protection configuration in the downlink at the RRC sequence number, for each RBn, except for signalling radio bearer RB2, indicated by the entry for signalling radio bearer n in the "RRC message sequence number list" in the IE "Downlink integrity protection activation info";

2> start applying the new integrity protection configuration in the downlink at the RRC sequence number for signalling radio bearer RB2, as specified for the procedure initiating the integrity protection reconfiguration.

Reference

3GPP TS 25.331 clauses 8.1.12.3, 8.6.3.4, 8.6.3.5.

8.1.7.1c.3 Test purpose

To verify that the UE correctly modifies the integrity protection and ciphering configuration with a newly generated PS domain keyset for when previously using the CS domain keyset.

To verify that the UE can handle change of integrity protection key when the RRC message sequence number wraps around when the SECURITY_MODE_COMMAND is received.

8.1.7.1c.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: has entered PS+CS-DCCH+DTCH_DCH (state 6-14) using procedure P19 as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state.

The SS transmits UE CAPABILITY ENQUIRY message repeatedly on the downlink DCCH using RLC-UM mode on SRB1. The UE shall respond to each downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS then send UE CAPABILITY INFORMATION CONFIRM message to the UE. This procedure is repeated until the RRC message sequence number for SRB 1 in downlink equals 15.

The SS initiates an Authentication procedure, which will result in the generation of a new security keyset (CK/IK). The SS transmits a valid SECURITY MODE COMMAND message which includes the correct downlink activation times and "Integrity check info" IE.

Then the UE shall check the integrity check info and shall start to configure ciphering in downlink according to the first valid SECURITY MODE COMMAND message. The UE shall transmit a SECURITY MODE COMPLETE message which contains the correct uplink activation times and also "Integrity check info" IE using the new integrity protection configuration.

The SS records the uplink ciphering activation time for RB 2.

Next, the SS transmits UE CAPABILITY ENQUIRY message repeatedly on the downlink DCCH using RLC-AM mode. The UE shall respond to each downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS then send UE CAPABILITY INFORMATION CONFIRM message to the UE. This cycle repeats itself until both the uplink and downlink ciphering activation time for RB 2 has elapsed. SS checks all uplink UE CAPABILITY INFORMATION messages are integrity-protected by UIA algorithm, and that the messages contain the correct values for "Integrity check info" IE. This can be verified in the SS through the reception of a correctly ciphered and integrity-protected UE CAPABILITY INFORMATION message.

The SS transmits UE CAPABILITY ENQUIRY message on the downlink DCCH using RLC-UM mode on SRB1. The UE shall respond to this message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS then send UE CAPABILITY INFORMATION CONFIRM message to the UE.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state.
2		←	UE CAPABILITY ENQUIRY	The SS repeats step 2, 3 and 4 until its internal downlink RRC message sequence number for RB 2 has the value 15.
3		→	UE CAPABILITY INFORMATION	The UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
4		←	UE CAPABILITY INFORMATION CONFIRM	
5		←	AUTHENTICATION and CIPHERING REQUEST	GMM message which will result in the generation of a new security keyset
6		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
7		←	SECURITY MODE COMMAND	See specific message contents.
8		→	SECURITY MODE COMPLETE	The SS verifies that this message is sent using the old ciphering configuration. SS records the uplink ciphering activation time for RB 2.
9		←	UE CAPABILITY ENQUIRY	The SS repeats step 9, 10 and 11 until its internal uplink and downlink RLC SN have both surpassed the uplink and downlink ciphering activation time specified for RB2. This message is sent on the downlink DCCH using RLC-AM.
10		→	UE CAPABILITY INFORMATION	The UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
11		←	UE CAPABILITY INFORMATION CONFIRM	
12		←	UE CAPABILITY ENQUIRY	The SS sends this message with the downlink RRC message sequence number for SRB 1 with the value 0.
13		→	UE CAPABILITY INFORMATION	The UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
14		←	UE CAPABILITY INFORMATION CONFIRM	

Specific Message Contents**SECURITY MODE COMMAND (Step 7)**

Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC transaction identifier</u>	<u>0</u>
<u>Integrity check info</u>	
<u>Message authentication code</u>	<u>Calculated result in SS</u>
<u>RRC Message sequence number</u>	<u>Next RRC SN</u>
<u>Security Capability</u>	<u>Same as originally sent by UE (and stored in SS)</u>
<u>Ciphering mode info</u>	
<u>Ciphering mode command</u>	<u>Start/restart</u>
<u>Ciphering algorithm</u>	<u>UEA1</u>
<u>Activation time for DPCH</u>	<u>(256+CFN-(CFN MOD 8 + 8))MOD 256</u>
<u>Radio bearer downlink ciphering activation time info</u>	
<u>RB Identity</u>	<u>1</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>RB Identity</u>	<u>2</u>
<u>RLC sequence number</u>	<u>Current RLC SN + 2</u>
<u>RB Identity</u>	<u>3</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>RB Identity</u>	<u>4</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>RB Identity</u>	<u>20</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>Integrity protection mode info</u>	
<u>Integrity protection mode command</u>	<u>Modify</u>
<u>Downlink integrity protection activation info</u>	
	<u>Current RRC SN for SRB0</u>
	<u>Current RRC SN for SRB1</u>
	<u>0</u>
	<u>Current RRC SN for SRB3</u>
	<u>Current RRC SN for SRB4</u>
<u>Integrity protection algorithm</u>	<u>UIA1</u>
<u>CN domain identity</u>	<u>PS Domain</u>

NOTE: "Current RLC SN" is defined as the value of VT(S) in the SS at the time when the SECURITY MODE COMMAND is submitted to RLC for transmission, that is, the RLC send sequence number of the next transmitted RLC PDU on the particular radio bearer. "Current RRC SN" is defined as the RRC message sequence number of the next transmitted RRC message on the particular radio bearer.

SECURITY MODE COMPLETE (Step 8)

Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC transaction identifier</u>	<u>0</u>
<u>Integrity check info</u>	<u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u>
<u>- Message Authentication code</u>	<u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u>
<u>- RRC Message sequence number</u>	
<u>Uplink integrity protection activation info</u>	<u>Check to see if the RRC SN for RB 0 to RB 4 are present</u>
<u>- RRC message sequence number list</u>	<u>Check to see if the RRC SN for RB 0 is present</u>
<u>-RRC message sequence number</u>	<u>Check to see if the RRC SN for RB 1 is present</u>
<u>-RRC message sequence number</u>	<u>Check to see if the RRC SN for RB 2 is present</u>
<u>-RRC message sequence number</u>	<u>Check to see if the RRC SN for RB 3 is present</u>
<u>-RRC message sequence number</u>	<u>Check to see if the RRC SN for RB 4 is present</u>
<u>Radio bearer uplink ciphering activation time info</u>	
<u>- Radio bearer activation time</u>	
<u>- RB Identity</u>	<u>1</u>
<u>- RLC sequence number</u>	<u>Check to see if the RLC SN for RB1 is present</u>
<u>- RB Identity</u>	<u>2</u>
<u>- RLC sequence number</u>	<u>SS records this value. See step 10 in 'expected sequence'</u>
<u>- RB Identity</u>	<u>3</u>
<u>- RLC sequence number</u>	<u>Check to see if the RLC SN for RB3 is present</u>
<u>- RB Identity</u>	<u>4</u>
<u>- RLC sequence number</u>	<u>Check to see if the RLC SN for RB4 is present</u>
<u>- RB Identity</u>	<u>20</u>
<u>- RLC sequence number</u>	<u>Check to see if the RLC SN for RB20 is present</u>

8.1.7.1c.5 Test requirement

After step 7 the SS checks that the SECURITY MODE COMPLETE message is received ciphered using the old configuration and that the calculated "integrity check info" IE is correct.

After step 8 SS verifies that all uplink signalling messages on RB2 are integrity protected with UIA1 algorithm.

After uplink ciphering activation time has lapsed, SS verifies that the UE CAPABILITY INFORMATION message received is integrity protected with UIA algorithm and ciphered with the new ciphering configuration and algorithm indicated in the SECURITY MODE COMMAND (Step 7) message.

After downlink ciphering activation time has lapsed, SS shall apply ciphering to all downlink messages using the new configuration. At least one more cycle between step 9 and step 11 shall be repeated correctly after activation time on both directions has lapsed and the messages on both direction shall be ciphered and integrity protected..

8.1.7.1d Security mode control in CELL_DCH state interrupted by a cell update

8.1.7.1d.1 Definition

8.1.7.1d.2 Conformance requirement

If:

- a cell update procedure according to subclause 8.3.1 is initiated; and
- the received SECURITY MODE COMMAND message causes either,
 - the IE "Reconfiguration" in the variable CIPHERING_STATUS to be set to TRUE; and/or
 - the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to be set to TRUE;

the UE shall:

- 1> abort the ongoing integrity and/or ciphering reconfiguration;

1> resume data transmission on any suspended radio bearer and signalling radio bearer mapped on RLC-AM or RLC-UM;

1> allow the transmission of RRC messages on all signalling radio bearers with any RRC SN;

1> when the response message has been submitted to lower layers for transmission:

2> if the SECURITY MODE COMMAND message contained the IE "Ciphering mode info":

3> set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and

3> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;

2> if the SECURITY MODE COMMAND message contained the IE "Integrity protection mode info":

3> set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and

3> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO.

2> continue with any ongoing processes and procedures as if the invalid SECURITY MODE COMMAND message has not been received; and

2> clear the variable SECURITY_MODIFICATION;

2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.12.4b.

8.1.7.1d.3 Test purpose

To confirm that the UE aborts the ongoing integrity and ciphering configuration and the security mode control procedure in case it is interrupted by a cell update procedure.

8.1.7.1d.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS initiates an Authentication and Ciphering procedure, which will result in the generation of a new security keyset (CK/IK).

The SS transmits a valid SECURITY MODE COMMAND message which includes the correct downlink activation times and "Integrity check info" IE..

Then SS immediately turns off the power in the cell, so the UE will initiate the cell reselection procedure.

The UE shall then abort the Security procedure.

Then after 6 seconds the power is turned on in the cell again.

Next, the SS transmits UE CAPABILITY ENQUIRY message on the downlink DCCH using RLC-AM mode. The UE shall respond to with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM using the same old integrity and ciphering configuration as used before the SECURITY MODE COMMAND was received...

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state.
2		←	AUTHENTICATION AND CIPHERING REQUEST	GMM message which will result in the generation of a new security keyset
3		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
4		←	SECURITY MODE COMMAND	See specific message contents.
5				When the RLC ack is received from the UE, the SS turns off power in the cell.
6				The UE starts cell selection
7				After waiting for 6 seconds, the SS turns on power in the cell.
8		→	CELL UPDATE	This message includes the value "Radio link failure" set in IE "Cell update cause". The SS verifies that message is integrity-protected correctly with the old security configuration
9		←	CELL UPDATE CONFIRM	This message includes "Physical channel information elements".
10		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that message is both integrity-protected and ciphered correctly with the old security configuration
11		←	UE CAPABILITY ENQUIRY	The SS repeats step 11, 12 and 13 until its internal uplink and downlink RLC SN have both surpassed the uplink and downlink ciphering activation time specified for RB2. This message is sent on the downlink DCCH using RLC-AM.
12		→	UE CAPABILITY INFORMATION	The UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
13		←	UE CAPABILITY INFORMATION CONFIRM	

Specific Message Contents**SECURITY MODE COMMAND (Step 4)**

Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>Integrity check info</u>	
<u>Message authentication code</u>	<u>Calculated result in SS</u>
<u>RRC Message sequence number</u>	<u>Next RRC SN</u>
<u>Security Capability</u>	<u>Same as originally sent by UE (and stored in SS)</u>
<u>Ciphering mode info</u>	
<u>Ciphering mode command</u>	<u>Start/restart</u>
<u>Ciphering algorithm</u>	<u>UEA1</u>
<u>Activation time for DPCH</u>	<u>Not Present</u>
<u>Radio bearer downlink ciphering activation time info</u>	
<u>RB Identity</u>	<u>1</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>RB Identity</u>	<u>2</u>
<u>RLC sequence number</u>	<u>Current RLC SN + 2</u>
<u>RB Identity</u>	<u>3</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>RB Identity</u>	<u>4</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>RB Identity</u>	<u>20</u>
<u>RLC sequence number</u>	<u>Current RLC SN</u>
<u>Integrity protection mode info</u>	
<u>Integrity protection mode command</u>	<u>Modify</u>
<u>Downlink integrity protection activation info</u>	
	<u>Current RRC SN for SRB0</u>
	<u>Current RRC SN for SRB1</u>
	<u>0</u>
	<u>Current RRC SN for SRB3</u>
	<u>Current RRC SN for SRB4</u>
<u>Integrity protection algorithm</u>	<u>UIA1</u>
<u>CN domain identity</u>	<u>PS Domain</u>

NOTE: "Current RLC SN" is defined as the value of VT(S) in the SS at the time when the SECURITY MODE COMMAND is submitted to RLC for transmission, that is, the RLC send sequence number of the next transmitted RLC PDU on the particular radio bearer. "Current RRC SN" is defined as the RRC message sequence number of the next transmitted RRC message on the particular radio bearer.

CELL UPDATE (Step 8)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in clause 9 of TS 34.108 Annex A with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u>	
- <u>SRNC Identity</u>	<u>Check to see if set to '0000 0000 0001'</u>
- <u>S-RNTI</u>	<u>Check to see if set to '0000 0000 0000 0000 0000 0001'</u>
<u>Cell Update Cause</u>	<u>"Radio link failure"</u>

CELL UPDATE CONFIRM (Step 9) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u>	<u>Same as CELL UPDATE message in step 8</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>CHOICE channel requirement</u>	<u>Uplink DPCH info</u>
- <u>UplinkDPCH Info</u>	<u>Same as RADIO BEARER SETUP message used to move to initial condition</u>
<u>Downlink information common for all radio links</u>	<u>Same as RRC CONNECTION SETUP message used to move to initial condition</u>
<u>Downlink information for each radio links</u>	<u>Same as RADIO BEARER SETUP message used to move to initial condition</u>

CELL UPDATE CONFIRM (Step 9) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in clause 9 of TS 34.108 Annex A with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u>	<u>Same as CELL UPDATE message in step 8</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>UplinkDPCH timeslots and codes</u>	<u>Same as RADIO BEARER SETUP message used to move to initial condition</u>
<u>Downlink information for each radio links</u>	<u>Same as RADIO BEARER SETUP message used to move to initial condition</u>

8.1.7.1d.5 Test requirement

After uplink ciphering activation time has lapsed, SS verifies that the UE CAPABILITY INFORMATION message received at step 12 is integrity protected with UIA algorithm and ciphered with the old ciphering configuration and algorithm and not the one indicated in the SECURITY MODE COMMAND (Step 4) message.

8.2.1 Radio Bearer Establishment

8.2.1.26 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success (with ciphering on)

8.2.1.26.1 Definition

8.2.1.26.2 Conformance requirement

If the UE receives:

- a RADIO BEARER SETUP message; or

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;
- 2> perform the physical layer synchronisation procedure A as specified in TS 25.214;
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

...

If the IE "RAB information for setup" is included, the procedure is used to establish radio bearers belonging to a radio access bearer, and the UE shall:

- 1> if the radio access bearer identified with the IE "RAB info" does not exist in the variable ESTABLISHED_RABS;
- 2> if prior to this procedure there exists no transparent mode radio bearer for the CN domain included in the IE "CN domain identity" and at least one transparent mode radio bearer is included in the IE "RB information to setup"; or
- 2> if at least one RLC-AM or RLC-UM radio bearer is included in the IE "RB information to setup";

3> calculate the START value only once during this procedure (the same START value shall be used on all new radio bearers created for this radio access bearer) according to subclause 8.5.9 for the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" part of the IE "RAB information to setup";

3> store the calculated START value in the variable START_VALUE_TO_TRANSMIT.

1> for each radio bearer in the IE "RB information to setup":

2> if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED_RABS:

3> perform the actions specified in subclause 8.6.4.3;

...

If the IE "RB information to setup" is included, the UE shall apply the following actions on the radio bearer identified with the value of the IE "RB identity". The UE shall:

1> use the same START value to initialise the hyper frame number components of COUNT-C variables for all the new radio bearers to setup;

1> if the IE "RB information to setup" was received in a message other than HANDOVER TO UTRAN COMMAND; and

1> if the IE "Uplink RLC mode" and the IE "Downlink RLC mode" either in the IE "RLC info" or referenced by the RB identity in the IE "Same as RB" is set to "TM RLC";

2> if prior to this procedure there exists no transparent mode radio bearer for the CN domain included in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS and at least one transparent mode radio bearer is included in the IE "RB information to setup";

3> if the IE "Status" in the variable CIPHERING_STATUS of the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS is set to "Started";

4> at the activation time as specified in the IE "Activation Time" in the RADIO BEARER SETUP message;

5> initialise the 20 most significant bits of the HFN component of COUNT-C common for all transparent mode RLC radio bearer to the value of the latest transmitted START for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and

5> set the remaining LSB of the HFN component of COUNT-C to zero;

5> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN.

4> at the activation time as specified in the IE "Ciphering activation time for DPCH" if included in the IE "Ciphering mode info" in the command message or, if this IE is not included, as specified in the IE "COUNT-C activation time" included in the response message;

5> initialise the 20 most significant bits of the HFN component of COUNT-C common for all transparent mode radio bearers of this CN domain with the START value in the variable START_VALUE_TO_TRANSMIT;

5> set the remaining LSB of the HFN component of COUNT-C to zero;

5> start incrementing the COUNT-C value common for all transparent mode radio bearers of this CN domain as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

1> if the IE "Status" in the variable CIPHERING_STATUS of the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS is set to "Started";

2> start to perform ciphering on the radio bearer in lower layers, using the value of the IE "RB identity" minus one as the value of BEARER in the ciphering algorithm.

Reference

[3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, 8.6.4.2, 8.6.4.3.](#)

8.2.1.26.3 Test purpose

[To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message, and that ciphering is applied onto this new radio bearer](#)

8.2.1.26.4 Method of test

Initial Condition

[System Simulator: 1 cell](#)

[UE: CS-DCCH_DCH \(state 6-5\) or PS_DCCH_DCH \(state 6-7\) as specified in clause 7.4 of TS 34.108, depending on the CN domain\(s\) supported by the UE.](#)

Test Procedure

[The UE is in CELL_DCH state, after the test operator is prompted to make an out-going call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message to the UE. This message requests the establishment of radio access bearer. After the UE receives this message, it configures them and establishes a radio access bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.](#)

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
				The UE is in CELL_DCH state.
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.
4		↔	E.g. . "speech" RLC-TM PDU's	Check that the ciphering is working.

Specific Message Contents

[RADIO BEARER SETUP COMPLETE \(Step 2\)](#)

[The contents of RADIO BEARER SETUP COMPLETE message in this test case is identical to the message sub-type indicated by "Non speech from CELL_DCH to CELL_DCH in CS" or "Speech from CELL_DCH to CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" in \[9\] TS 34.108 clause 9 with the following exceptions:](#)

Information Element	Value/remark
START	Current START value for applicable CN domain

8.2.1.26.5 Test requirement

[After step 1 the UE shall transmit a RADIO BEARER SETUP COMPLETE message.](#)

3GPP TSG-T WG1 Meeting #18
San Antonio, TX, USA, Feb 10th-14th, 2003

Tdoc # T1-030087

3GPP TSG-T WG1 SIG Meeting #27
San Antonio, TX, USA, Feb 10th-14th, 2003

Tdoc # T1S030090

CR-Form-v7

CHANGE REQUEST

⌘ 34.123-1 CR 435 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to 34.123-1 REL-5; Removal of low priority RRC test cases with state transition
Source:	⌘ Ericsson
Work item code:	⌘ TEI Date: ⌘ 31/01/2003
Category:	⌘ F Release: ⌘ REL-5
Use <u>one</u> of the following categories:	
F (correction)	
A (corresponds to a correction in an earlier release)	
B (addition of feature),	
C (functional modification of feature)	
D (editorial modification)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	
Use <u>one</u> of the following releases:	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
Rel-4 (Release 4)	
Rel-5 (Release 5)	
Rel-6 (Release 6)	

Reason for change: ⌘ At the T1-SIG meeting #26 in Luton, T1SIG agreed the proposal in T1S020642 to remove a number of RRC radio bearer control procedure test cases that correspond to configurations not likely to be used by networks.

Summary of change: ⌘ The following low priority test cases are removed, in accordance with T1S020642:

- 8.2.1.19 Radio Bearer Establishment from CELL_DCH to CELL_PCH: Success
- 8.2.1.20 Radio Bearer Establishment from CELL_DCH to URA_PCH: Success
- 8.2.2.21 Radio Bearer Reconfiguration from CELL_DCH to CELL_PCH: Success
- 8.2.2.22 Radio Bearer Reconfiguration from CELL_DCH to URA_PCH: Success
- 8.2.2.24 Radio Bearer Reconfiguration from CELL_FACH to URA_PCH: Success
- 8.2.2.29 Radio Bearer Reconfiguration for transition from CELL_DCH to URA_PCH (Frequency band modification): Success
- 8.2.2.30 Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_PCH (Frequency band modification): Success
- 8.2.2.33 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_PCH (Frequency band modification): Success
- 8.2.4.7 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success
- 8.2.4.9 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success (Cell re-selection)
- 8.2.4.16 Transport channel reconfiguration from CELL_FACH to CELL_FACH:

Success with no transport channel type switching

8.2.4.17 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success (Cell re-selection)

8.2.4.20 Transport Channel Reconfiguration from CELL_DCH to CELL_PCH: Success

8.2.4.21 Transport Channel Reconfiguration from CELL_DCH to URA_PCH: Success

8.2.4.22 Transport Channel Reconfiguration from CELL_FACH to CELL_PCH: Success

8.2.4.23 Transport Channel Reconfiguration from CELL_FACH to URA_PCH: Success

8.2.4.26 Transport Channel Reconfiguration for transition from CELL_FACH to CELL_PCH: Success

8.2.4.27 Transport Channel Reconfiguration for transition from CELL_DCH to URA_PCH (Frequency band modification): Success

8.2.4.28 Transport Channel Reconfiguration for transition from CELL_FACH to URA_PCH: Success

8.2.4.30 Transport Channel Reconfiguration from CELL_DCH to CELL_FACH (Transport channel type switching with frequency band modification): Success

8.2.4.31 Transport Channel Reconfiguration for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.4.32 Transport Channel Reconfiguration for transition from CELL_FACH to CELL_PCH (Frequency band modification): Success

8.2.4.33 Transport channel reconfiguration for transition from CELL_FACH to URA_PCH (Frequency band modification): Success

8.2.4.34 Transport channel reconfiguration for transition from CELL_DCH to CELL_PCH (Frequency band modification): Success

8.2.6.15 *(was agreed to be removed but removal is already done)*

8.2.6.16 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: (Cell re-selection)

8.2.6.24 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (modify uplink physical channel rate): Success

Consequences if not approved: ☹ Redundant test cases remain.

Clauses affected: ☹ 8.2.1.19, 8.2.1.20, 8.2.2.21, 8.2.2.22, 8.2.2.24, 8.2.2.29, 8.2.2.30, 8.2.2.33, 8.2.4.7, 8.2.4.9, 8.2.4.16, 8.2.4.17, 8.2.4.20, 8.2.4.21, 8.2.4.22, 8.2.4.23, 8.2.4.26, 8.2.4.27, 8.2.4.28, 8.2.4.30, 8.2.4.31, 8.2.4.32, 8.2.4.33, 8.2.4.34, 8.2.6.16, 8.2.6.24

Other specs affected:

<input type="checkbox"/>	<input type="checkbox"/>	Y	N
<input type="checkbox"/>	<input checked="" type="checkbox"/>	X	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	X	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	X	

☹ Other core specifications ☹ TS 34.123-2

☹ Test specifications

☹ O&M Specifications

Other comments: ☹ Affects REL-5, REL-4 and R99.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.1.19 ~~Void~~Radio Bearer Establishment from CELL_DCH to CELL_PCH: Success

8.2.1.19.1 ~~Definition~~

8.2.1.19.2 ~~Conformance requirement~~

If the UE receives:

~~— a RADIO BEARER SETUP message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

If after state transition the UE enters CELL_PCH, the UE shall, after the state transition and transmission of the response message:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- ~~1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

~~8.2.1.19.3 Test purpose~~

~~To conform that the UE transmits a RADIO BEARER SETUP COMPLETE message and enters CELL_PCH state after it received a RADIO BEARER SETUP message for the transition from CELL_DCH to CELL_PCH from SS. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.~~

~~8.2.1.19.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS-34.108.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message. The UE transmits RADIO BEARER SETUP COMPLETE message using AM-RLC and enters CELL_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~RADIO BEARER SETUP (Step 1) (FDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN-DRX cycle length coefficient	3
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	100

~~RADIO BEARER SETUP (Step 1) (TDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN-DRX cycle length coefficient	3
Downlink information for each radio links	
- Primary CCPCH info	
- Cell parameters ID	4

~~8.2.1.19.5 Test requirement~~~~After step 1, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on uplink DCCH using AM RLC.~~~~After step 2, the UE shall enter CELL_PCH state.~~8.2.1.20 Void~~Radio Bearer Establishment from CELL_DCH to URA_PCH: Success~~~~8.2.1.20.1 Definition~~~~8.2.1.20.2 Conformance requirement~~~~If the UE receives:~~~~— a RADIO BEARER SETUP message; or~~~~it shall:~~

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below:~~

~~The UE shall then:~~

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

~~In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:~~

- ~~1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.~~

~~8.2.1.20.3 Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER SETUP COMPLETE message and enters URA_PCH state after it received a RADIO BEARER SETUP message for the transition from CELL_DCH to URA_PCH from SS.~~

~~8.2.1.20.4 Method of test~~

Initial Condition

System Simulator: 1 cell.

UE: PS-DCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC and enters URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	400

RADIO BEARER SETUP (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	4

~~8.2.1.20.5 Test requirement~~

~~After step 1, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on uplink DCCH using AM RLC.~~

~~After step 2, the UE shall enter URA_PCH state.~~

8.2.2.21 ~~Void~~Radio Bearer Reconfiguration from CELL_DCH to CELL_PCH: Success

8.2.2.21.1 ~~Definition~~

8.2.2.21.2 ~~Conformance requirement~~

If the UE receives:

~~— a RADIO BEARER RECONFIGURATION message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- ~~1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

~~8.2.2.21.3~~ ~~Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL_PCH state after it receives a RADIO BEARER RECONFIGURATION, which invoke the UE to transit from CELL_DCH to CELL_PCH, from SS.~~

~~8.2.2.21.4~~ ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~RADIO BEARER RECONFIGURATION (Step 1) (FDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio-link -Primary CPICH info -Primary scrambling code	400

~~RADIO BEARER RECONFIGURATION (Step 1) (TDD)~~

~~The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL_FACH from CELL_DCH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links -Primary CCPCH info -Cell parameters ID	4

~~8.2.2.21.5 Test requirement~~~~After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.~~~~8.2.2.22 VoidRadio Bearer Reconfiguration from CELL_DCH to URA_PCH: Success~~~~8.2.2.22.1 Definition~~~~8.2.2.22.2 Conformance requirement~~~~If the UE receives:~~~~— a RADIO BEARER RECONFIGURATION message; or~~~~it shall:~~

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
 - ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

~~The UE shall then:~~

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

~~In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

~~Reference~~~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4~~

~~8.2.2.22.3~~ ~~Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE and enters URA_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH, from SS.~~

~~8.2.2.22.4~~ ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters into URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~RADIO BEARER RECONFIGURATION (Step 1)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN-DRX cycle length coefficient	3
Downlink information for each radio-link -Primary CPICH info -Primary scrambling code	100

~~RADIO BEARER RECONFIGURATION (Step 1) (TDD)~~

~~The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL_FACH from CELL_DCH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN-DRX cycle length coefficient	3
Downlink information for each radio links -Primary CCPCH info -Cell parameters-ID	4

~~8.2.2.22.5~~ ~~Test requirement~~

~~After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.~~

8.2.2.24 ~~Void~~Radio Bearer Reconfiguration from CELL_FACH to URA_PCH: Success

8.2.2.24.1 ~~Definition~~

8.2.2.24.2 ~~Conformance requirement~~

If the UE receives:

~~— a RADIO BEARER RECONFIGURATION message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- ~~1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

~~8.2.2.24.3~~ ~~Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters URA_PCH state after it receives a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL_FACH to URA_PCH. To check that the UE does not transmit periodical RLC status in URA_PCH state after it has been activated.~~

~~8.2.2.24.4~~ ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	Periodical RLC status transmission is activated.
2	→		RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state. The SS verifies that no periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers during at least 5 seconds.
4	↔		CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~RADIO BEARER RECONFIGURATION (Step 1) (FDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA identity	0000-0000-0001B
RB information to reconfigure list	
- RB information to reconfigure	(AM-DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	500
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM-DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	500
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM-DCCH for NAS_DT Low priority)

RB identity	4
PDCP info	Not Present
PDCP SN info	Not Present
RLC info	
CHOICE Uplink RLC mode	AM RLC
Transmission RLC discard	
SDU discard mode	No discard
MAX_DAT	15
Transmission window size	128
Timer_RST	600
Max_RST	4
Polling info	
Timer_poll_prohibit	250
Timer_poll	250
Poll_PDU	Not present
Poll_SDU	1
Last transmission PDU poll	TRUE
Last retransmission PDU poll	TRUE
Poll_Window	99
Timer_poll_periodic	Not Present
CHOICE Downlink RLC mode	AM RLC
In-sequence delivery	TRUE
Receiving window size	128
Downlink RLC status info	
Timer_status_prohibit	200
Timer_EPC	Not Present
Missing PDU indicator	TRUE
Timer_STATUS_periodic	Not Present
RB mapping info	Not Present
RB stop/continue	Not Present
RB information to reconfigure	(AM DTCH)
RB identity	20
PDCP info	Not Present
PDCP SN info	Not Present
RLC info	
CHOICE Uplink RLC mode	AM RLC
Transmission RLC discard	
SDU discard mode	No discard
MAX_DAT	15
Transmission window size	128
Timer_RST	600
Max_RST	4
Polling info	
Timer_poll_prohibit	250
Timer_poll	250
Poll_PDU	Not Present
Poll_SDU	1
Last transmission PDU poll	TRUE
Last retransmission PDU poll	TRUE
Poll_Window	99
Timer_poll_periodic	Not Present
CHOICE Downlink RLC mode	AM RLC
In-sequence delivery	TRUE
Receiving window size	128
Downlink RLC status info	
Timer_status_prohibit	200
Timer_EPC	Not Present
Missing PDU indicator	TRUE
Timer_STATUS_periodic	500
RB mapping info	Not Present
RB stop/continue	Not Present
Maximum allowed UL TX power	Not Present
Downlink information per radio link list	
Downlink information for each radio link	
Primary CPICH info	
Primary scrambling code	Set to same code as used for cell 1

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL_FACH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN-DRX cycle length coefficient	3
Downlink information for each radio links Primary CCPCH info Cell parameters ID	4

8.2.2.24.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 2, the UE shall not transmit any periodical RLC STATUS PDUs.

8.2.2.29 ~~Void~~Radio Bearer Reconfiguration for transition from CELL_DCH to URA_PCH (Frequency band modification): Success

8.2.2.29.1 ~~Definition~~

8.2.2.29.2 ~~Conformance requirement~~

If the UE receives:

- ~~-a RADIO BEARER RECONFIGURATION message;~~

it shall:

- ~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below;~~
- ~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:~~

- ~~1> handle the message as if IE "RB information to reconfigure" was absent.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:

 - ~~2> select a suitable UTRA cell according to TS25.304 on that frequency.~~~~
- ~~1> if the IE "Frequency info" is not included in the received reconfiguration message:

 - ~~2> select a suitable UTRA cell according to TS25.304.~~~~
- ~~1> prohibit periodical status transmission in RLC;~~
- ~~1> remove any C-RNTI from MAC;~~
- ~~1> clear the variable C-RNTI;~~
- ~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

 - ~~2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~~~
- ~~1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:

 - ~~2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";~~
 - ~~2> when the URA update procedure is successfully completed:

 - ~~3> the procedure ends.~~~~~~

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

~~8.2.2.29.3~~ Test purpose

- ~~1.To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~
- ~~2.To confirm that the UE transits from CELL_DCH to URA_PCH according to the RADIO BEARER RECONFIGURATION message.~~
- ~~3.To confirm that the UE release dedicated physical channel and selects a common physical channel in a different frequency.~~

~~8.2.2.29.4~~ Method of test

Initial Condition

System Simulator: 2 cells — Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.2.29

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (FDD)	dBm	-55	-72	Off	-55

Table 8.2.2.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.29. SS request operator to make an outgoing call. The SS and UE execute procedure P5. Next the SS and the UE execute procedure P9 and then execute procedure P13. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter CELL_URA state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.29. SS request operator to make an outgoing call.
2		↔	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.29.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	UE transmit this message in cell 4 on the dedicated physical channel.
8				The SS waits for 5 s.
9		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
Primary CPICH info	
Primary scrambling code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info	
UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links	
Primary CCPCH info	
Cell parameters ID	As used for cell 6

~~8.2.2.29.5 Test requirement~~

~~After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.~~

~~After step 8 the UE shall be in CELL_PCH state in cell 6.~~

8.2.2.30 VoidRadio Bearer Reconfiguration for transition from CELL_DCH to CELL_PCH (Frequency band modification): Success

~~8.2.2.30.1 Definition~~~~8.2.2.30.2 Conformance requirement~~

~~If the UE receives:~~

- ~~- a RADIO BEARER RECONFIGURATION message;~~

~~it shall:~~

- ~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

- ~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:~~

- ~~1> handle the message as if IE "RB information to reconfigure" was absent.~~

~~If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~

- ~~2> select a suitable UTRA cell according to TS25.304 on that frequency.~~

- ~~1> if the IE "Frequency info" is not included in the received reconfiguration message:~~

- ~~2> select a suitable UTRA cell according to TS25.304.~~

- ~~1> prohibit periodical status transmission in RLC;~~

- ~~1> remove any C-RNTI from MAC;~~

- ~~1> clear the variable C-RNTI;~~

- ~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~

- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~

- ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~

- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~

- ~~2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~

- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info, and the UE selected another cell than indicated by this IE;
- 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
- 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.30.3 Test purpose

- 1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
- 2. To confirm that the UE transits from CELL_DCH to CELL_PCH according to the RADIO BEARER RECONFIGURATION message.
- 3. To confirm that the UE releases the dedicated physical channel and selects a common physical channel in a different frequency.

8.2.2.30.4 Method of test

Initial Condition

System Simulator: 2 cells Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.2.30

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 2	
CPICH E _c	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.30 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.30. SS request operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter

CELL_PCH state. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.30. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P5 (clause 7.4.2.2.3) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.3) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.3) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.30.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	UE transmit this message on the dedicated physical channel in cell 1
8				The SS waits for 5 s.
9			Call C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN-DRX cycle length coefficient	3
Frequency info	
— UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
— UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
— Primary CPICH info	
— Primary scrambling code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
— UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links	
— Primary CDPCH info	
— Cell parameters ID	As used for cell 6

8.2.2.30.5 ——— Test requirement

After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL_PCH state in cell 6.

8.2.2.33 ~~Void~~Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_PCH (Frequency band modification): Success

8.2.2.33.1 ~~Definition~~

8.2.2.33.2 ~~Conformance requirement~~

If the UE receives:

~~-a RADIO BEARER RECONFIGURATION message;~~

it shall:

~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below;~~

~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:~~

~~1> handle the message as if IE "RB information to reconfigure" was absent.~~

~~In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:~~

~~1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:~~

~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304 on that frequency.~~

~~1> if the IE "Frequency info" is not included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304.~~

~~1> prohibit periodical status transmission in RLC;~~

~~1> remove any C-RNTI from MAC;~~

~~1> clear the variable C-RNTI;~~

~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~

~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~

~~2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~

~~1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" for FDD or IE "Primary CCPCH info" for TDD and the UE selected another cell than indicated by this IE:~~

~~2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";~~

~~2> when the cell update procedure is successfully completed:~~

~~3> the procedure ends.~~

Reference

~~3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.~~

~~8.2.2.33.3 Test purpose~~

- ~~1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~
- ~~2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the RADIO BEARER RECONFIGURATION message.~~
- ~~3. To confirm that the UE selects a common physical channel in a different frequency.~~

~~8.2.2.33.4 Method of test~~

Initial Condition

~~System Simulator: 2 cells Cell 1 in active and cell 6 is inactive~~

~~UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).~~

Test Procedure

Table 8.2.2.33

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.33 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.33. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter CELL_PCH state in cell 6. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.33. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.3) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.3) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.3) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.33.
6		←	RADIO-BEARER-RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7		→	RADIO-BEARER-RECONFIGURATION COMPLETE	UE transmit this message on the common physical channel in cell 4.
8				The SS waits for 5 s.
9		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO-BEARER RECONFIGURATION (Step 6) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
— UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
— UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio-link	
-Primary CPICH info	
-Primary scrambling code	Set to same code as used for cell 6

RADIO-BEARER RECONFIGURATION (Step 6) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
 UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links	
 Primary CCPCH info	
 Cell parameters ID	As used for cell 6

~~8.2.2.33.5 Test requirement~~

~~After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.~~

~~After step 8 the UE shall be in CELL_PCH state in cell 6.~~

8.2.4.7 ~~Void~~Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success

~~8.2.4.7.1~~ Definition

~~8.2.4.7.2~~ Conformance requirement

If the UE receives:

~~— a TRANSPORT CHANNEL RECONFIGURATION message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

~~If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency;~~
- ~~1> select PRACH according to TS 25.331 subclause 8.5.17;~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> use the transport format set given in system information;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> ignore that IE and stop using DRX.~~
- ~~1> if the contents of the variable C_RNTI is empty:~~
 - ~~2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";~~

~~...~~

~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.~~

~~8.2.4.7.3 Test purpose~~

~~To confirm that the UE reconfigures the channel according to a TRANSPORT CHANNEL RECONFIGURATION message.~~

~~8.2.4.7.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS-DCH+DTCH-DCH (state 6-10) as specified in clause 7.4 of TS 34.108. An interactive/ background PS domain RAB has been established.~~

Test Procedure

~~The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE and the UE performs a state transition from CELL_DCH to CELL_FACH in the same cell. The UE then reconfigures the new channels according to this message and system information messages. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2				UE shall perform the reconfiguration
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
4		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

~~TRANSPORT CHANNEL RECONFIGURATION~~

~~Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exception:~~

Information Element	Value/remark
New C-RNTI	0000-0000-0000-0004B
Frequency info	Not Present
Maximum allowed UL TX power	Not Present

~~8.2.4.7.5 Test requirement~~

~~After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the common physical channel.~~

8.2.4.9 ~~Void~~Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success (Cell re-selection)

8.2.4.9.1 ~~Definition~~

8.2.4.9.2 ~~Conformance requirement~~

If the UE receives:

~~— a TRANSPORT CHANNEL RECONFIGURATION message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):~~
 - ~~2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";~~
 - ~~2> when the cell update procedure completed successfully:~~
 - ~~1> select PRACH according to TS 25.331 subclause 8.5.17;~~
 - ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
 - ~~1> use the transport format set given in system information;~~
 - ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> ignore that IE and stop using DRX.~~
 - ~~1> if the contents of the variable C_RNTI is empty:~~
 - ~~2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";~~

∴

If the CELL_UPDATE_CONFIRM message:

- ~~— does not include "RB information elements"; and~~
- ~~— does not include "Transport channel information elements"; and~~
- ~~— does not include "Physical channel information elements"; and~~
- ~~— includes "CN information elements"; or~~

- ~~—includes the IE "Ciphering mode info"; or~~
- ~~—includes the IE "Integrity protection mode info"; or~~
- ~~—includes the IE "New C-RNTI"; or~~
- ~~—includes the IE "New U-RNTI";~~

~~the UE shall:~~

- ~~1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.~~

~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, 8.3.1.7.~~

~~8.2.4.9.3 Test purpose~~

~~To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after it completes a cell update procedure.~~

~~8.2.4.9.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.~~

Test Procedure

~~The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes IE "Primary CPICH info" and no dedicated physical channel information to transit from CELL_DCH to CELL_FACH, to the UE. The UE shall initiate the cell re-selection procedure, because it selects another cell than the one requested by SS. It transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3		←	TRANSPORT CHANNEL RECONFIGURATION	This message include IE "Primary CPICH info".
4		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	See message content.
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
Downlink information for each radio links	
Primary CPICH info	
Primary scrambling code	150

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links	
Primary CCPCH info	
Cell parameters ID	4

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions:

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 7)~~~~Use the message with the same message type specified in Annex A.~~~~8.2.4.9.5 Test requirement~~~~After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".~~~~After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.~~~~After step 6 UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

8.2.4.16 ~~Void~~Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success with no transport channel type switching

8.2.4.16.1 ~~Definition~~

8.2.4.16.2 ~~Conformance requirement~~

If the UE receives:

~~— a TRANSPORT CHANNEL RECONFIGURATION message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message;~~
- ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency;~~
- ~~2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD);~~

~~...~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- ~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.~~

8.2.4.16.3 ~~Test purpose~~

To confirm that the UE transits from CELL_FACH in the current cell to CELL_FACH in another cell according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.16.4 ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 2 cells—Cell 1 and 2 are active.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

Table 8.2.4.16

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 1	
CPICH E _c (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.4.16 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a TRANSPORT_CHANNEL_RECONFIGURATION message, to the UE. Then the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.16. As a result of this, the UE re-selects cell 2 and configures the new transport channels and the common physical channel according to the system information messages. Since the SS included a C-RNTI that is valid within cell 2, the UE need not perform the cell update procedure but can proceed by transmitting a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message using AM-RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
4		←	TRANSPORT_CHANNEL_RECONFIGURATION	
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.16.
3		→	TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE	
4		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~TRANSPORT_CHANNEL_RECONFIGURATION (FDD)~~

~~Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions.~~

Information Element	Value/remark
Downlink information for each radio links Primary CPICH info Primary scrambling code	150

~~TRANSPORT CHANNEL RECONFIGURATION (TDD)~~

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links Primary CCPCH info Cell parameters ID	4

~~8.2.4.16.5 Test requirement~~

After step 2 the UE shall transmit a ~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE~~ message on DCCH using AM RLC in cell 2.

8.2.4.17 Void Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success (Cell re-selection)

~~8.2.4.17.1 Definition~~

~~8.2.4.17.2 Conformance requirement~~

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency;~~
 - ~~2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):~~
 - ~~3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "cell reselection";~~
 - ~~3> when the cell update procedure completed successfully:~~
 - ~~4> proceed as below.~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

If the ~~CELL UPDATE CONFIRM~~ message:

- ~~— does not include "RB information elements"; and~~
- ~~— does not include "Transport channel information elements"; and~~
- ~~— does not include "Physical channel information elements"; and~~

- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI";

the UE shall:

- 1> transmit a ~~UTRAN MOBILITY INFORMATION CONFIRM~~ as response message using AM RLC.

In case the procedure was triggered by reception of a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message, the UE shall:

- 1> transmit a ~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE~~ as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, 8.3.1.7.

8.2.4.17.3 Test purpose

To confirm that the UE transmits a ~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE~~ message after UE completes a cell update procedure indicated by a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message.

8.2.4.17.4 Method of test

Initial Condition

System Simulator: 2 cells—Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.4.17

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 1	
CPICH-E _c (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.4.17 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. On transmitting a TRANSPORT CHANNEL RECONFIGURATION message, which does not include the IE "Primary CPICH info", the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.17. The UE shall initiate the cell reselection procedure. The UE transmits a CELL_UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL_UPDATE_CONFIRM message on downlink CCCH after receiving a CELL_UPDATE message. The UE then transmit a UTRAN_MOBILITY_INFORMATION_CONFIRM message on the DCCH using AM RLC. The UE transmit a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	This message does not include IE "Primary CPICH info"
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.17.
3			Void	
4		→	CELL_UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5		←	CELL_UPDATE_CONFIRM	See message content.
6		→	UTRAN_MOBILITY_INFORMATION_CONFIRM	
7		→	TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links — Primary CPICH info — Primary scrambling code	Not Present

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links — Primary CCPCH info — Cell parameters ID	Not present

CELL_UPDATE (Step 4)

The contents of CELL_UPDATE message is identical as "Contents of CELL_UPDATE message" as found in Annex A for FDD and Annex A for TDD.

CELL_UPDATE_CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions:

Information Element	Value/Remarks
New-C-RNTI	'1010 1010 1010 1010'

~~UTRAN MOBILITY INFORMATION CONFIRM (Step 6)~~

~~Only the message type is checked.~~

~~8.2.4.17.5 Test requirement~~

~~After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".~~

~~After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.~~

~~After step 6 UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

8.2.4.20 ~~Void~~Transport Channel Reconfiguration from CELL_DCH to CELL_PCH: Success

~~8.2.4.20.1~~ Definition

~~8.2.4.20.2~~ Conformance requirement

If the UE receives:

~~— a TRANSPORT CHANNEL RECONFIGURATION message; or~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
 - ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

The UE shall then:

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- ~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.~~

~~8.2.4.20.3 Test purpose~~

~~To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters CELL_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to CELL_PCH.~~

~~8.2.4.20.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to CELL_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	100

~~TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
- Primary CCPCH info - Cell parameters ID	4

~~8.2.4.20.5 Test requirement~~~~After step 1 the UE shall transmit TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message on uplink DCCH using AM RLC.~~~~8.2.4.21 Void Transport Channel Reconfiguration from CELL_DCH to URA_PCH:
Success~~~~8.2.4.21.1 Definition~~~~8.2.4.21.2 Conformance requirement~~~~If the UE receives:~~~~— a TRANSPORT_CHANNEL_RECONFIGURATION message; or~~~~it shall:~~

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
 - ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below:~~

~~The UE shall then:~~

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- 1-> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

8.2.4.21.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters URA_PCH state after it received a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH.

8.2.4.21.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA identity	Ref. to the Default setting in TS34.108 clause 6.1 (FDD)

~~TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA identity	Ref. to the Default setting in TS34.108 clause 6.1 (FDD)

~~8.2.4.21.5 Test requirement~~

~~After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.~~

~~8.2.4.22 Void Transport Channel Reconfiguration from CELL_FACH to CELL_PCH: Success~~

~~8.2.4.22.1 Definition~~

~~8.2.4.22.2 Conformance requirement~~

~~If the UE receives:~~

~~— a TRANSPORT CHANNEL RECONFIGURATION message; or~~

~~it shall:~~

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

~~The UE shall then:~~

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

~~If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~

~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;

In case the procedure was triggered by reception of a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message, the UE shall:

- 1> transmit a ~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE~~ as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

8.2.4.22.3 Test purpose

To confirm that the UE transmits a ~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE~~ message and enters CELL_PCH state after it receives a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message, which invokes the UE to transit from CELL_FACH to CELL_PCH state.

8.2.4.22.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH(state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message, which invokes the UE to transit from CELL_FACH to CELL_PCH. The UE transmits a ~~TRANSPORT CHANNEL RECONFIGURATION COMPLETE~~ message using AM RLC and enters CELL_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN-DRX cycle-length coefficient	3
Physical channel information	Not Present

~~8.2.4.22.5 Test requirement~~~~After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.~~~~8.2.4.23 Void Transport Channel Reconfiguration from CELL_FACH to URA_PCH: Success~~~~8.2.4.23.1 Definition~~~~8.2.4.23.2 Conformance requirement~~~~If the UE receives:~~~~— a TRANSPORT CHANNEL RECONFIGURATION message; or~~~~it shall:~~

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:~~
 - ~~2> perform the physical layer synchronisation procedure A as specified in TS 25.214;~~
- ~~1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below:~~

~~The UE shall then:~~

- ~~1> enter a state according to TS 25.331 subclause 8.6.3.3.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~
 - ~~2> select a suitable UTRA cell according to TS 25.304 on that frequency.~~
- ~~1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - ~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~...~~~~The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:~~

- ~~1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- ~~1> clear that entry;~~

In case the procedure was triggered by reception of a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message, the UE shall:

- 1) ~~transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4~~

~~8.2.4.23.3 Test purpose~~

~~To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters URA_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL_FACH to CELL_PCH.~~

~~8.2.4.23.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS DCCH+DTCH_FACH(state 6-11) as specified in clause 7.4 of TS 34.108.~~

Test Procedure

~~The UE is in CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL_FACH to CELL_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

~~TRANSPORT CHANNEL RECONFIGURATION (Step 1)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

~~8.2.4.23.5 Test requirement~~

~~After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.~~

8.2.4.26 ~~Void~~Transport Channel Reconfiguration for transition from CELL_FACH to CELL_PCH: Success

8.2.4.26.1 ~~Definition~~

8.2.4.26.2 ~~Conformance requirement~~

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C-RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS5.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info, and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.3, 8.5 and 8.6.

~~8.2.4.26.3 Test purpose~~

- ~~1. To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~
- ~~2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~

~~8.2.4.26.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell Cell 1 is active.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state of cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter CELL_PCH state according to its message. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2		←	TRANSPORT CHANNEL RECONFIGURATION	
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message on uplink DCCH using AM RLC.
4				The SS waits for 5 s.
5		←	CALL C.	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~TRANSPORT CHANNEL RECONFIGURATION (Step 2)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

~~8.2.4.26.5 Test requirement~~

~~After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.~~

~~After step 4 the UE shall be in CELL_PCH state.~~

8.2.4.27 ~~Void~~Transport Channel Reconfiguration for transition from CELL_DCH to URA_PCH (Frequency band modification): Success

8.2.4.27.1 ~~Definition~~

8.2.4.27.2 ~~Conformance requirement~~

If the UE receives:

- a ~~TRANSPORT CHANNEL RECONFIGURATION~~ message;

it shall:

- 1> ~~act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.~~
- 1> ~~enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

- 1> ~~transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- 1> ~~if the IE "Frequency info" is included in the received reconfiguration message:~~
 - 2> ~~select a suitable UTRA cell according to TS25.304 on that frequency.~~
- 1> ~~if the IE "Frequency info" is not included in the received reconfiguration message:~~
 - 2> ~~select a suitable UTRA cell according to TS25.304.~~
- 1> ~~prohibit periodical status transmission in RLC;~~
- 1> ~~remove any C-RNTI from MAC;~~
- 1> ~~clear the variable C-RNTI;~~
- 1> ~~select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~
- 1> ~~if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~
 - 2> ~~use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~
- 1> ~~if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~
 - 2> ~~keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~
- 1> ~~if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:~~
 - 2> ~~initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";~~
 - 2> ~~when the URA update procedure is successfully completed:~~
 - 3> ~~the procedure ends.~~

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

~~8.2.4.27.3~~ Test purpose

- ~~1. To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~
- ~~2. To confirm that the UE transits from CELL_DCH to URA_PCH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~
- ~~3. To confirm that the UE release the dedicated physical channel and reconfigures transport channel parameters and selects a common physical channel in a different frequency.~~

~~8.2.4.27.4~~ Method of test

Initial Condition

System Simulator: 2 cells — Cell 1 is active and cell 6 is inactive

UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.4.27

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.4.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.27. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message not including IE "Frequency info" and IE "Primary CPICH info". The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_URA state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.27. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.27.
6		←	TRANSPORT CHANNEL RECONFIGURATION	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	UE transmit this message on the dedicated physical channel in cell 1.
8				The SS waits for 5 s.
9		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

8.2.4.27.5 Test requirement

After step 6 the UE shall transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL_PCH state in cell 6.

8.2.4.28 Void Transport Channel Reconfiguration for transition from CELL_FACH to URA_PCH: Success

8.2.4.28.1 Definition

8.2.4.28.2 Conformance requirement

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304 on that frequency.~~

~~1> if the IE "Frequency info" is not included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304.~~

~~1> prohibit periodical status transmission in RLC;~~

~~1> remove any C_RNTI from MAC;~~

~~1> clear the variable C_RNTI;~~

~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~

~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~

~~2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~

~~1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:~~

~~2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";~~

~~2> when the URA update procedure is successfully completed:~~

~~3> the procedure ends.~~

Reference

~~3GPP TS 25.331 clause 8.2.2, 8.3, 8.5 and 8.6.~~

~~8.2.4.28.3~~ Test purpose

~~1. To confirm that the UE transmits the TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~

~~2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~

~~3. To confirm that the UE reconfigures the transport channel parameters and selects a common physical channel.~~

~~8.2.4.28.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell—Cell 1 is active.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state of cell 1. The SS transmits a TRANSPORT_CHANNEL_RECONFIGURATION message. The UE shall reconfigure its transport channel parameters and enter URA_PCH state after it transmits a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2		←	TRANSPORT_CHANNEL_RECONFIGURATION	
3		→	TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE	The UE transmits this message on uplink DCCH using AM RLC.
4		←		The SS waits for 5 s.
5		↔	CALL C.5	If the test result of C.5 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

~~Specific Message Contents~~

~~TRANSPORT_CHANNEL_RECONFIGURATION (Step 2)~~

~~Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN-DRX-cycle-length-coefficient	3

~~8.2.4.28.5 Test requirement~~

~~After step 2 the UE shall transmit a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message on uplink DCCH using AM RLC.~~

~~After step 4 the UE shall be in URA_PCH state.~~

8.2.4.30 ~~Void~~Transport Channel Reconfiguration from CELL_DCH to CELL_FACH (Transport channel type switching with frequency band modification): Success

8.2.4.30.1 ~~Definition~~

8.2.4.30.2 ~~Conformance requirement~~

If the UE receives:

- ~~-a TRANSPORT CHANNEL RECONFIGURATION message;~~

it shall:

~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below;~~

~~1> enter a state according to TS25.331 subclause 8.6.3.3;~~

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304 on that frequency;~~

~~1> if the IE "Frequency info" is not included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304;~~

~~1> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":~~

~~2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";~~

~~1> select PRACH according to TS25.331 subclause 8.5.17;~~

~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~

~~1> use the transport format set given in system information;~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~

~~2> ignore that IE and stop using DRX;~~

~~1> if the contents of the variable C_RNTI is empty:~~

~~2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";~~

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition;~~

~~1> the procedure ends;~~

Reference

~~3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.~~

~~8.2.4.30.3 Test purpose~~

- ~~1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~
- ~~2. To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.~~

~~8.2.4.30.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 2 cells—Cell 1 is active and cell 6 is inactive.~~

~~UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).~~

~~Test Procedure~~

Table 8.2.4.30

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 2	
CPICH Ee	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.4.30 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.30. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message not including IE "Frequency info" and IE "Primary CPICH info". The UE shall select cell 6 and initiate CELL_UPDATE procedure with IE "Cell update cause" set to "cell reselection". Upon completion of the cell update procedure, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC after it completes configuring of transport channel parameters according to SIB5 or SIB6. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.30. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.30.
6		←	TRANSPORT CHANNEL RECONFIGURATION	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
8		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
9		→	UTRAN MOBILITY INFORMATION CONFIRM	
10		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message on the common physical channel in cell 6.
11		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info	Not present
Downlink information for each radio link	Not present

CELL UPDATE (Step 7)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000-0000-0000-0004B

~~UTRAN MOBILITY UPDATE CONFIRM (Step 9)~~

~~The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.~~

~~8.2.4.30.5 Test requirement~~

~~After step 6 the UE shall transmit a CELL_UPDATE message on the CCCH in cell 6.~~

~~After step 8 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.~~

~~After step 9 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~

~~After step 10 the UE shall be in CELL_FACH state of cell 6.~~

8.2.4.31 Void Transport Channel Reconfiguration for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

~~8.2.4.31.1 Definition~~~~8.2.4.31.2 Conformance requirement~~

~~If the UE receives:~~

- ~~- a TRANSPORT CHANNEL RECONFIGURATION message;~~

~~it shall:~~

- ~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.~~
- ~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:

 - ~~2> select a suitable UTRA cell according to TS25.304 on that frequency;~~
 - ~~2> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

 - ~~3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";~~
 - ~~3> when the cell update procedure completed successfully;~~~~~~
- ~~4> proceed as below.~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

~~8.2.4.31.3 Test purpose~~

- ~~1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~
- ~~2. To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.~~

~~8.2.4.31.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 2 cells—Cell 1 is active and cell 6 is inactive.~~

~~UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".~~

~~Test Procedure~~

Table 8.2.4.31

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 2	
CPICH E _e	dBm/3.84 MHz	-55	-72	Off	-55

~~Table 8.2.4.31 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.~~

~~The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.31. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 but not IE "Primary CPICH info". The UE shall select cell 6 and initiates CELL_UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE shall reconfigure its transport channel parameters after completing cell reselection procedure, and then remain in CELL_FACH state. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC after it completes configuration according to the received TRANSPORT CHANNEL RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.31. SS requests operator to make an outgoing call.
2	↔		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.31.
6	←		TRANSPORT CHANNEL RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6
7	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
8	←		CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
9	→		UTRAN MOBILITY INFORMATION CONFIRM	
10	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a common physical channel in cell 6.
11	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 6)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	
—— UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
—— UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio links	Not present

CELL UPDATE (Step 7)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000-0000-0000-0004B

~~UTRAN MOBILITY UPDATE CONFIRM (Step 9)~~

~~The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.~~

~~8.2.4.31.5 Test requirement~~

~~After step 6 the UE shall transmit a CELL_UPDATE message on the CCCH in cell 6.~~

~~After step 8 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.~~

~~After step 9 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.~~

~~After step 10 the UE shall be in CELL_FACH state in cell 6.~~

8.2.4.32 Void Transport Channel Reconfiguration for transition from CELL_FACH to CELL_PCH (Frequency band modification): Success

~~8.2.4.32.1 Definition~~~~8.2.4.32.2 Conformance requirement~~

~~If the UE receives:~~

- ~~- a TRANSPORT CHANNEL RECONFIGURATION message;~~

~~it shall:~~

- ~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.~~
- ~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:~~

- ~~1> if the IE "Frequency info" is included in the received reconfiguration message:

 - ~~2> select a suitable UTRA cell according to TS25.304 on that frequency.~~~~
- ~~1> if the IE "Frequency info" is not included in the received reconfiguration message:

 - ~~2> select a suitable UTRA cell according to TS25.304.~~~~
- ~~1> prohibit periodical status transmission in RLC;~~
- ~~1> remove any C-RNTI from MAC;~~
- ~~1> clear the variable C-RNTI;~~
- ~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~
- ~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

 - ~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~~~

- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.4.32.3 Test purpose

- 1. To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
- 2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the TRANSPORT CHANNEL RECONFIGURATION message.
- 3. To confirm that the UE selects a common physical channel in a different frequency.

8.2.4.32.4 Method of test

Initial Condition

System Simulator: 2 cells — Cell 1 in active and cell 6 inactive

UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.4.32

Parameter	Unit	Cell 4		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.4.32 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.32. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter CELL_PCH state in cell 6. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.32. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.32.
6		←	TRANSPORT CHANNEL RECONFIGURATION	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE transmit this message on the common physical channel in cell 1.
8				The SS waits for 5 s.
9		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not Present
Downlink information for each radio link	

8.2.4.32.5 Test requirement

After step 6 the UE shall transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL_PCH state in cell 6.

8.2.4.33 Void Transport channel reconfiguration for transition from CELL_FACH to URA_PCH (Frequency band modification): Success

8.2.4.33.1 Definition

8.2.4.33.2 Conformance requirement

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below;~~

~~1> enter a state according to TS25.331 subclause 8.6.3.3;~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition;~~

~~If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:~~

~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304 on that frequency;~~

~~1> if the IE "Frequency info" is not included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304;~~

~~1> prohibit periodical status transmission in RLC;~~

~~1> remove any C_RNTI from MAC;~~

~~1> clear the variable C_RNTI;~~

~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~

~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2;~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~

~~2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~

~~1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:~~

~~2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";~~

~~2> when the URA update procedure is successfully completed:~~

~~3> the procedure ends;~~

Reference

~~3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.~~

~~8.2.4.33.3~~ Test purpose

~~1.To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~

~~2.To confirm that the UE transits from CELL_FACH to URA_PCH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~

~~3.To confirm that the UE reconfigures the transport channel parameters and selects a common physical channel in a different frequency.~~

8.2.4.33.4 ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 2 cells Cell 1 is active and cell 6 is inactive~~

~~UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).~~

~~Test Procedure~~

Table 8.2.4.33

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.4.33 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" dan "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.33. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.33. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.33.
6		←	TRANSPORT CHANNEL RECONFIGURATION	Not including IE "Frequency info" set to and IE "Primary CPICH info"
7		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	UE transmit this message 1 on the common physical channel in cell 1.
8		←		The SS transmits this message with a matched identity.
9		→	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION COMPLETE (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

8.2.4.33.5 Test requirement

After step 6 the UE shall transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in URA_PCH state in cell 6.

8.2.4.34 ~~Void~~Transport channel reconfiguration for transition from CELL_DCH to CELL_PCH (Frequency band modification): Success

8.2.4.34.1 ~~Definition~~

8.2.4.34.2 ~~Conformance requirement~~

If the UE receives:

~~-a TRANSPORT CHANNEL RECONFIGURATION message;~~

it shall:

~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below;~~

~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:~~

~~1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.~~

~~If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:~~

~~1> if the IE "Frequency info" is included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304 on that frequency.~~

~~1> if the IE "Frequency info" is not included in the received reconfiguration message:~~

~~2> select a suitable UTRA cell according to TS25.304.~~

~~1> prohibit periodical status transmission in RLC;~~

~~1> remove any C-RNTI from MAC;~~

~~1> clear the variable C-RNTI;~~

~~1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:~~

~~2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.~~

~~1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:~~

~~2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9~~

~~1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info"~~

~~2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";~~

~~2> when the cell update procedure completed successfully;~~

~~3> the procedure ends.~~

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

~~8.2.4.34.3 Test purpose~~

- ~~1. To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.~~
- ~~2. To confirm that the UE transits from CELL_DCH to CELL_PCH according to the TRANSPORT CHANNEL RECONFIGURATION message.~~
- ~~3. To confirm that the UE release the dedicated physical channel and selects a common physical channel in a different frequency.~~

~~8.2.4.34.4 Method of test~~

Initial Condition

System Simulator: 2 cells — Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.4.34

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.4.34 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.34. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter CELL_PCH state. The UE shall select cell 6 and initiate CELL_UPDATE procedure with IE "Cell update cause" set to "cell reselection".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.34. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.34.
6		←	TRANSPORT CHANNEL RECONFIGURATION	Not including IE "Frequency info" and no IE "Primary CPICH info"
7		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	UE transmit this message on the dedicated physical channel in cell 1.
8		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
9		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

CELL UPDATE (Step 6)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indic	CELL_PCH
UTRAN DRX cycle length coefficient	3

~~8.2.4.34.5 Test requirement~~

~~After step 6 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.~~

~~After step 7 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.~~

8.2.6.16 ~~Void~~Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: (Cell re-selection)

8.2.6.16.1 ~~Definition~~

8.2.6.16.2 ~~Conformance requirement~~

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- 1> ~~if the IE "Frequency info" is included in the received reconfiguration message;~~
- 2> ~~select a suitable UTRA cell according to TS 25.304 on that frequency;~~
- 2> ~~if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD);~~
- 3> ~~initiate a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "cell reselection";~~
- 3> ~~when the cell update procedure completed successfully;~~
- 4> ~~proceed as below.~~

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> ~~set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
- 1> ~~clear that entry;~~

If the CELL_UPDATE_CONFIRM message:

- ~~— does not include "RB information elements"; and~~
- ~~— does not include "Transport channel information elements"; and~~
- ~~— does not include "Physical channel information elements"; and~~
- ~~— includes "CN information elements"; or~~
- ~~— includes the IE "Ciphering mode info"; or~~
- ~~— includes the IE "Integrity protection mode info"; or~~
- ~~— includes the IE "New C-RNTI"; or~~
- ~~— includes the IE "New U-RNTI";~~

the UE shall:

- 1> ~~transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.~~

In case the procedure was triggered by reception of a PHYSICAL_CHANNEL_RECONFIGURATION message, the UE shall:

- 1> ~~transmit a PHYSICAL_CHANNEL_RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, 8.3.1.7

~~8.2.6.16.3 Test purpose~~

~~To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after the UE completes a cell update procedure indicated by a PHYSICAL CHANNEL RECONFIGURATION message.~~

~~8.2.6.16.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 2 cells—Cell 1 and 2 are active.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108~~

~~Test Procedure~~

Table 8.2.6.16

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 1	
CPICH E _c (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.6.16 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which does not include the IE "Primary CPICH info". When receiving the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message sent by the UE on the uplink DCCH using AM-RLC, the SS will not acknowledge the concerning RLC PDUs and configures its downlink transmission power settings according to columns "T1" in table 8.2.6.16. The UE shall initiate the cell update procedure and transmits a CELL_UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL_UPDATE CONFIRM message on downlink CCCH after receiving CELL_UPDATE message. The UE transmits a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM-RLC and re-transmit the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM-RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	This message does not include IE "Primary CPICH info" (FDD).
2		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The SS shall not acknowledge the received RLC PDU's and configure the transmission power settings, according to the values in columns "T1" of table 8.2.6.16.
3			Void	
4		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A.

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Assigned previously in cell 1
-S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A for FDD and Annex A for TDD, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 4
New U-RNTI	
-SRNC Identity	'0000 0000 0000 0001'
-S-RNTI	Different from previous S-RNTI
New C-RNTI	Different from previous C-RNTI

8.2.6.16.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 5 the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

~~After step 6 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

8.2.6.24 ~~Void~~Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (modify uplink physical channel rate): Success

8.2.6.24.1 ~~Definition~~

8.2.6.24.2 ~~Conformance requirement~~

If the UE receives:

~~— a PHYSICAL_CHANNEL_RECONFIGURATION message;~~

it shall:

- ~~1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure;~~
- ~~2> perform the physical layer synchronisation procedure A as specified in TS25.214;~~
- ~~1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.~~

~~The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:~~

- ~~1> enter a state according to TS25.331 subclause 8.6.3.3.~~

~~If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:~~

- ~~1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;~~
- ~~1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.~~

~~In case the procedure was triggered by reception of a PHYSICAL_CHANNEL_RECONFIGURATION message, the UE shall:~~

- ~~1> transmit a PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE as response message on the uplink DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2 and 8.5 and 8.6~~

8.2.6.24.3 ~~Test purpose~~

~~To confirm that the UE modifies uplink physical channel rate according to a PHYSICAL_CHANNEL_RECONFIGURATION message and transmits PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH using AM RLC.~~

8.2.6.24.4 ~~Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.~~

~~NOTE: — Transmission rate shall be set to the maximum rate for the UE during the radio bearer establishment procedure.~~

Test Procedure

The UE is in CELL_DCH state of cell 1. The radio bearer is placed into UE test loop mode 1 described in 34.109 clause 5.3 and the UL_RLC_SDU size for the loopback scheme is set to the maximum size possible when the maximum uplink TFS, as indicated in RADIO BEARER SETUP message during radio bearer establishment procedure, is used. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which assign a new UL puncture limit and minimum spreading factor to the UE to modify uplink physical channel rate. The UE shall reconfigure the physical channel according to this message and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH AM RLC. UL MAC restriction is imposed on the SS so that SS can only received using the maximum TFS and minimum TFS. Both TFSs belong to the restricted TFS(i.e. the TFS after reconfiguration) by the specified spreading factor. In this procedure SS transmits a RLC_SDU whose size is the same as the UL_RLC_SDU size for the loopback scheme. The UE shall selects the maximum uplink TFS in the restricted TFS(i.e. the TFS after reconfiguration) on the radio access bearer. The SS should receive the expected data as a RLC_SDU that is sent back by UE. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state of cell 1.
2		←	PHYSICAL CHANNEL RECONFIGURATION	This message is including new IE "Uplink DPCH info" and don't include IE "Downlink information for each radio link".
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	DOWNLINK RLC SDU	
5		→	UPLINK RLC SDU	
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
CHOICE channel requirement -Uplink DPCH power control info	Uplink DPCH info Same contents as a RADIO BEARER SETUP message used in initial procedure
-CHOICE mode -Scrambling code type -Scrambling code number -Number of DPDCH -Spreading factor	FDD Long 0 (0 to 16777215) Not Present Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
-TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
-Number of FBI bit -Puncturing Limit	Not Present Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
Downlink information per radio link list	Not present

~~8.2.6.24.5 Test requirement~~

~~After step 2 the UE shall transmit a PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH using AM RLC.~~

~~After step 4 the UE shall transmit a RLC_SDU that is same as the transmitted data from SS in step 4 on the radio access bearer.~~

3GPP TSG-T1 Meeting #18
 San Antonio, USA, 10th - 14th, February 2003

T1-030088

3GPP TSG-T1/SIG Meeting #27
 San Antonio, USA, 10th - 14th, February 2003

T1S030210

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 436 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 Corrections to clause 8.2.2.20		
Source:	⌘ Panasonic		
Work item code:	⌘ TEI Date: ⌘ 11/02/03		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
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Reason for change:	⌘ Clause 8.2.2.20. There are three possibilities that the UE would behave after receiving the first RADIO BEARER RECONFIGURATION message from the SS. <ol style="list-style-type: none"> a) The UE may finish reconfiguration even before SS could start to send the second RADIO BEARER RECONFIGURATION message on UM RLC and move into CELL_DCH state and thus unable to receive the second RADIO BEARER RECONFIGURATION message because it is sent on SCCPCH. In this case the UE would send a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC on the uplink DPCH. If the SS stops RB2 before step 1, then the UE will keep sending the RLC PDU containing RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DPCH. If SS starts RB2 after sending the second RADIO BEARER RECONFIGURATION message (before the UE start to transmit RESET PDU), then the SS shall acknowledge the RADIO BEARER RECONFIGURATION COMPLETE message sent by UE using UL scrambling code assigned in the first reconfiguration message on uplink DPCH. In this case, we should consider this test case irrelevant for such a fast UE. b) In the second case, the UE finish configuration during the reception of the second RADIO BEARER RECONFIGURATION message (this is assuming that the UE could simultaneously receive on the SCCPCH and transmit on the uplink DPCH). If the SS stops RB2 before step 1, then the UE will keep sending the RLC PDU containing RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DPCH. Without the acknowledgement from the SS, the UE shall
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	<p>deem the second RADIO BEARER RECONFIGURATION message as “subsequently received” message and therefore ignore it. If SS starts RB2 after sending the second RADIO BEARER RECONFIGURATION message (before the UE start to transmit RESET PDU), Then the SS shall acknowledge the RADIO BEARER RECONFIGURATION COMPLETE message sent by UE using UL scrambling code assigned in the first reconfiguration message on uplink DPCH. In the test case, we could wait for another 5 s to see if UE transmits any RRC message. Test fails if UE does, otherwise we could consider that the UE has passed the test.</p> <p>c) In the third case, the UE receives the second RADIO BEARER RECONFIGURATION message before or during the configuration of the radio bearers according the first RADIO BEARER RECONFIGURATION message. UE shall ignore the second message and transmit a RADIO BEARER RECONFIGURATION COMPLETE message using secondary scrambling code 1 on uplink DPCH. If SS starts RB2 after sending the second RADIO BEARER RECONFIGURATION message (before the UE start to transmit RESET PDU), then the SS shall acknowledge the RADIO BEARER RECONFIGURATION COMPLETE message sent by UE using UL scrambling code assigned in the first reconfiguration message on uplink DPCH and the UE is consider to have passed the test.</p> <p>Propose:</p> <p>a) To stop RB2 of the SS before step 1.</p> <p>b) To start RB2 after SS has completely transmitted the second RADIO BEARER RECONFIGURATION message using UM RLC.</p> <p>c) SS confirms that UE ignores the second reconfiguration message after receiving the RADIO BEARER RECONFIGURATION COMPLETE message sent by UE using UL scrambling code assigned in the first reconfiguration message on uplink DPCH. In the current test case, different DL channelisation codes are assigned in the two reconfiguration messages instead.</p>
Summary of change: ⌘	<p>See the proposal in the section Reason for change.</p> <p>Revision to T1S030030(changes are highlighted in blue),</p> <p>Reference to Annex A has been change to clause 9 of TS 34.108.</p>
Consequences if not approved: ⌘	<p>This test case may fail good UE.</p>

Clauses affected: ⌘	8.2.2.20				
Other specs Affected: ⌘	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> <p>Other core specifications ⌘</p> <p>Test specifications ⌘</p> <p>O&M Specifications ⌘</p>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N				
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Other comments: ⌘	Affects R'99, Rel-4, Rel5 UEs.				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modification>**8.2.2.20 Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Success
(Subsequently received)****8.2.2.20.1 Definition****8.2.2.20.2 Conformance requirement**

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER RECONFIGURATION; or
- ...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
 - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
 - 3> else:
 - ...

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.2.20.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER RECONFIGURATION message before the UE configures the radio bearer according to a previous RADIO BEARER RECONFIGURATION message, it ignores the new RADIO BEARER RECONFIGURATION message and configures the radio bearer according to the previous RADIO BEARER RECONFIGURATION message received.

8.2.2.20.4 Method of test**Initial Condition**

System Simulator: 1 cell.

UE: PS-DCCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a first RADIO BEARER RECONFIGURATION message to the UE using downlink DCCH on UM RLC.

SS transmits then a second RADIO BEARER RECONFIGURATION message to the UE using downlink DCCH on UM RLC immediately after sending out the first RADIO BEARER RECONFIGURATION message. The UE ignores the new RADIO BEARER RECONFIGURATION message and configures the radio bearers according to the former RADIO BEARER RECONFIGURATION message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

SS calls for generic procedure C.3 2 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	For FDD, the IE "Secondary scrambling code" is set to "1". For TDD, the code combination is assigned by SS.
1a (TDD)			A code combination is assigned for the SS.	
2		←	RADIO BEARER RECONFIGURATION	For FDD, the IE "Secondary scrambling code number" in IE "Uplink DPCH info" is set to "2" a different value as that in step 1. For TDD, the code combination assigned is different to that assigned in step 1.
3		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE ignores the RADIO BEARER RECONFIGURATION message in step 2 and confirms configuration according to the RADIO BEARER RECONFIGURATION message in step 1. The UE shall send this message using the UL scrambling code assigned in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
RB information to reconfigure list	
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4

- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DTCH)
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
Downlink information per radio link list	
- Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1
- Downlink DPCH info for each RL	
- DL channelisation code	
- Secondary scrambling code	4

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 Assigned by SS

RADIO BEARER RECONFIGURATION (Step 2) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
RB information to reconfigure list	
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE

- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DTCH)
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	400
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	150
- Timer_poll	150
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
UL Transport channel information for all transport channels	Not Present
Added or Reconfigured UL TrCH information	Not Present
CHOICE mode	Not Present

DL Transport channel information common for all transport channel	Not Present
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	Not Present
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	Different from the value set in step 1
- Number of DPDCH	Not Present(1)
- spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information for each radio link list	
- Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1
- Downlink DPCH info for each RL	
- DL channelisation code	
- Secondary scrambling code	2

RADIO BEARER RECONFIGURATION (Step 2) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH timeslots and codes	
- First timeslot code list	A different code combination to that used in step 1.

8.2.2.20.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

<End of Modification>

3GPP TSG-T1 Meeting #18
San Antonio, USA, 10th - 14th, February 2003

T1-030089

3GPP TSG-T1/SIG Meeting #27
San Antonio, USA, 10th - 14th, February 2003

T1S030194

<small>CR-Form-v7</small>
<h2 style="margin: 0;">CHANGE REQUEST</h2>
⌘ 34.123-1 CR 437 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 Addition of re-run statements when it is failed in cell reselection (revision of T1S030027)		
Source:	⌘ Panasonic, Ericsson		
Work item code:	⌘ TEI Date: ⌘ 21/1/03		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	⌘ F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
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Reason for change: ⌘	<ol style="list-style-type: none"> 1. During T1/SIG #26 meeting, it was agreed that RF condition provided in the signalling conformance test cannot guarantee that UE reselect to the right cell when more than one cell is used in the test. It was suggested that re-run of such test case should be allowed if the UE failed the test due to a failure to reselect to the right cell. 2. In order to avoid the duplication of CPICH code(sf256,0) and DPCH(sfXXX,0) in cell 2 in ACTIVE SET UPDATE message, it is proposed to change the secondary scrambling code of cell 2 from "Not present" to other values.
Summary of change: ⌘	<ol style="list-style-type: none"> 1. A note has been added to cell reselection test cases to indicate that these test cases can be re-run if the UE failed due to failure to reselect to the right cell. 2. In clause 8.1.3.9, ACTIVE SET UPDATE message in step 2 has been revised so that secondary scrambling code of cell 2 is set to '1'. <p>Revision to T1S030027, In T1S030090, Ericsson has proposed to remove some RRC test cases, therefore the proposed correction in this CR does not need to be applied to these test cases. Hence these test cases are removed from this CR.</p>

Consequences if not approved:	⌘ Good UE may fail due to the failure to reselect to the right cell.												
Clauses affected:	⌘ 8.1.2.4, 8.1.2.10, 8.1.2.11, 8.1.3.6, 8.1.3.7, 8.1.3.8, 8.1.3.9, 8.1.10.1, 8.2.1.13, 8.2.1.22, 8.2.1.23, 8.2.1.24, 8.2.1.25, 8.2.2.13, 8.2.2.18, 8.2.2.27, 8.2.2.28, , 8.2.2.31, 8.2.2.32, 8.2.2.34, 8.2.3.12, 8.2.3.20, 8.2.3.21, 8.2.3.24, 8.2.3.25, 8.2.3.26, 8.2.3.27, 8.2.3.28, 8.2.4.1, 8.2.4.13, 8.2.4.25, 8.2.4.29, 8.2.6.12, 8.2.6.23, 8.2.6.25, 8.2.6.26, 8.2.6.29, 8.2.6.30, 8.2.6.32, 8.2.6.33, 8.2.6.34, 8.2.6.35, 8.2.6.36, 8.3.1.1, 8.3.1.2, 8.3.1.3, 8.3.1.4, 8.3.1.18, 8.3.1.21, 8.3.1.22, 8.3.1.23, 8.3.1.24, 8.3.2.1, 8.3.2.11, 8.3.2.12, 8.3.2.13, 8.3.4.2, 8.3.4.5, 8.4.1.4, 8.4.1.5, 8.4.1.6 and 8.4.1.7												
Other specs Affected:	<table border="1"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> <td></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Other core specifications</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Test specifications</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>O&M Specifications</td> </tr> </table>	Y	N		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications
Y	N												
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications											
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications											
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications											
Other comments:	⌘ Affects R'99, Rel-4 and Rel-5 UEs.												

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modification>

8.1.2.4 RRC Connection Establishment: Reject ("wait time" is not equal to 0)

8.1.2.4.1 Definition

8.1.2.4.2 Conformance requirement

When the UE receives an RRC CONNECTION REJECT message on the downlink CCCH, it shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION REJECT message with the value of the variable INITIAL_UE_IDENTITY:

If the values are different, the UE shall ignore the rest of the message;

If the values are identical, the UE shall stop timer T300 and:

1> if the IE "wait time" \neq '0'; and

1> if the IE "frequency info" is present and:

2> if V300 is equal to or smaller than N300:

3> initiate cell selection on the designated UTRA carrier;

3> after having selected and camped on a cell:

4> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

4> set the contents of the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.3;

4> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;

4> transmit an RRC CONNECTION REQUEST message on the uplink CCCH;

4> reset counter V300;

4> start timer T300 when the MAC layer indicates success or failure in transmitting the message;

4> disable cell reselection to original carrier until the time stated in the IE "wait time" has elapsed;

3> if a cell selection on the designated carrier fails:

4> wait for the time stated in the IE "wait time";

4> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

4> set the IEs in the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.3;

4> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;

4> then submit a new RRC CONNECTION REQUEST message to the lower layers for transmission on the uplink CCCH of the original serving cell;

4> increment counter V300;

4> restart timer T300 when the MAC layer indicates success or failure to transmit the message;

2> if V300 is greater than N300:

3> enter idle mode;

- 3> perform the actions specified in TS 25.331 subclause 8.5.2 when entering idle mode from connected mode;
- 3> consider the RRC establishment procedure to be unsuccessful;
- 3> the procedure ends.
- ...
- 1> If the IEs "frequency info" not present.....:
 - 2> if V300 is equal to or smaller than N300:
 - 3> wait at least the time stated in the IE "wait time";
 - 3> set the IEs in the RRC CONNECTION REQUEST message according to TS 25.331 subclause 8.1.3.2;
 - 3> perform the mapping of the Access Class to an Access Service Class as specified in TS 25.331 subclause 8.5.13, and apply the given Access Service Class when accessing the RACH;
 - 3> submit a new RRC CONNECTION REQUEST message to the lower layers for transmission on the uplink CCCH;
 - 3> increment counter V300;
 - 3> restart timer T300 when the MAC layer indicates success or failure to transmit the message;
 - 2> if V300 is greater than N300:
 - 3> enter idle mode;
 - 3> perform the actions specified in TS 25.331 subclause 8.5.2 when entering idle mode from connected mode;
 - 3> consider the RRC establishment procedure to be unsuccessful;
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.3.9.

8.1.2.4.3 Test purpose

To confirm that the UE retries to establish the RRC connection after the "wait time" lapses, if the UE receives an RRC CONNECTION REJECT message which includes the IE "wait time" not set to 0.

To confirm that the UE performs a cell reselection when receiving an RRC CONNECTION REJECT message, containing relevant frequency information of the target cell to be re-selected.

8.1.2.4.4 Method of test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 4 are active and suitable for camping, but cell 1 is transmitted using a larger power. Cell 1 and cell 4 are being transmitted from different 2 UARFCNs. The transmission power of cell 4 is 15 dB smaller than cell 1.

Table 8.1.2.4

Parameter	Unit	Cell 1	Cell 4
UTRA RF Channel Number		Ch. 1	Ch. 2
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75
P-CCPCH (TDD)	dBm	-60	-75

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation in cell 1. SS rejects the first request by transmitting an RRC CONNECTION REJECT message which indicates a non-zero wait time. In this message, frequency information for cell 4 is available. SS then waits for RRC CONNECTION REQUEST message on the uplink CCCH of cell 4. SS will also monitor the uplink of cell 1 simultaneously to ensure that all transmission activities from cell 1 have ceased. When the UE has successfully camp onto cell 4, it shall send an RRC CONNECTION REQUEST with the same establishment cause as its previous attempt in cell 1. SS responds with an RRC CONNECTION REJECT message, indicating a non-zero "wait time" and omitting the IE "Redirection Info". The UE shall observe the wait time period indicated. After the wait time has elapsed, the UE shall re-transmit RRC CONNECTION REQUEST again. Finally, SS transmits an RRC CONNECTION SETUP message to establish an RRC connection with the UE, and the UE replies with an RRC CONNECTION SETUP COMPLETE message and enters CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	SS prompts the operator to make an outgoing call in cell 1.
2		←	RRC CONNECTION REJECT	This message shall include the IE "wait time" set to 15 seconds and IE "frequency info" set to the UARFCN of cell 4.
3				SS waits for a period of time sufficient for UE to reselect to cell 4. At the same time, it monitors the uplink of cell 1 to make sure that all transmissions have ceased.
4		→	RRC CONNECTION REQUEST	UE shall attempt to re-start an RRC connection establishment procedure in cell 4. The establishment cause shall remain unchanged.
5		←	RRC CONNECTION REJECT	This message shall include the IE "wait time" set to 15 seconds, but with IE "Redirection Info" absent.
6		→	RRC CONNECTION REQUEST	SS waits until the duration specified in IE "wait time" has elapsed and then listens to the uplink CCCH for a second RRC CONNECTION REQUEST message.
7		←	RRC CONNECTION SETUP	SS sends the message to UE to setup an RRC connection with the UE.
8				The UE shall configure the layer 2 and layer 1 in order to access the uplink and downlink DCCH assigned.
9		→	RRC CONNECTION SETUP COMPLETE	

Specific Message Contents

RRC CONNECTION REQUEST (Step 1)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Initial UE Identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Must be "Originating Call"

RRC CONNECTION REJECT (Step 2) - FDD

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
Frequency Info	
CHOICE mode	FDD
UARFCN uplink (Nu)	Not present
UARFCN downlink (Nd)	Set to the UARFCN for uplink carrier of cell 4

RRC CONNECTION REJECT (Step 2) – TDD

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
Frequency Info	
CHOICE Mode	TDD
UARFCN (Nt)	Set to a different UARFCN from the carrier of cell 1

RRC CONNECTION REQUEST (Step 4 and step 6)

Same requirement as in step 1.

RRC CONNECTION REJECT (Step 5)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Wait time	15 seconds

8.1.2.4.5 Test requirement

After step 3 the UE shall have successfully re-selected to cell 4, using information transmitted in IE "frequency info" of RRC CONNECTION REJECT message. UE shall trigger the start of RRC connection establishment by transmitting RRC CONNECTION REQUEST. The establishment cause shall be similar to the message sent in step 1.

After step 5 the UE shall observe the period specified in IE "wait time" of an RRC CONNECTION REJECT message and not transmit an RRC CONNECTION REQUEST message in this period.

After step 7 the UE shall transmit an RRC CONNECTION SETUP COMPLETE message to SS on uplink DCCH and then establish an RRC connection.

<End of Modification>

<Start of Modification>

8.1.2.10 RRC connection establishment in CELL_DCH on another frequency

8.1.2.10.1 Definition

8.1.2.10.2 Conformance requirement

1. The UE shall, in the transmitted RRC CONNECTION REQUEST message:

- 1> set the IE "Establishment cause" to the value of the variable ESTABLISHMENT_CAUSE;
- 1> set the IE "Initial UE identity" to the value of the variable INITIAL_UE_IDENTITY;
- 1> set the IE "Protocol error indicator" to the value of the variable PROTOCOL_ERROR_INDICATOR;
- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 11; and
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported; and

1> take care that the maximum allowed message size is not exceeded when forming the IE "Measured results on RACH".

2. The UE shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION SETUP message with the value of the variable INITIAL_UE_IDENTITY.

...

If the values are identical, the UE shall:

...

1> if the UE will be in the CELL_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).

Reference

3GPP TS 25.331 clauses 8.1.3.3, 8.1.3.6

8.1.2.10.3 Test Purpose

To confirm that the UE manages to establish an RRC CONNECTION on another frequency when so required by SS in the RRC CONNECTION SETUP message.

8.1.2.10.4 Method of test

Initial condition

System simulator: 2 cells – Cell 1 on UARFCN 1 and Cell 4 on UARFCN 4.

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial state shall be "Registered idle mode on CS/PS" (state 7).

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
SIB12 indicator	FALSE
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency reporting quantity for RACH reporting	No report
- SFN-SFN observed time difference reporting indicator	FDD
- CHOICE mode	CPICH Ec/No
- Reporting quantity	Current Cell
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	

System Information Block type 11 (TDD)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	4
- Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to table 6.1 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	Reference clause 6.1,TS34.108,Default settings for cell 4
- Cell parameters ID	Reference clause 6.1,TS34.108,Default settings for cell 4
- Primary CPICH TX power	Not present
- Timeslot list	Not present
- Cell Selection and Re-selection Info	Not present For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Qoffset1 _{s,n}	0dB
- Maximum allowed UL TX power	Reference to table 6.1.6, TS 34.108
- HCS neighbouring cell information	Not present
- CHOICE mode	TDD
- Qrxlevmin	Reference to table 6.1.6, TS 34.108
- Cells for measurement	Not present

Test procedure

The UE is initially in idle mode and is camping on cell 1. SIB 11 is broadcast in cell 1.

SS prompts the operator to make an outgoing call of a supported traffic class. The UE shall transmit an RRC CONNECTION REQUEST on the CCCH, and SS replies with the RRC CONNECTION SETUP, in which the IEs are set as described below. The UE shall send the RRC CONNECTION SETUP COMPLETE back to SS in cell 4 on the DPCH described in the RRC CONNECTION SET UP message received from the SS. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	By outgoing call operation
2	←		RRC CONNECTION SETUP	Indicating frequency of cell 4.
3				The UE configures the layer 2 and layer 1.
4	→		RRC CONNECTION SETUP COMPLETE	This message is sent to SS on the frequency indicated in the RRC CONNECTION SETUP message
5	↔		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific message content

All messages indicated below shall use the same content as found in TS 34.108 clause 6.1 with the following exceptions:

RRC CONNECTION REQUEST (Step 2) (FDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Measured results on RACH	Check that the Ec/No for the cell 1 is reported.

RRC CONNECTION REQUEST (Step 2) (TDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Measured results on RACH	Check that the P-CCPCH RSCP for the cell 1 is reported.

RRC CONNECTION SETUP (Step 3) (FDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Not present UARFCN downlink of cell 4

RRC CONNECTION SETUP (Step 3) (TDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Frequency info - UARFCN(Nt)	UARFCN of the cell 4

8.1.2.10.5 Test requirement

In step 4, the UE shall send the RRC CONNECTION SETUP COMPLETE message on the frequency indicated in the RRC CONNECTION SETUP message.

8.1.2.11 RRC Connection Establishment in FACH state (Frequency band modification): Success

8.1.2.11.1 Definition

8.1.2.11.2 Conformance requirement

The UE shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION SETUP message with the value of the UE storing "Initial UE identity".

If the values are different, the UE shall:

1> ignore the rest of the message.

If the values are identical, the UE shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified otherwise in the following:

2> if the UE will be in the CELL_FACH state at the conclusion of this procedure:

3> if the IE "Frequency info" is included:

4> select a suitable UTRA cell according to TS25.304 on that frequency;

3> select PRACH according to TS25.331 subclause 8.5.17;

3> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

3> ignore the IE "UTRAN DRX cycle length coefficient" and stop using DRX.

1> enter UTRA RRC connected mode, in a state according to TS25.331 subclause 8.6.3.3;

1> submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per TS25.331 subclause 8.6.3.3:

And the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.11.3 Test purpose

To confirm that the UE enters to CELL_FACH state and correctly establishes signalling radio bearers using common physical channels of a cell within the frequency band specified by SS in RRC CONNECTION SETUP message.

8.1.2.11.4 Method of test

Initial Condition

System Simulator: 2 cells–Cells 1 is active and cell 6 is inactive.

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	
- FDD	
- Reporting quantity	CPICH Ec/N0
- Maximum number of reported cells on RACH	current cell

System Information Block type 11 (TDD)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- Intra-frequency reporting quantity for RACH Reporting	
-SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	TDD
- CHOICE measurement quantity	PCCPCH RSCP
- Maximum number of reported cells on RACH	current cell

Test Procedure

Table 8.1.2.11

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-72
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-72

Table 8.1.2.11 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in Idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.2.11. The SS switches its downlink transmission power settings to columns "T1" and the UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by attempting to make an outgoing call. After SS receives this message, it assigns the necessary radio resources and U-RNTI to be used by the UE. The SS then transmits an RRC CONNECTION SETUP message containing an IE "frequency info" IE "Frequency info" set to uplink/downlink UARFCN as used for cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode, and UARFCN as used for cell 6 and IE "Primary CCPCH RSCP info" set as assigned in cell 6 for TDD mode. The SS monitors all uplink RACH channels of cell 6. The UE transmitting an RRC CONNECTION SETUP COMPLETE message on the DCCH (mapped onto RACH) of cell 6.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in Idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.2.11.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.1.2.11.
3		→	RRC CONNECTION REQUEST	Operator makes an outgoing call. The UE shall transmit this message, indicating the proper establishment cause.
4		←	RRC CONNECTION SETUP	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode, and IE "Primary CCPCH RSCP info" set as assigned in cell 6 for TDD mode.
5		→	RRC CONNECTION SETUP COMPLETE	UE shall send this message on the DCCH, carried by the assigned PRACH resources in cell 6.

Specific Message Content

RRC CONNECTION REQUEST (Step 3) (FDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception:

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI Originating Interactive Call or Originating Background Call or Originating Streaming Call Check to see if set in accordance with the IE "Intra-frequency reporting quantity for RACH Reporting" included in SYSTEM INFORMATION BLOCK Type 11
Establishment Cause	
Measured results on RACH	
- Measurement result for current cell	
- CHOICE mode	
- FDD	The actual reported value is not checked
- CHOICE measurement quantity	
- CPICH Ec/N0	

RRC CONNECTION REQUEST (Step 3) (TDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception:

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Originating Interactive Call or Originating Background Call or Originating Streaming Call
Measured results on RACH	Check to see if set in accordance with the IE "Intra-frequency reporting quantity for RACH Reporting" included in SYSTEM INFORMATION BLOCK Type 11
- Measurement result for current cell	
- CHOICE mode	TDD
- CHOICE measurement quantity	
- P-CCPCH RSCP	The actual reported value is not checked

RRC CONNECTION SETUP (Step 4) (FDD)

For this message, the contents of the message to be used are basically identical to the message sub-type entitled "RRC CONNECTION SETUP message (Transition to CELL_FACH)" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RRC CONNECTION SETUP (Step 4) (TDD)

For this message, the contents of the message to be used are basically identical to the message sub-type entitled "RRC CONNECTION SETUP message (Transition to CELL_FACH)" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

RRC CONNECTION SETUP COMPLETE (Step 5)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
UE Radio Access Capability	Checked to see if compatible with the stated capability in PIXIT/PICS statements.
UE radio access capability extension	Checked to see if compatible with the stated capability in PIXIT/PICS statements.
UE system specific Capability	Checked to see if compatible with the stated capability in PIXIT/PICS statements.

8.1.2.11.5 Test requirement

After step 5 the UE shall transmit RRC CONNECTION SETUP COMPLETE message on the uplink DCCH in cell 6.

<End of Modification>

<Start of Modification>**8.1.3.6 RRC Connection Release in CELL_DCH state (Frequency band modification): Success****8.1.3.6.1 Definition****8.1.3.6.2 Conformance requirement**

If the UE first receives an RRC CONNECTION RELEASE message in CELL_DCH state, it shall:

- initialize the counter V308 to zero;
- submit an RRC CONNECTION RELEASE COMPLETE message to the lower layers for transmission using UM RLC on the DCCH to the UTRAN;
- start timer T308 when the RRC CONNECTION RELEASE COMPLETE message is sent on the radio interface.

If the timer T308 expires, the UE shall:

- increment V308 by one;
- if V308 is equal to or smaller than N308:
 - retransmit the RRC CONNECTION RELEASE COMPLETE message;
- if V308 is greater than N308:
 - release all its radio resources;
 - enter idle mode;
 - perform cell-selection according to TS25.304;
 - procedure end;

Reference

3GPP TS 25.331 clause 8.1.4.

8.1.3.6.3 Test purpose

To confirm that when the UE receives an RRC CONNECTION RELEASE message the UE transmits N308+1 RRC CONNECTION RELEASE COMPLETE messages using UM on DCCH.

To confirm that the UE enters into idle mode with performing cell-selection and selecting new cell configured by SS.

8.1.3.6.4 Method of test**Initial Condition**

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	6
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Not present
	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
- UARFCN downlink(Nd)	Reference to table 6.1.2 of TS34.108 for Cell 6
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 of TS34.108
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1 _{s,n}	0dB
- Qoffset2 _{s,n}	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cells for measurement	Not present

System Information Block type 11 (TDD)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	4
- Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	Reference clause 6.1,TS34.108,Default settings for cell 4
- Cell parameters ID	Reference clause 6.1,TS34.108,Default settings for cell 4
- Primary CPICH TX power	Not present
- Timeslot list	Not present
- Cell Selection and Re-selection Info	Not present For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Qoffset1 _{s,n}	0dB
- Maximum allowed UL TX power	Reference to table 6.1.6, TS34.108
- HCS neighbouring cell information	Not present
- CHOICE mode	TDD
- Qrxlevmin	Reference to table 6.1.6, TS 34.108
- Cells for measurement	Not present

Test Procedure

Table 8.1.3.6

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-55	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-55	Off	-55

Table 8.1.3.6 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.6. The SS switches its downlink transmission power settings to columns "T1". The SS modify contents of SIB3 in cell 6. The SS transmits an RRC CONNECTION RELEASE message. After the SS transmits an RRC CONNECTION RELEASE message to the UE, the SS waits for the UE to transmit RRC CONNECTION RELEASE COMPLETE messages using UM on DCCH and checks to see if N308+1 such messages has been received. The UE leaves connected mode and enters idle mode in cell 1. The UE shall perform cell reselection

and camp on cell 6 after reading the system information. The SS calls for generic procedure C.3 to check that UE is in Idle state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.6.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.1.3.6.
3			Void	
4			Void	
5		←	System Information Block type 3	The SS modifies SIB 3 in cell 1 to indicate that the cell is barred.
6				The SS waits for 5 s.
7		←	RRC CONNECTION RELEASE	
8		→	RRC CONNECTION RELEASE COMPLETE	The SS waits for the arrival of N308+1 such messages send on UM RLC.
9				The UE releases signalling radio bearer and dedicated resources. Then the UE goes to idle mode in cell 1.
10				The UE select s cell 6 and camp on it.
11				The SS waits for 15 s after receiving the last RRC CONNECTION RELEASE COMPLETE message.
12		↔	CALL C.1	If the test result of C.1 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 3 (Step 5)

Use the same message type found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Cell Access Restriction	
- Cell barred	Barred
- Intra-frequency cell re-selection indicator	Not allowed
- T _{barred}	10[s]
- Cell Reserved for operator use	Not reserved
- Cell Reservation Extension	Not reserved
- Access Class Barred List	
- Access Class Barred0	barred
- Access Class Barred1	barred
- Access Class Barred2	barred
- Access Class Barred3	barred
- Access Class Barred4	barred
- Access Class Barred5	barred
- Access Class Barred6	barred
- Access Class Barred7	barred
- Access Class Barred10	barred
- Access Class Barred11	barred
- Access Class Barred12	barred
- Access Class Barred13	barred
- Access Class Barred14	barred
- Access Class Barred15	barred

RRC CONNECTION RELEASE (Step 6)

Use the same message type found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
N308	Arbitrarily chosen between 1 and 8

8.1.3.6.5 Test requirement

After step 6 the UE shall start to transmit N308 + 1 times RRC CONNECTION RELEASE COMPLETE messages using UM on DCCH.

After step 11 the UE shall be in Idle mode in cell 6.

8.1.3.7 RRC Connection Release in CELL_FACH state (Frequency band modification): Success

8.1.3.7.1 Definition

8.1.3.7.2 Conformance requirement

When the UE receives the first RRC CONNECTION RELEASE message

the UE shall:

- 1> in state CELL_FACH:
- 2> if the RRC CONNECTION RELEASE message was received on the DCCH:
- 3> when the successful transmission of the RRC CONNECTION RELEASE COMPLETE message has been confirmed by the lower layers:
- 4> release all its radio resources; and
- 4> indicate the release of the established signalling connections ; and
- 4> pass the value of the IE "Release cause" received in the RRC CONNECTION RELEASE message to upper layers;

4> enter idle mode;

4> perform the actions specified in TS25.331 subclause 8.5.2 when entering idle mode.

a) 3> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.4.

8.1.3.7.3 Test purpose

To confirm that when the UE receives an RRC CONNECTION RELEASE message, the UE releases signalling radio bearer and its radio resources and goes back to the idle.

To confirm that the UE enters into idle mode withby performing cell-selection and selecting other cell than the UE selecting cell in connected mode.

8.1.3.7.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.1.3.7

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	off	-60
P-CCPCH RSCP (TDD)	dBm	-60	-60	off	-60

Table 8.1.3.7 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.7. SS request operator to make an outgoing call. The SS and UE execute procedure P4 or P6. Next The SS and the UE execute procedure P8 or P10. The SS switches its downlink transmission power settings to columns "T1" and then modifies SIB 3 to indicate that cell 1 is barred. The SS transmits an RRC CONNECTION RELEASE message on DCCH. The UE shall transmit an RRC CONNECTION RELEASE COMPLETE message using UM on DCCH and try to enter idle mode state in cell 1. On selecting cell 1 the UE reads system information block 3 and is aware that cell 1 is barred cell. Hence the UE selects cell 6 and camp on cell 6. Upon completion of the procedure, the SS calls for generic procedure C.1 to check that UE is in idle mode.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.7. SS requests operator to make an outgoing call.
2			SS executes procedure P4 (clause 7.4.2.1.2) or P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3			SS executes procedure P8 (clause 7.4.2.3.2) or P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4				The SS switches its downlink transmission power settings to columns "T1" in table 8.1.3.7.
5		←	System Information Block type 3	The SS modifies SIB 3 in cell 1 to indicate that the cell is barred.
6				The SS waits for 5 s
7		←	RRC CONNECTION RELEASE	
8		→	RRC CONNECTION RELEASE COMPLETE	
9				The SS waits for 5s
10		↔	CALL C.1	If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 3 (Step 5)

Use the same message type found in clause 6 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Cell Access Restriction	Barred
- Cell barred	Not allowed
- Intra-frequency cell re-selection indicator	10[s]
- T_{barred}	Not reserved
- Cell Reserved for operator use	Not reserved
- Cell Reservation Extension	Not reserved
- Access Class Barred List	
- Access Class Barred0	barred
- Access Class Barred1	barred
- Access Class Barred2	barred
- Access Class Barred3	barred
- Access Class Barred4	barred
- Access Class Barred5	barred
- Access Class Barred6	barred
- Access Class Barred7	barred
- Access Class Barred10	barred
- Access Class Barred11	barred
- Access Class Barred12	barred
- Access Class Barred13	barred
- Access Class Barred14	barred
- Access Class Barred15	barred

8.1.3.7.5 Test requirement

After step 3 the UE shall transmit RRC CONNECTION RELEASE COMPLETE messages using AM on DCCH.

After step 9 the UE shall be in idle mode of cell 6.

8.1.3.8 RRC Connection Release in CELL_FACH state (Network Authentication Failure): Success

8.1.3.8.1 Definition

8.1.3.8.2 Conformance requirement

If the upper layers request the release of the RRC connection, the UE shall:

- 1> release all its radio resources;
- 1> enter idle mode;
- 1> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;
- 1> if the UE was in CELL_FACH or CELL_PCH or URA_PCH state prior to entering idle mode:
 - 2> consider the cell on which the UE was camped prior to entering idle mode to be barred according to TS 25.304; and
 - 2> consider the barred cell as using the value "allowed" in the IE "Intra-frequency cell re-selection indicator", and the maximum value in the IE "T_{barred}".

Reference

3GPP TS 25.331 clause 8.1.4a.2.

8.1.3.8.3 Test purpose

To confirm that when the upper layers request the release of the RRC connection, the UE releases signalling radio bearer and its radio resources and goes back to the idle.

To confirm that the UE enters into idle mode by performing cell-selection to a non-barred cell.

8.1.3.8.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: "CS-CELL_FACH_Initial" (state 6-2) or "PS-CELL_FACH_Initial" (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.1.3.8

Parameter	Unit	Cell 1	Cell 2
		T0	T0
UTRA RF Channel Number		Ch. 1	Ch. 1
CPICH Ec	dBm/3.84 MHz	-60	-65

Table 8.1.3.8 illustrates the downlink power to be applied for the 2 cells during the test execution. The UE is in CELL_FACH mode of cell 1. The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain or AUTHENTICATION AND CIPHERING REQUEST for PS domain) and an invalid SQN. The UE shall transmit an UPLINK DIRECT TRANSFER message using AM on DCCH. After SS acknowledges the UPLINK DIRECT TRANSFER message, SS shall wait for T3216 or

T3320 to expire in the UE. The SS shall wait for 5s, and then transmit PAGING TYPE 1 message to the UE. The UE shall respond with RRC CONNECTION REQUEST message. SS then transmit RRC CONNECTION REJECT message back to UE. SS then waits for 22 minutes before SS execute generic procedure C.1 in cell 1 to check that UE is in idle mode in cell 1.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER	Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.
2		→	UPLINK DIRECT TRANSFER	After SS acknowledged this message, SS waits for T3216 or T3320 to expire.
3				The SS waits for 5s
4		←	PAGING TYPE 1	SS sends this message in cell 2.
5		→	RRC CONNECTION REQUEST	
6		←	RRC CONNECTION REJECT	
7				SS waits 22 minutes for T _{barred} to expire.
8		↔	CALL C.1	SS execute this generic procedure in cell 1. If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.

Specific Message Content

DOWNLINK DIRECT TRANSFER (Step 1)

Use the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION REQUEST (CS domain) or AUTHENTICATION AND CIPHERING REQUEST (PS domain)

UPLINK DIRECT TRANSFER (Step 2)

Information Element	Value/remark
Message Type Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION FAILURE(CS domain) or AUTHENTICATION AND CIPHERING FAILURE (PS domain)
Measured results on RACH	Not checked

8.1.3.8.5 Test requirement

After step 1 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 4, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 2.

After step 7 the UE shall be in idle mode of cell 1.

8.1.3.9 RRC Connection Release in CELL_DCH state (Network Authentication Failure): Success

8.1.3.9.1 Definition

8.1.3.9.2 Conformance requirement

If the upper layers request the release of the RRC connection, the UE shall:

- 1> release all its radio resources;
- 1> enter idle mode;
- 1> perform other actions when entering idle mode from connected mode as specified in subclause 8.5.2;
- 1> if the UE was in CELL_DCH state prior to entering idle mode:
 - 2> consider all cells that were in the active set prior to entering idle mode to be barred according to [4]; and
 - 2> consider the barred cells as using the value "allowed" in the IE "Intra-frequency cell re-selection indicator", and the maximum value in the IE " T_{barred} ".

Reference

3GPP TS 25.331 clause 8.1.4a.2.

8.1.3.9.3 Test purpose

To confirm that when the upper layers request the release of the RRC connection, the UE releases signalling radio bearer and its radio resources and goes back to the idle.

To confirm that the UE enters into idle mode by performing cell-selection to a non-barred cell.

8.1.3.9.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1,2 and 3 are active.

UE: "CS-DCCH+DTCH_DCH" (state 6-9) or " PS-DCCH+DTCH_DCH " (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.1.3.9 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.1.3.9

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm/3.84 MHz	-60	-60	-85	-65	-85	-70

SS switches the downlink transmission power of the 3 cells to the columns "T1" in Table 8.1.3.9. UE transmits a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 and 3 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE in cell 1 an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information", indicating the addition of cell 2 into the active set, on DCCH using AM RLC.

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain or AUTHENTICATION AND CIPHERING REQUEST for PS domain) and an invalid SQN. The UE shall transmit an UPLINK DIRECT TRANSFER message using AM on DCCH. After SS acknowledges the UPLINK DIRECT TRANSFER message, SS shall wait for T3216 or T3320 to expire in the UE. Then SS wait for 5 s. SS transmits PAGING TYPE 1 message in cell 3. The UE shall respond with RRC CONNECTION REQUEST message. SS then transmit RRC CONNECTION REJECT message back to UE. SS then waits for 22 minutes before SS execute generic procedure C.1 in cell 1 to check that UE is in idle mode in cell 1.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	MEASUREMENT REPORT	See specific message contents for this message
2		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information" for cell 2.
3		→	ACTIVE SET UPDATE COMPLETE	The UE adds the radio link in cell 2.
4		←	DOWNLINK DIRECT TRANSFER	Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.
5		→	UPLINK DIRECT TRANSFER	After SS acknowledged this message, SS waits for T3216 or T3320 to expire.
6				The SS waits for 5s
7		←	PAGING TYPE 1	SS sends this message in cell 3.
8		→	RRC CONNECTION REQUEST	
9		←	RRC CONNECTION REJECT	
10				SS waits 22 minutes for T _{barred} to expire.
11		↔	CALL C.1	SS execute this generic procedure in cell 1. If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT REPORT (Step 1)

Information Element	Value/remark
<p>Message Type Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Measurement identity Measured Results</p> <ul style="list-style-type: none"> - Intra-frequency measured results <ul style="list-style-type: none"> - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss <p>Measured results on RACH Additional measured results Event results</p> <ul style="list-style-type: none"> - Intra-frequency measurement event results <ul style="list-style-type: none"> - Intra-frequency event identity - Cell measurement event results <ul style="list-style-type: none"> - Primary CPICH info <ul style="list-style-type: none"> - Primary scrambling code 	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>1</p> <p>Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent</p> <p>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent</p> <p>Checked that this IE is absent Checked that this IE is absent Checked that this IE is present and includes IE COUNT-C-SFN frame difference</p> <p>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent</p> <p>Checked that this IE is absent Checked that this IE is absent Checked that this IE is present and includes IE COUNT-C-SFN frame difference</p> <p>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent</p> <p>1a</p> <p>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108</p>

ACTIVE SET UPDATE (Step 2)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
Primary CPICH Info	Set to same code as assigned for cell 2
Primary Scrambling Code	Set to same code as assigned for cell 2
Downlink DPCH info for each RL	Calculated value from Cell synchronisation information
DPCH frame offset	Calculated value from Cell synchronisation information
Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	Set to same code as assigned for cell 2
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	1
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets"
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present

ACTIVE SET UPDATE COMPLETE (Step 3)

Only the message type of this message is checked.

DOWNLINK DIRECT TRANSFER (Step 4)

Use the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

Information Element	Value/remark
CN domain identity	CS domain or PS domain
NAS message	AUTHENTICATION REQUEST (CS domain) or AUTHENTICATION AND CIPHERING REQUEST (PS domain)

UPLINK DIRECT TRANSFER (Step 5)

Information Element	Value/remark
Message Type	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	CS domain or PS domain
NAS message	AUTHENTICATION FAILURE(CS domain) or AUTHENTICATION AND CIPHERING FAILURE (PS domain)
Measured results on RACH	Not checked

8.1.3.9.5 Test requirement

At step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 2 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 4 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 7, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 3.

After step 10 the UE shall be in idle mode of cell 1.

<End of Modification>

<Start of Modification>

8.1.10 Broadcast of system information

8.1.10.1 Dynamic change of segmentation, concatenation & scheduling and handling of unsupported information blocks

8.1.10.1.1 Definition

8.1.10.1.2 Conformance requirement

1. The RRC layer in the UE shall perform re-assembly of segments. All segments belonging to the same master information block, scheduling block or system information block shall be assembled in ascending order with respect to the segment index. When all segments of the master information block, scheduling block or a system information block have been received, the UE shall perform decoding of the complete master information block, scheduling block or system information block.
2. For all system information blocks or scheduling blocks that are supported by the UE referenced in the master information block or the scheduling blocks, the UE shall perform the following actions:

.....

- read and store the IEs of that system information block;

NOTE: There are options with and without scheduling blocks.

3. For system information blocks, not supported by the UE.....
 - skip reading this system information block;
 - skip monitoring changes to this system information block.
4. However, to enable future introduction of new system information blocks, the UE shall also be able to receive system information blocks other than the ones indicated within the scheduling information. The UE may ignore contents of such system information block.

Reference

3GPP TS 25.331 clause 8.1.1.1.3, 8.1.1.1.4, 8.1.1.1.5, 8.1.1.5 and 8.1.1.6.

8.1.10.1.4 Test Purpose

1. To verify that dynamic change of System Information is identified, new information read and used.
2. To verify that the UE can support all segment types and "all" segment combinations.
3. To verify that the UE can dynamically use different configurations
4. To verify that the UE properly uses combinations of Default and assigned values.

NOTE: There are 4 segment types and 11 different SYSTEM INFORMATION segment combinations to interpret when re-assembling segments. There are many alternative SIB position offsets and repetition rates.

The allowed segment types are:

- First segment
- Subsequent segment
- Last segment
- Complete

The allowed segment combinations are:

1. No segment
2. First segment
3. Subsequent segment
4. Last segment
5. Last segment + First segment
6. Last segment + one or several Complete
7. Last segment + one or several Complete + First segment
8. One or several Complete
9. One or several Complete + First segment
10. One Complete of size 215 to 226 (not fully tested)
11. Last segment of size 215 to 222

NOTE: Segment combinations 10 and 11 are more difficult to test as they require SIBs of a very specific size.

8.1.10.1.5 Method of test

Alternate two sets of System Information and generate a call after one or the other set has been broadcasted.

These two sets of System Information are based on the System Information specified in 34.108, section 6.

A "Minimum" configuration and a "Maximum" configuration of System Information are defined. The "Minimum" configuration does not contain all of the Information Blocks defined for Configuration 1 in section 6 of 34.108, while the "Maximum" configuration does. The contents of the SIBs remains the same (for the "Minimum" configuration, the contents of SIB11 changes for the "Maximum" configuration) while the contents of the MIB and SB is altered depending on the nature of the test, i.e. the schedule changes between the "Minimum" and "Maximum" configurations.

The four segment types and the eleven segment combinations are tested using the two configurations.

NOTE: The decoding of system information in the UE is only measurable by functional tests. A large number of functions utilize system information. An extensive test of the system information decoding thus creates a large number of functional tests, which is impractical. This test specification uses a "sample test", where only a few functions are invoked.

Initial Condition

System Simulator: 2 cells (Cell 1, Cell 2), settings for Cell 1 and Cell 2 according to TS 34.108, clause 6.1.5, table 6.1.2 (Cell 1 configured as the serving cell). The Minimum Configuration System Information is being broadcast in Cell 1. The Maximum Configuration System Information is being broadcast in Cell 2.

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108 with a CN UE identity (set to IMSI), depending on the CN domain(s) supported by the UE.

Test procedure

- a) The UE is in C1 in Camped Normally state.
- b) UE starts establishing a MO call/session.
- c) SS disconnects the call. UE shall enter IDLE state.
- d) The SS sets the Cell Barred Indicator in SIB3 to "Barred". The SS notifies the UE of the changed System Information by sending the Paging Type 1 message including the IE BCCH Modification Info indicating that new System Information is available.
- e) Based on the updated information in SIB3, the UE performs a cell reselection to Cell 2. The UE reads the System Information in Cell 2, i.e. Maximum Configuration System Information.
- f) UE starts establishing a MO call/session.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	UE			Mobile originated call/session establishment
2	SS			Disconnection of call
3	←		System Information (Minimum Configuration)	System Information message is sent in Cell 1 with the Cell Barred Indicator in SIB3 set to "Barred".
4	←		Paging Type 1	This message is to inform the UE in Idle State that System Information has been updated.
5	UE			Mobile originated call /session establishment

Specific message content for "Minimum" configuration

The Minimum configuration is the same as the Configuration 1 System Information on 34.108, section 6 with some differences:

- Only SIB1, SIB3, SIB5, SIB7, SIB11 are used, i.e. the Minimum number of SIBs is used.
- No SB is used, all scheduling information is contained in the MIB. The contents of this changed MIB are shown below.
- A different schedule is used. Details below.
- SIB11 lists eight cells (one serving cell and seven neighbouring cells). Only the first two of these are considered relevant.

Other characteristics of the Minimum configuration are:

- An unknown future System Information Block (SIB-F1) is included. SIB-F1 is used to test segment combination 10. However, it should be noted that, based on the scheduling information in the MIB, UEs may decide not to read segment combinations associated with SIBs that they do not support/comprehend. Hence, the use of SIB-F1 does not fully cover the verification of combinations 10. The tests really just verify that UE ignores it. There is no real verification that the UE can support segment combinations 10.

The following tables show (based on SIB_REP and SIB_POS in the MIB and SB) the schedule used for the Minimum configuration.

Table 1: The schedule in this table incorporates segment combinations 1, 2, 3, 4, 7, 8, 10.

Block Type	MIB	SIB1	SIB3	SIB5	SIB7	SIB11
SIB_REP	8	64	64	64	16	64
SEG_COUNT	1	1	1	3	1	4

Frame No / SIB_POS	0	2	4	6	8	10	12	14
Block Type	MIB		SIB7		MIB			
Frame No / SIB_POS	16	18	20	22	24	26	28	30
Block Type	MIB		SIB7/SIB3	SIB1	MIB		SIB-F1	SIB5
Frame No / SIB_POS	32	34	36	38	40	42	44	46
Block Type	MIB	SIB5	SIB5/SIB7/SIB11	SIB11	MIB	SIB11	SIB11	
Frame No / SIB_POS	48	50	52	54	56	58	60	62
Block Type	MIB		SIB7		MIB			

Contents of Master Information Block PLMN type is the case of GSM-MAP

- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- MNC digit	Set to the same Mobile Network Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	22
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	20
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	30
- SIB_POS offset info	
- SIB_OFF	4
- SIB_OFF	2
- SIB type	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	16
- SIB_POS	4
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	36
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	4
- SIB_OFF	2
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	28
- SIB_POS offset info	Not Present – use default
- SIB and SB type	System Information Type F1

Specific message content for "Maximum" configuration

The Maximum configuration is the same as the Configuration 1 System Information on 34.108, section 6 with some differences:

- A different schedule is used. Details below.
- SIB11 lists eight cells (one serving cell and seven neighbouring cells). Only the first two of these are considered relevant.

Other characteristics of the maximum configuration are:

- one "unknown future" block (SIB-F2) is included. This SIB is concatenated with another SIB and is used to verify that the UE can receive an Information Block that it does not support and still process the Information Blocks that it does support in the correct way.
- The test of the segment combination 11 is verified if the UE is able to read the last segment of SIB 6. The SS ensures that this last segment shall have the length between 215 and 222 bits. Depending on the length of SIB 6, the combination 11 occurs either in SIB_position 6, or in the most cases in SIB_position 10

The following tables show (based on SIB_REP and SIB_POS in the MIB and SB) the schedule used for the Maximum configuration.

Table 2: The schedule in this table incorporates segment combinations 1, 2, 3, 4, 5, 6, 8, 9, 11.

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB6	SIB7	SIB11	SIB12	SIB18
SIB_REP	8	16	64	64	64	64	64	64	32	64	64	64
SEG_COUNT	1	1	1	1	1	1	3	3	1	4	4	1

Frame No / SIB_POS	0	2	4	6	8	10	12	14
Block Type	MIB	SB1	SIB7/SIB6	SIB6	MIB	SIB6	SIB3/SIB-F2	SIB11

Frame No / SIB_POS	16	18	20	22	24	26	28	30
Block Type	MIB	SB1	SIB11	SIB11	MIB	SIB11/SIB12	SIB12	SIB12

Frame No / SIB_POS	32	34	36	38	40	42	44	46
Block Type	MIB	SB1	SIB7/SIB18	SIB12	MIB	SIB5	SIB5	SIB5/SIB2

Frame No / SIB_POS	48	50	52	54	56	58	60	62
Block Type	MIB	SB1	SIB4		MIB	SIB1		

Contents of Master Information Block PLMN type is the case of GSM-MAP

Information Element	Value/remark
- MIB value tag	1
- Supported PLMN types	GSM-MAP
- PLMN type	GSM-MAP
- PLMN identity	Set to the same Mobile Country Codes stored in the test
- MCC digit	USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- MNC digit	Set to the same Mobile Network Codes stored in the test
- ANSI-41 Core Network information	USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- References to other system information blocks	Set to the same Mobile Network Codes stored in the test
- References to other system information blocks	USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- Scheduling information	Not Present
- CHOICE Value tag	Cell Value Tag
- Cell Value tag	1
- Scheduling	1
- SEG_COUNT	16
- SIB_REP	2
- SIB_POS	Not Present – use default
- SIB_POS offset info	Scheduling Block 1
- SIB type	PLMN Value tag
- Scheduling information	1
- CHOICE Value tag	1
- PLMN Value tag	64
- SEG_COUNT	58
- SIB_REP	Not Present – use default
- SIB_POS	System Information Type 1
- SIB_POS offset info	Cell Value tag
- SIB type	1
- Scheduling information	1
- CHOICE Value tag	64
- Cell Value tag	46
- SEG_COUNT	Not Present – use default
- SIB_REP	System Information Type 2
- SIB_POS	Cell Value tag
- SIB_POS offset info	1
- SIB type	1
- Scheduling information	64
- CHOICE Value tag	46
- Cell Value tag	Not Present – use default
- SEG_COUNT	System Information Type 2
- SIB_REP	Cell Value tag
- SIB_POS	1
- SIB_POS offset info	1
- SIB type	64
- Scheduling information	12
- CHOICE Value tag	Not Present – use default
- Cell Value tag	System Information Type 3
- SEG_COUNT	Cell Value tag
- SIB_REP	1
- SIB_POS	1
- SIB_POS offset info	64
- SIB type	52
- Scheduling information	Not Present – use default
- CHOICE Value tag	System Information Type 4
- Cell Value tag	Cell Value tag
- SEG_COUNT	1
- SIB_REP	3
- SIB_POS	64
- SIB_POS offset info	42
- SIB type	2
- Scheduling information	2
- CHOICE Value tag	System Information Type 5
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	42
- SIB_POS offset info	2
- SIB_OFF	2
- SIB_OFF	2
- SIB type	System Information Type 5

Contents of Scheduling Block 1 (FDD)

Information Element	Value/remark
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	4
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	4
- SIB and SB type	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	32
- SIB_POS	4
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	14
- SIB_POS offset info	
- SIB_OFF	6
- SIB_OFF	2
- SIB_OFF	4
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	26
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB_OFF	8
- SIB and SB type	System Information Type 12
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	36
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 18
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	12
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type F2

Contents of System Information Block type 11 (FDD)

Same contents as that defined in Configuration 1, Section 6, 34.108 except for the following:

Information Element	Value/remark
Qqualmin	-18 (for first adjacent cell)

Contents of System Information Block type F1

Information Element	Value/remark
Data	Arbitrary data with a size of 226 bits

Contents of System Information Block type F2

Information Element	Value/remark
Data	Arbitrary data with a size of 50 bits

NOTE: For these future System Information Block types one of the available spare values for SIB type should be used

8.1.10.1.6 Test requirement

After step 1 the UE shall have a call/session established in Cell 1.

After step 5 the UE shall have a call/session established in Cell 2.

<End of Modification>

<Start of Modification>

8.2.1.13 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and cell reselection)

8.2.1.13.1 Definition

8.2.1.13.2 Conformance requirement

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

The UE shall:

- 1> in case of reception of a RADIO BEARER SETUP message:
 - ...
- 2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

8.2.1.13.3 Test purpose

To confirm that the UE transmit a RADIO BEARER SETUP FAILURE message after it completes a cell update for the physical channel failure in the radio bearer establishment procedure.

8.2.1.13.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.1.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPICH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.1.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies reverse of the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its DL dedicated physical channel in accordance with the setting in the message and release its current configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.1.13. The UE recognize that it cannot synchronize with the SS on the new radio bearer. The UE performs cell re-selection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" which is set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	
2				The SS does not configure the new radio bearer in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.1.13.
3			Void	
4				The UE select the cell 2.
5		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	This message include IE "new U-RNTI" and IE "new C-RNTI".
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"
9		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical Reporting
- Periodical Reporting / Event Trigger Reporting Mode	
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 9)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM" message as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 5
New U-RNTI	
- SRNC Identity	
- S-RNTI	
New C-RNTI	'0000 0000 0000 0001'
	Different from previous S-RNTI
	Different from previous C-RNTI

RADIO BEARER SETUP FAILURE (Step 8)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	"physical channel failure"

8.2.1.13.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 8, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

<End of Modification>

<Start of Modification>

8.2.1.22 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success

8.2.1.22.1 Definition

8.2.1.22.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304.

1> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" :

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.22.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.1.22.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.1.22

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.1.22 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode state of cell 1 and the SS configures its downlink transmission power setting according to columns "T0" in table 8.2.1.22. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message with no IE "Frequency info" to the UE. After the UE receives this message, it transits from CELL_DCH in cell 1 to CELL_FACH state in cell 6, and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1a	↔		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	↔		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.22.
3			Void	
4		←	RADIO BEARER SETUP	Not including frequency information.
5		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a common physical channel in cell 6.
9	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 4)

Use the message sub-type indicated as "Packet to CELL_FACH from CELL_DCH in PS" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info	Not Present
Downlink information for each radio link	Not Present

CELL UPDATE (Step 5)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.1.22.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL_FACH state of cell 6.

8.2.1.23 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.1.23.1 Definition

8.2.1.23.2 Conformance requirement

If the UE receives:

- a RADIO BEARER SETUP message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
- 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the C_RNTI.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.23.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.1.23.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: CS-DCCH_FACH (state 6-6) or PS_DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.1.23

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-55	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-55	Off	-55

Table 8.2.1.23 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.23. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including new frequency information to the UE. After the UE receives this message, it configures them and establishes the required radio access bearers and moves into cell 6. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. The SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.23.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.23.
3		←	RADIO BEARER SETUP	Including new frequency information.
4		→	RADIO BEARER SETUP COMPLETE	The UE sends this message in cell 6.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 3) (FDD)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" or "Non speech from CELL_FACH to CELL_DCH in CS" or "Speech from CELL_FACH to CELL_DCH in CS" in [9] TS 34.108 clause 9 , with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	350

RADIO BEARER SETUP (Step 3) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" or "Non speech from CELL_FACH to CELL_DCH in CS" or "Speech from CELL_FACH to CELL_DCH in CS" in [9] TS 34.108 clause 9 , with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.1.23.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL_DCH state of cell 6.

8.2.1.24 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH (Frequency band modification): Success

8.2.1.24.1 Definition

8.2.1.24.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS 25.214 for FDD and TS 25.224 for TDD;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.24.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_DCH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits the RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.1.24.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

CS-DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.1.24

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.1.24 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.24. For FDD, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell. For TDD, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE selects cell 6 and establish a radio access bearer after receiving this message, and then remains CELL_DCH state. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC after completes configuration according to receiving RADIO BEARER SETUP message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.24.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.24.
3		←	RADIO BEARER SETUP	For FDD, including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD, including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set cell 6 parameters.
4				The UE select cell 6 and establish a radio access bearer.
5		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 3) (FDD)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_DCH in PS" or "Speech in CS" in TS34.108 clause 9 Default Message Contents, or identical the message sub-type indicated by "Non speech in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER SETUP (Step 3) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_DCH in PS" or "Speech in CS" in TS34.108 clause 9 Default Message Contents, or identical the message sub-type indicated by "Non speech in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.1.24.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL_DCH state of cell 6.

8.2.1.25 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.1.25.1 Definition

8.2.1.25.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.25.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the RADIO BEARER SETUP message.

2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.1.25.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.1.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.1.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.25. SS asks operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" for FDD and no IE "Primary CCPCH info" for TDD. The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE remains CELL_FACH state. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC after completes configuration according to receiving RADIO BEARER SETUP message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.25. SS requests operator to make an outgoing call.
2	↔		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.25.
5	←		RADIO BEARER SETUP	Including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" for FDD and no IE "Primary CCPCH info" for TDD.
6	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7	←		CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
8	→		UTRAN MOBILITY INFORMATION CONFIRM	
9	→		RADIO BEARER SETUP COMPLETE	The UE sends this message on a common physical channel in cell 6.
10	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 5)

The contents of RADIO BEARER SETUP message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	Not present
Downlink information for each radio links	Not present

CELL UPDATE (Step 6)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 8)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.1.25.5 Test requirement

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 7 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 9 the UE shall be in CELL_FACH state in cell 6.

<End of Modification>

<Start of Modification>

8.2.2.13 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.2.13.1 Definition

8.2.2.13.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

- 2> clear that entry;
- 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

The UE shall:

- 1> in case of reception of a RADIO BEARER RECONFIGURATION message:
 - ...
 - 2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.2.13.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer reconfiguration procedure.

8.2.2.13.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.2.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec	dBm /3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	switched off	-60

Table 8.2.2.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE but SS does not reconfigure dedicated physical channel in accordance with the settings in the message. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.13. The UE recognize that it cannot synchronize with the SS on the new radio bearers. The UE performs cell reselection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. UE reply with UTRAN MOBILITY INFORMATION CONFIRM message. The UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the dedicated physical channel in accordance with the RADIO BEARER RECONFIGURATION message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.2.13.
3			Void	
4			Void	
5		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	See message content.
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"
9		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical Reporting
- Periodical Reporting / Event Trigger Reporting Mode	
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 9)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in clause Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

RADIO BEARER RECONFIGURATION FAILURE (Step 8)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.2.13.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 6, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 7 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 8, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

<End of Modification>

<Start of Modification>

8.2.2.18 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Success (Cell re-selection)

8.2.2.18.1 Definition

8.2.2.18.2 Conformance requirement

If the UE performs cell re-selection during the reconfiguration procedure, the UE shall:

- 1> initiate a cell update procedure, as specified in subclause 8.3.1;
- 1> continue with the reconfiguration procedure.

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI";

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, 8.2.2.8, 8.3.1.7.

8.2.2.18.3 Test purpose

To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message in cell 2 when a cell re-selection occurs after receiving a RADIO BEARER RECONFIGURATION message.

8.2.2.18.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.2.18

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH (TDD)	dBm	-60	-75	-75	-60

Table 8.2.2.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS configures RB2 to stop transmission and reception of RLC PDUs. On transmitting a RADIO BEARER RECONFIGURATION message to the UE on RB 1, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.18. The UE shall initiate the cell reselection procedure, which may occur either before or after submitting the RADIO BEARER RECONFIGURATION COMPLETE message for transmission on the DCCH using AM RLC. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH and configure RB2 to continue transmission and reception of RLC PDUs after receiving CELL UPDATE message. Any RADIO BEARER RECONFIGURATION COMPLETE message that was previously submitted for transmission in the UE will now be received by the SS. UE transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. If not already done so, the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

NOTE: The RADIO BEARER RECONFIGURATION COMPLETE message may be received by the SS either after reception of CELL UPDATE CONFIRM (Option 1) or after transmitting UTRAN MOBILITY INFORMATION CONFIRM (Option 2).

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0	SS			The SS configures RB 2 to stop transmission and reception of RLC PDUs.
1	←		RADIO BEARER RECONFIGURATION	The message is transmitted on RB 1.
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.2.18.
3			Void	
				The following messages are transmitted in cell 2.
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
5a	SS			The SS configures RB 2 to continue transmission and reception of RLC PDUs.
5b	→		RADIO BEARER RECONFIGURATION COMPLETE (Option 1)	
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		RADIO BEARER RECONFIGURATION COMPLETE (Option 2)	
8	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
<ul style="list-style-type: none"> RB information to reconfigure list <ul style="list-style-type: none"> - RB information to reconfigure <ul style="list-style-type: none"> - RB identity - PDCP info - PDCP SN info - RLC info <ul style="list-style-type: none"> - CHOICE Uplink RLC mode <ul style="list-style-type: none"> - Transmission RLC discard <ul style="list-style-type: none"> - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info <ul style="list-style-type: none"> - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode <ul style="list-style-type: none"> - In-sequence delivery - Receiving window size - Downlink RLC status info <ul style="list-style-type: none"> - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue - RB information to reconfigure <ul style="list-style-type: none"> - RB identity - PDCP info - PDCP SN info - RLC info <ul style="list-style-type: none"> - CHOICE Uplink RLC mode <ul style="list-style-type: none"> - Transmission RLC discard <ul style="list-style-type: none"> - SDU discard mode - MAX_DAT - Transmission window size - Timer_RST - Max_RST - Polling info <ul style="list-style-type: none"> - Timer_poll_prohibit - Timer_poll - Poll_PDU - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Window - Timer_poll_periodic - CHOICE Downlink RLC mode <ul style="list-style-type: none"> - In-sequence delivery - Receiving window size - Downlink RLC status info <ul style="list-style-type: none"> - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - Timer_STATUS_periodic - RB mapping info - RB stop/continue - RB information to reconfigure <ul style="list-style-type: none"> - RB identity - PDCP info - PDCP SN info 	<ul style="list-style-type: none"> (AM DCCH for RRC) 2 Not Present Not Present AM RLC No discard 15 128 600 4 250 250 Not present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not present TRUE Not Present Not Present (AM DCCH for NAS_DT High priority) 3 Not Present Not Present AM RLC No discard 15 128 600 4 250 250 Not present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not present TRUE Not Present Not Present Not Present (AM DCCH for NAS_DT Low priority) 4 Not Present Not Present

- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	No discard
- SDU discard mode	15
- MAX_DAT	128
- Transmission window size	600
- Timer_RST	4
- Max_RST	
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DTCH)
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	No discard
- SDU discard mode	15
- MAX_DAT	128
- Transmission window size	600
- Timer_RST	4
- Max_RST	
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
Downlink information per radio link list	
- Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	Not present

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	Not present

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.2.18.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message on the CCCH with IE "cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC. This message may be received by the SS earliest after step 5a and at latest after step 6.

<End of Modification>**<Start of Modification>**

8.2.2.27 Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_DCH (Frequency band modification): Success

8.2.2.27.1 Definition

8.2.2.27.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message;

it shall:

1> perform the physical layer synchronisation procedure as specified in TS 25.214 for FDD and TS 25.224 for TDD;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.27.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_DCH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits the RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.2.27.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: CS-DCCH_DTCH_DCH (state 6-9) or PS_DCCH_DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.2.27

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.27. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and reconfigure its radio access bearer after receiving this message, and then remains in CELL_DCH state. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after complete configuration according to receiving RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.27.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.27.
3		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 3) (FDD)

The contents RADIO BEARER RECONFIGURATION message in this test case is identical the message sub-type indicated by "Packet to in PS" or "Speech in CS" or "Non speech from CELL_DCH to CELL_DCH in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 3) (TDD)

The contents RADIO BEARER RECONFIGURATION message in this test case is identical the message sub-type indicated by "Packet to in PS" or "Speech in CS" or "Non speech from CELL_DCH to CELL_DCH in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.2.27.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL_DCH state in cell 6.

8.2.2.28 Radio Bearer Reconfiguration for transition from CELL_DCH to CELL_FACH (Transport channel type switching with frequency band modification): Success

8.2.2.28.1 Definition

8.2.2.28.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> if the received reconfiguration message included the IE "Primary CPICH info" for FDD or the IE "Primary CCPCH info" for TDD, and the UE selects another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

- 1> select PRACH according to TS25.331 subclause 8.5.17;

- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.
- 1> if the contents of the variable C_RNTI is empty:
 - 2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.28.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.2.28.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 in active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.2.28

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.28 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.28. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. For FDD mode, the SS switches its

downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. On receiving the RADIO BEARER RECONFIGURATION message, the UE shall select cell 6 and transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after complete configuration according to the RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.28. SS requests operator to make an outgoing call.
2		←→	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		←→	SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		←→	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.28.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE transmits this message on the common physical channel in cell 6.
8		←→	CALL C.2	f the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 5) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9[9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio link - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 5) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9[9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 7 the UE shall be in CELL_FACH state.

8.2.2.31 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.2.31.1 Definition

8.2.2.31.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS 25.214 for FDD and TS 25.224 for TDD;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
 - 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the C_RNTI.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.31.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.2.31.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: PS_DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.2.31

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	Off	-60
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.31 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and then enter CELL_DCH state according to receiving RADIO BEARER RECONFIGURATION message. Finally the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.31.
3		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔	Call C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 3)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 3)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.2.31.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL_DCH state in cell 6.

8.2.2.32 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.2.32.1 Definition

8.2.2.32.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.32.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.2.32.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.2.32

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.32 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.32. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after it completes configuration according to the received RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.32. SS requests operator to make an outgoing call.
2	↔		SS executes procedure P6 (clause 7.4.2.2.3) specified in TS 34.108.	
3	↔		SS executes procedure P9 (clause 7.4.2.4.3) specified in TS 34.108.	
4	↔		SS executes procedure P13 (clause 7.4.2.6.3) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.32.
6	←		RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7	→		RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a common physical channel in cell 6.
8	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.2.32.5 Test requirement

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall be in CELL_FACH state of cell 6.

8.2.2.34 Radio Bearer Reconfiguration for transition from CELL_FACH to URA_PCH (Frequency band modification): Success

8.2.2.34.1 Definition

8.2.2.34.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9

- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause TS25.331 8.3.1 is fulfilled:
- 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
- 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.34.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the RADIO BEARER RECONFIGURATION message.
3. To confirm that the UE selects a common physical channel in a different frequency.

8.2.2.34.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 are active

UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.2.34

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.34 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.34. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter URA_PCH

state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.34. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	←→		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.34.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE transmit this message on the common physical channel. n cell 1.
8				The SS waits for 5 s.
9	←→		CALL C.5	If the test result of C.4 indicates that UE is in URA_PCH state, the test passes, otherwise it fails

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.2.34.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL_PCH state in cell 6.

<End of Modification>**<Start of Modification>**

8.2.3.12 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.3.12.1 Definition

8.2.3.12.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

- 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

The UE shall:

- 1> in case of reception of a RADIO BEARER RELEASE message:

...

- 2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.3.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update procedure following a physical channel failure during the radio bearer release procedure.

8.2.3.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.3.12

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.3.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RELEASE message to the UE, but it does not configure the specified L1 in accordance with the settings in the message. This is expected to cause the UE to experience a failure to release the radio bearer and it subsequently tries to revert to the old configuration. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.3.12. The UE shall find cell 2 and transmits CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The SS does not configure the specified L1 in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.3.12.
3		←	Void	
4		→	CELL UPDATE	The UE finds a new cell 2 and enter CELL_FACH state. This message includes the value "cell reselection" set in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	See message content.
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.3.12.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

<End of Modification>**<Start of Modification>**

8.2.3.20 Radio Bearer Release for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success

8.2.3.20.1 Definition

8.2.3.20.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304.

1> if the received reconfiguration message included the IE "Primary CPICH info"), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" :

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.20.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the RADIO BEARER RELEASE message.

2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.3.20.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.3.20

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.3.20 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.20. The SS and UE execute procedure P3 or P5. Next The SS and the UE execute procedure P7 or P9 and then execute procedure P11 or P13. The SS switches its downlink transmission power settings to columns "T1" transmits a RADIO BEARER RELEASE message with no IE "Frequency info" to the UE. The UE releases the radio access bearer and moves into cell 6. The UE transmits CELL UPDATE message with IE "Cell update cause" set to "cell reselection". SS then transmit CELL UDPATE CONFIRM with IE "New C_RNTI". The UE shall respond with an UTRAN MOBILITY INFORMATION CONFIRM message, and then transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. The SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1a	↔		SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	↔		SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
1c	↔		SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.20.
3			Void	
4	←		RADIO BEARER RELEASE	Not including frequency information.
5	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6	←		CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		RADIO BEARER RELEASE COMPLETE	
9	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" or "Non speech to CELL_FACH from CELL_DCH in CS" or "Speech to CELL_FACH from CELL_DCH in CS" in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info Downlink information for each radio link	Not present

CELL UPDATE (Step 5)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.3.20.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL_FACH state of cell 6.

8.2.3.21 Radio Bearer Release from CELL_DCH to CELL_PCH (Frequency band modification): Success

8.2.3.21.1 Definition

8.2.3.21.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info, and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info:
- 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
- 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.21.3 Test purpose

1. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_DCH to CELL_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases the radio access bearer and selects a common physical channel in a different frequency indicated by SS.

8.2.3.21.4 Method of test

Initial Condition

System Simulator: 2 cells–Cells 1 is active and cell 6 is inactive.

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.3.21

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.3.21 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode in cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.21. The SS and UE execute procedure P3 or P5. Next The SS and the UE execute procedure P7 or P9 and then execute procedure P11 or P13. The SS switches its downlink transmission power settings to columns "T1" and then transmits a RADIO BEARER RELEASE message with no IE "Frequency info". The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC and enters CELL_PCH state of cell 6, then the UE shall transmit CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection", to complete the procedure. The SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1a	↔		SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	↔		SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
1c	↔		SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.21.
3	←		Void	
4	←		RADIO BEARER RELEASE	Not including new frequency information.
5	→		RADIO BEARER RELEASE COMPLETE	The UE sends this message before it completes state transition. UE sends this message in cell 1.
6	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9	↔		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" or "Non speech to CELL_FACH from CELL_DCH in CS" or "Speech to CELL_FACH from CELL_DCH in CS" in [9] TS 34.108 clause 9, with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not Present
Downlink information for each radio link	Not Present

CELL UPDATE (Step 6)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.2.3.21.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL_PCH state in cell 6.

<End of Modification>

<Start of Modification>

8.2.3.24 Radio Bearer Release for transition from CELL_DCH to CELL_DCH (Frequency band modification): Success

8.2.3.24.1 Definition

8.2.3.24.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.24.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_DCH according to the RADIO BEARER RELEASE message.
2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.3.24.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

CS-DCCH_DTCH_DCH (state 6-9) or PS_DCCH_DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.4.24

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-72

Table 8.2.3.24 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.24. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. The UE shall select cell 6 and release the radio access bearer after receiving this message, and then remain in CELL_DCH state. The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC after it completes reconfiguration according to received RADIO BEARER RELEASE message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.24.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.24.
3		←	RADIO BEARER RELEASE	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6.
4				The UE select cell 6.
5		→	RADIO BEARER RELEASE COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 3)

The contents RADIO BEARER RELEASE message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_DCH in PS" or "Speech in CS" or "Non speech in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

8.2.3.24.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL_DCH state in cell 6.

8.2.3.25 Radio Bearer Release for transition from CELL_DCH to URA_PCH (Frequency band modification): Success

8.2.3.25.1 Definition

8.2.3.25.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9

1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:

2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";

2> when the URA update procedure is successfully completed:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.25.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_DCH to URA_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases radio access bearer, dedicated physical channel and selects a common physical channel in a different frequency.

8.2.3.25.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.3.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.3.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.25. SS requests operator to make an outgoing call. The SS and UE execute procedure P3 or P5. Next The SS and the UE execute procedure P7 or P9 and then execute procedure P11 or P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE message including no IE "Frequency info". The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.25. SS requests operator to make an outgoing call.
2			SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3			SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4			SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.25.
6		←	RADIO BEARER RELEASE	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	RADIO BEARER RELEASE COMPLETE	UE transmit this message on the dedicated physical channel in cell 1
8				The SS waits for 5 s.
9		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 6)

Use the same message sub-type titled "Speech to CELL_FACH from CELL_DCH in CS" or "Non speech to CELL_FACH from CELL_DCH in CS" or "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

8.2.3.25.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in URA_PCH state in cell 6.

8.2.3.26 Radio Bearer Release for transition from CELL_FACH to CELL_PCH (Frequency band modification): Success

8.2.3.26.1 Definition

8.2.3.26.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" , and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.26.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the RADIO BEARER RELEASE message.

3. To confirm that the UE releases radio access bearer and selects a common physical channel in a different frequency.

8.2.3.26.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.3.26

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.3.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.26. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE message with IE "Frequency info" and IE "Primary CPICH info" omitted. The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC and enter CELL_PCH state. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.26. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.26.
6		←	RADIO BEARER RELEASE	IE "Frequency info" and IE "Primary CPICH info" are omitted.
7		→	RADIO BEARER RELEASE COMPLETE	UE transmit this message on the common physical channel in cell 1
8				The SS waits for 5 s.
9		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

8.2.3.26.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 1.

After step 10 the UE shall be in CELL_PCH state in cell 6.

8.2.3.27 Radio Bearer Release for transition from CELL_FACH to URA_PCH (Frequency band modification): Success

8.2.3.27.1 Definition

8.2.3.27.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9.

1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:

2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";

2> when the URA update procedure is successfully completed:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.27.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases radio access bearer and selects a common physical channel in a different frequency.

8.2.3.27.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.3.27

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.3.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.27. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.27. SS requests operator to make an outgoing call.
2		←→	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		←→	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		←→	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5			Void	
6		←	RADIO BEARER RELEASE	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	RADIO BEARER RELEASE COMPLETE	UE transmit this message on the common physical channel in cell 1. The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.27.
8				The SS waits for 5 s.
9		←→	CALL C.5	If the test result of C.4 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
Downlink information for each radio link	Not present

8.2.3.27.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 1.

After step 7 the UE shall be in URA_PCH state in cell 6.

8.2.3.28 Radio Bearer Release for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.3.28.1 Definition

8.2.3.28.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.28.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the RADIO BEARER RELEASE message.
2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.3.28.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.3.28

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.3.28 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.28. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE message including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info". The UE shall select cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC after it completes reconfiguration according to the received RADIO BEARER RELEASE message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.28. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P6 (clause 7.4.2.4.2) specified in TS 34.108.	
4	←→		SS executes procedure P6 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.28.
6		←	RADIO BEARER RELEASE	Including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" set to Primary Scrambling Code
7		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
8		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
9		→	UTRAN MOBILITY INFORMATION CONFIRM	
10		→	RADIO BEARER RELEASE COMPLETE	The UE sends this message on a common physical channel in cell 6.
11	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 6)

The contents of RADIO BEARER RELEASE message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio links	Not present

CELL UPDATE (Step 7)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 9)

The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.3.28.5 Test requirement

After step 6 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 8 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 9 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 10 the UE shall be in CELL_FACH state in cell 6.

<End of Modification>**<Start of Modification>**

8.2.4.1 Transport channel reconfiguration (Timing re-initialised hard handover with transmission rate modification) from CELL_DCH to CELL_DCH: Success

8.2.4.1.1 Definition

8.2.4.1.2 Conformance requirement

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS 25.214;
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

8.2.4.1.3 Test purpose

To confirm that the UE reconfigures the channel configuration according to a TRANSPORT CHANNEL RECONFIGURATION message, which is used to change the TFCS and the TFS while replacing the RL(s) in the active set with a set of RL(s) disjunct with the previous active set.

8.2.4.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and cell 2 are active

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. Either a streaming CS domain RAB (state 6-9) or an interactive/ background PS domain RAB (state 6-10) has been established. UE connected to cell 1.

Test Procedure

The UE is in CELL_DCH state, connected to cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new configuration parameters. The message is used to replace the RL(s) in the active set with a set of RL(s) disjunct with the previous active set. In this case, the connection to cell 1 is discontinued while a new connection to cell 2 is established at the same time. The TRANSPORT CHANNEL RECONFIGURATION message is used to also change the TFCS and TFS e.g. because the currently used rate is not available on cell 2. The TFCS and TFS change from a value corresponding with one reference configuration in 34.108 to another such reference configuration, e.g. to change an interactive PS domain RAB from UL:64 DL:384 to UL:32 DL:64 or to change a streaming CS RAB from UL:14.4 DL:14.4 to UL:57.6 DL:57.6. The UE shall apply the new configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3		←	TRANSPORT CHANNEL RECONFIGURATION	The TFCS and the TFS are changed while replacing the RL(s) in the active set with a set of RL(s) disjunct with the previous active set
4			Void	
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

For condition A1 (for CS non- speech the following IEs are not present in the default message, while included below: UL Transport channel information for all transport channels, Added or Reconfigured UL TrCH information, DL Transport channel information common for all transport channel, Added or Reconfigured DL TrCH information).

Information Element	Value/remark
UL Transport channel information for all transport channels	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
Added or Reconfigured UL TrCH information	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
DL Transport channel information common for all transport channel	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
Added or Reconfigured DL TrCH information	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS"
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following
-Uplink DPCH power control info	Not present
Downlink information common for all radio links	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following
- Downlink DPCH info common for all RL	Initialise
- Timing indicator	Not present
- Downlink DPCH power control information	Arbitrary set to value 0..306688 by step of 512
- Default DPCH Offset Value	Set to the same values as for "Packet to CELL_DCH from CELL_FACH in PS" unless explicitly indicated otherwise in the following
Downlink information for each radio link list	
- Downlink information for each radio links	FDD
- CHOICE mode	
- Primary CPICH info	Ref. to the Default setting in TS34.108 clause 6.1 (FDD) for cell 2: 150
- Primary scrambling code	
- Downlink DPCH info for each RL	
- DPCH frame offset	Set to value : Default DPCH Offset Value mod 38400
- DL channelisation code	
- Scrambling code change	Not Present

TRANSPORT CHANNEL RECONFIGURATION (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message in Annex A, with the following exceptions:

Information Element	Value/remark
- Uplink DPCH timeslots and codes - First timeslot code list Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	A different code combination to that used previously. Maintain

8.2.4.1.5 Test requirement

After step 3 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCCH using AM RLC on a dedicated physical channel using another radio link.

<End of Modification>

<Start of Modification>

8.2.4.13 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.4.13.1 Definition

8.2.4.13.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

- 2> clear that entry;
- 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

The UE shall:

- 1> in case of reception of a TRANSPORT CHANNEL RECONFIGURATION message:
 - ...
- 2> transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.4.13.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message after it completes a cell update procedure, when the UE cannot reconfigure the new channel before timer T312 expires.

8.2.4.13.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.4.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.4.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE in cell 1. The message includes a new configuration parameters. However, the SS does not reconfigure the specified configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.13. As a result, the UE cannot synchronise with the SS on the new DPCH before T312 expires. The UE initiates the cell re-selection procedure transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2				The SS does not reconfigure L1 and transport channel in accordance with the settings in the message, and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.13.
3			Void	
4				The UE shall find cell 2, camp onto it,
5		→	CELL UPDATE	This message include the value "cell reselection" set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	See message content.
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Assigned previously in cell 1
- SRNC Identity	Assigned previously in cell 1
- S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in clause Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

TRANSPORT CHANNEL RECONGURATION FAILURE (Step 8)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.4.13.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 6 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 7 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

<End of Modification>

<Start of Modification>

8.2.4.25 Transport channel reconfiguration from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.4.25.1 Definition

8.2.4.25.2 Conformance requirement

If the UE receives:

-a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
- 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the C_RNTI.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.4.25.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to TRANSPORT CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION message on the uplink DCCH using AM RLC on dedicated physical channel in a different frequency.

8.2.4.25.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.4.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-55	Off	-55

Table 8.2.4.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.25. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes new frequency information leading to a state transition from CELL_FACH to CELL_DCH in cell 6. The UE shall reconfigure transport channel parameter and frequency band according to this message. Finally, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.25.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.25.
3		←	TRANSPORT CHANNEL RECONFIGURATION	
4				Reconfiguration of transport channel.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	350

8.2.4.25.5 Test requirement

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL_DCH state of cell 6.

<End of Modification>

<Start of Modification>

8.2.4.29 Transport Channel Reconfiguration for transition from CELL_DCH to CELL_DCH (Frequency band modification): Success

8.2.4.29.1 Definition

8.2.4.29.2 Conformance requirement

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
 - 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.4.29.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_DCH according to the TRANSPORT CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits the TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.4.29.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: CS-DCCH_DTCH_DCH (state 6-9) or PS_DCCH_DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.4.29

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.4.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.29. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. The UE shall select cell 6 and reconfigure its transport channel parameters after receiving this message, and then remain in CELL_DCH state. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC after completes configuration according to receiving TRANSPORT CHANNEL RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.29.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.29.
3		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
4				The UE select cell 6.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3)

The contents TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical the message subtype indicated by "Packet to CELL_DCH from CELL_DCH in PS" or "Speech in CS" or "Non speech from in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

8.2.4.29.5 Test requirement

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL_DCH state in cell 6.

<End of Modification>

<Start of Modification>

8.2.6.12 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.6.12.1 Definition

8.2.6.12.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and

- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI";

the UE shall:

- 1> transmit no response message.

The UE shall:

- 1> in case of reception of a PHYSICAL CHANNEL RECONFIGURATION message:

...

- 2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4

8.2.6.12.3 Test purpose

To confirm that the UE initiates a cell update procedure after it fails to reconfigure the new physical channel and selects another cell.

To confirm that UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message after UE completes cell update procedure.

8.2.6.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108 in cell 1

Test Procedure

Table 8.2.6.12

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.6.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_DCH state in cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a PHYSICAL

CHANNEL RECONFIGURATION message to the UE, but the SS does not reconfigure L1 accordingly. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.6.12. As a result, the UE fails to synchronise on the new physical channel before timer T312 expires and reselect cell 2 and then the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "Cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	PHYSICAL CHANNEL RECONFIGURATION	
5				The SS does not configure the new dedicated physical channel in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.6.12.
6			Void	
7		→	CELL UPDATE	This message includes the value "cell reselection" set in IE "Cell update cause".
8		←	CELL UPDATE CONFIRM	
9			Void	
10		→	PHYSICAL CHANNEL RECONGURATION FAILURE	UE shall transmit this message in the cell 2.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A for FDD and Annex A for TDD.

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A for FDD and Annex A for TDD.

CELL UPDATE (Step 7)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

Information Element	Value/remark
U-RNTI	Assigned previously in cell 1
- SRNC Identity	Assigned previously in cell 1
- S-RNTI	"cell reselection"
Cell Update Cause	

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A.

PHYSICAL CHANNEL RECONGURATION FAILURE (Step 10)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.6.12.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 6 the UE shall transmit a CELL UPDATE message using RLC-TM mode on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 9 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

<End of Modification>

<Start of Modification>

8.2.6.23 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing maintain): Success

8.2.6.23.1 Definition

8.2.6.23.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.23.3 Test purpose

To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, on a dedicated physical channel in a different frequency band.

8.2.6.23.4 Method of test

Initial Condition

System Simulator: 2 cells–Cells 1 is active and cell 6 is inactive.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending to the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.6.23

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-55	Off	-55

Table 8.2.6.23 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.23. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new frequency information and IE "Timing indicator" set to maintain. The UE shall reconfigure the physical channel parameters according to PHYSICAL CHANNEL RECONFIGURATION message and establish a radio link with the SS using a dedicated physical channel in cell 6. The UE then transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message in cell 6 on the uplink DCCH AM RLC after its transition. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.23.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.23.
3		←	PHYSICAL CHANNEL RECONFIGURATION	Including new frequency information. IE "Timing indicator" is set to maintain.
4				The UE remains in CELL_DCH state after connecting to the SS on a dedicated physical channel in cell 6.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	350

8.2.6.23.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 6.

<End of Modification>

<Start of Modification>

8.2.6.25 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success

8.2.6.25.1 Definition

8.2.6.25.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> if the received reconfiguration message included the IE "Primary CPICH info" (, and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.25.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency..

8.2.6.25.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.6.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.25. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message with no IE "Frequency info" and IE "Primary CPICH info". The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Upon completion of the cell update procedure, UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the DCCH in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1a	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←→		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108.	
1c	←→		SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.25.
3	←		Void	
4	←		PHYSICAL CHANNEL RECONFIGURATION	No including IE "Frequency info" and IE "Primary CPICH info"
5	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6	←		CELL UPDATE CONFIRM	Including the IE" New C-RNTI"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a common physical channel in cell 6.
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	Not Present
Downlink information for each radio link	Not Present

CELL UPDATE (Step 5)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.6.25.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL_FACH state of cell 6.

8.2.6.26 Physical Channel Reconfiguration from CELL_DCH to CELL_PCH (Frequency band modification): Success

8.2.6.26.1 Definition

8.2.6.26.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS5.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

- 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":
 - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.26.3 Test purpose

1. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCCH using AM RLC.
2. To confirm that the UE transits from CELL_DCH to CELL_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.
3. To confirm that the UE releases a dedicated physical channel and selects a common physical channel in a different frequency.

8.2.6.26.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.6.26

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1a	↔		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	↔		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108..	
1c	↔		SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.26.
3			Void	
4		←	PHYSICAL CHANNELRECONFIGURATION	Not including IE "frequency info" and IE "Primary CPICH info"
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmit this message in cell 1.
6		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 6)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
RRC State Indic	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.2.6.26.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL_PCH state in cell 6.

<End of Modification>

<Start of Modification>

8.2.6.29 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Compressed mode initiation): Success

8.2.6.29.1 Definition

8.2.6.29.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
- 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6..

8.2.6.29.3 Test purpose

1. To confirm that the UE activates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is activated.

3. To confirm that the UE deactivates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
4. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is deactivated..

8.2.6.29.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending to the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.6.29

Parameter	Unit	Cell 1				Cell 6			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 2			
CPICH Ec	dBm/3 .84MH z	-60	-60	-60	-60	Off	-60	-90	-60

Table 8.2.6.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1" or "T1" to "T2" or "T2" to "T3", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29. The SS transmits MEASUREMENT CONTROL message in order for the UE to perform Inter-frequency measurements and report event 2c. The SS switches its downlink transmission power setting according to columns "T1" in table 8.2.6.29, but the UE shall not transmit any MEASUREMENT REPORT messages. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed mode info" with "TGPS Status Flag" set to "Activate". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. The UE shall transmit MEASUREMENT REPORT message to report event 2c with the measured CPICH RSCP value for cell 6 to the SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed mode info" with "TGPS Status Flag" set to "deactivate". The UE shall respond with the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. After the SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29 and 10s is passed, the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29. The UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH because the UE cannot measure the CPICH RSCP on non used frequency as the compressed mode operation has been deactivated.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29.
2		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2c.
3				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.29.
4				The SS checks that no MEASUREMENT REPORT messages receives for 10 s.
5		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to activate.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	MEASUREMENT REPORT	The UE shall report event 2c with the measured CPICH RSCP value for cell 6.
8		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to deactivate.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10				The SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29.
11				After 10 s is passed ,the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29.
12				The SS checks that no MEASUREMENT REPORT messages receives for 10 s..

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 6
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CHOICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 [ms]
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	1
- Parameters required for each non-used	

frequency	
- Threshold non used frequency	-68dbm
- W non-used frequency	0
DPCH compressed mode status info	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- CFN-target SFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE Mode	FDD
-DPC Mode	0 (Single)
- CHOICE Mode	FDD
- Power offset Pilot-DPCH	0
- DL rate matching restriction information	Not Present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	mode 0
- ITP	mode 0
- CHOICE UL/DL Mode	DL and UL
- Downlink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

MEASUREMENT REPORT (Step 7)

The contents of MEASUREMENT REPORT message is the same as them found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	Check to see if set to 15
Measured Results	
- CHOICE Measurement	
- Inter frequency measured results list	Check to see if set to "Inter-frequency measured results list"
- Inter frequency measurement results	
- Frequency info	
- CHOICE	FDD
- UARFCN uplink (Nu)	Check to see if set to the UARFCN of the uplink

- UARFCN downlink (Nd)	frequency for cell 6 Check to see if set to the UARFCN of the downlink frequency for cell 6
- UTRA carrier RSSI	Not checked
- Inter frequency cell measurement results	
- Cell measured results	
- Cell Identity	Not checked
- Cell synchronisation information	Not checked
- CHOICE Mode	FDD
- Primary CPICH Info	Not checked
- CPICH Ec/No	Not checked
- CPICH RSCP	Check to see if it is present
- Pathloss	Not checked
Measured Results on RACH	Not checked
Additional Measured results	Not checked
- Measured Result	
Event results	Not checked

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	Not present

8.2.6.29.5 Test requirement

After step 3 the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a MEASUREMENT REPORT message containing the IE "measured results" reporting cell 6's CPICH RSCP value, also report the triggering of event '2c' included in IE "Event results".

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After 11 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.

8.2.6.30 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Modify active set cell): Success

8.2.6.30.1 Definition

8.2.6.30.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.30.3 Test purpose

To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel of same frequency in another cell.

8.2.6.30.4 Method of test

Initial Condition

System Simulator: 2 cells–Cells 1 is active and cell 6 is inactive.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending to the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.6.30

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec	dBm/3.84 MHz	-60	-60	Off	-60

Table 8.2.6.30 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 2.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.30. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 2 and IE "Timing indicator" set to "initialise".. The UE shall reconfigure the physical channel parameters according to PHYSICAL CHANNEL RECONFIGURATION message and initiate to synchronise with new dedicated physical channel in cell 2. The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message in cell 2 on the uplink DCCH AM RLC after synchronization.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.30.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.30.
3		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 2 and IE "Timing indicator" which is set to 'initialise'.
4				The UE remains in CELL_DCH state after connecting to the SS on a dedicated physical channel in cell 2.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message in cell 2.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	initialise
- Default DPCH Offset Value	0
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2

8.2.6.30.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 2.

<End of Modification>

<Start of Modification>**8.2.6.32 Physical channel reconfiguration for transition from CELL_DCH to URA_PCH (Frequency band modification): Success****8.2.6.32.1 Definition****8.2.6.32.2 Conformance requirement**

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9

1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:

2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";

2> when the URA update procedure is successfully completed:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.32.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_DCH to URA_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.
3. To confirm that the UE releases the dedicated physical channel and selects a common physical channel in a different frequency.

8.2.6.32.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.6.32

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.32 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.32. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.32. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.32.
6		←	PHYSICAL CHANNEL RECONFIGURATION	Not including IE "Frequency info"
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmit this message on the dedicated physical channel in cell 1
8				The SS waits for 5 s.
9		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present

8.2.6.32.5 Test requirement

After step 3 the UE shall transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in URA_PCH state in cell 6.

8.2.6.33 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.6.33.1 Definition

8.2.6.33.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the C_RNTI.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.33.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to the PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.6.33.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: PS_DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.6.33

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.6.33 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.33. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency

information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. The UE shall select cell 6 and change its physical channel configuration after receiving this message and then enter CELL_DCH state. Finally the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.33.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.33.
3		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔		If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical the message subtype indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

8.2.6.33.5 Test requirement

After step 3 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL_DCH state in cell 6.

8.2.6.34 Physical channel reconfiguration from CELL_FACH to CELL_PCH (Frequency band modification): Success

8.2.6.34.1 Definition

8.2.6.34.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9

1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE:

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

2> when the cell update procedure is successfully completed:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.6.34.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.
3. To confirm that the UE selects a common physical channel in a different frequency.

8.2.6.34.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.6.34

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.6.34 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.34. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter CELL_PCH state in cell 6. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.34. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.34.
6		←	RADIO BEARER RECONFIGURATION	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE transmit this message on the common physical channel in cell 1.
8				The SS waits for 5 s.
9		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

8.2.6.34.5 Test requirement

After step 6 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL_PCH state in cell 6.

8.2.6.35 Physical channel reconfiguration for transition from CELL_FACH to URA_PCH (Frequency band modification): Success

8.2.6.35.1 Definition

8.2.6.35.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.35.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.
3. To confirm that the UE selects a common physical channel in a different frequency.

8.2.6.35.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 in active and cell 6 is inactive

UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.6.35

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.35 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.35. SS requests operator to make an outgoing call. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.35. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.35.
6		←	PHYSICAL CHANNEL RECONFIGURATION	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmit this message on the common physical channel in cell 1.
8				The SS waits for 5 s.
9		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present
Downlink information for each radio link	Not present

8.2.6.35.5 Test requirement

After step 3 the UE shall transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in URA_PCH state in cell 6.

8.2.6.36 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.6.36.1 Definition

8.2.6.36.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.36.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.6.36.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.6.36

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.36 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.36. The SS modifies the contents of System formation block 11 in cell 1, so that include IE "Inter frequency measurement system information" about cell 6. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info". The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC after complete configuration according to receiving PHYSICAL CHANNEL RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped onto cell 1. The System Information Block type 11 messages to be transmitted are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.36.
2	↔		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.36.
6		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" set to Primary Scrambling Code
7		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
8		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
9		→	UTRAN MOBILITY INFORMATION CONFIRM	
10		→	PHYSICAL CHANNEL RECONFIGURATION	The UE sends this message on a common physical channel in cell 6.
11		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

The contents PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in Annex A, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links	Not present

CELL UPDATE (Step 7)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 9)

The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.6.36.5 Test requirement

After step 6 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 8 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 9 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 10 the UE shall be in CELL_FACH state in cell 6.

<End of Modification>**<Start of Modification>**

8.3.1.1 Cell Update: cell reselection in CELL_FACH

8.3.1.1.1 Definition

8.3.1.1.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

- 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
- 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:
 - 4> perform cell update using the cause "cell reselection".

...

When initiating cell update procedure, the UE shall:

- 1> stop timer T305;
- 1> if the UE is in CELL_DCH state:
 - ...
 - ...
 - 1> move to CELL_FACH state, if not already in that state;
 - 1> if the UE performs cell re-selection:
 - 2> clear the variable C_RNTI; and
 - 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.
 - 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
 - 1> in case of a cell update procedure:
 - 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the CELL UPDATE message for transmission on the uplink CCCH.
 - ...
 - 1> set counter V302 to 1;
 - 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

- 1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

NOTE: During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes.

- 1> set the IE "U-RNTI" to the value of the variable U_RNTI;
- 1> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:

...

- 1> if the value of the variable FAILURE_INDICATOR is TRUE:

...

...

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or

- if the message is received on DCCH:

the UE shall:

- 1> stop timer T302;
- 1> in case of a cell update procedure and the CELL UPDATE CONFIRM message:
 - 2> includes "RB information elements"; and/or
 - 2> includes "Transport channel information elements"; and/or
 - 2> includes "Physical channel information elements"; and
 - 2> if the variable ORDERED_RECONFIGURATION is set to FALSE:
 - 3> set the variable ORDERED_RECONFIGURATION to TRUE.
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:
 - ...
 - ...
- 1> enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

...

If the UE after state transition remains in CELL_FACH state, it shall

- 1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- 1> select PRACH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> not prohibit periodical status transmission in RLC;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.

If the UE after the state transition remains in CELL_FACH state; and

- a C-RNTI is stored in the variable C_RNTI;

...

the UE shall:

...

- 1> in case of a cell update procedure:
 - 2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry.
- ...
- 1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;

...

If the CELL UPDATE CONFIRM message:

- includes the IE "RB information to release list":

the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include the IE "RB information to release list"; and
- includes the IE "RB information to reconfigure list"; or
- includes the IE "RB information to be affected list":

the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- includes "Transport channel information elements":

the UE shall:

- 1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI";

the UE shall:

- 1> transmit no response message.

If the new state is CELL_FACH, the response message shall be transmitted using the new configuration after the state transition., and the UE shall:

...

- 1> if the variable PDCP_SN_INFO is empty:

...

- 2> if the CELL UPDATE CONFIRM or URA UPDATE CONFIRM message did not contain the IE "Ciphering mode info":

- 3> when RLC has been requested to transmit the response message,

- 4> continue with the remainder of the procedure.

...

If any or several of the following conditions are true:

...;

- reselection to another UTRA cell (including the previously serving cell) before completion of the cell update or URA update procedure;

the UE shall:

- 1> stop T302 if it is running;

...

- 1> check whether it is still in "in service area";

...

- 1> in case of a cell update procedure:

- 2> clear any entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS.

If the UE detects "in service area" if it has not entered idle mode, and:

- 1> if V302 is equal to or smaller than N302, the UE shall:

- 2> if the UE performed cell re-selection:

- 3> delete its C-RNTI.

- 2> in case of a cell update procedure:

- 3> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
- 3> submit the CELL UPDATE message for transmission on the uplink CCCH.
- 2> increment counter V302;
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.
- 1> if V302 is greater than N302, the UE shall:

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1.3 Test purpose

1. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell.
2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.1.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.1

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.3.1.1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions. SS switches the power settings repeatedly between columns "T1" and "T0", whenever the description below specifies that the transmission power settings for cell 1 and cell 2 be reversed.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. UE shall verify that IE "New C-RNTI" is not included in the downlink message and shall send a CELL UPDATE message to SS again. SS shall then send a CELL UPDATE CONFIRM message which includes a valid IE "New C-RNTI". SS verifies that the UE send UTRAN MOBILITY INFORMATION CONFIRM message.. UE shall stay in CELL_FACH state. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with CELL UPDATE CONFIRM message and allocates new C-RNTI and U-RNTI identities to the UE. The IE "RRC State Indicator" is set to "CELL_FACH" in this message. The UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall initiate a cell update procedure by transmitting a CELL UPDATE message and stating the cause as 'cell re-selection'. SS replies with a CELL UPDATE CONFIRM message which contains IE "Physical channel information elements". The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge the change in physical resources. Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "Transport channel information elements" and IE "RRC State Indicator" is set to "CELL_DCH". The UE shall move to CELL_DCH state and send TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. The SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message, asking the UE to move to CELL_FACH state. The UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after transiting to CELL_FACH state. Following this, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to be affected list". The UE shall send RADIO BEARER RECONFIGURATION COMPLETE message. Then, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS replies with a CELL UPDATE CONFIRM message which contains IE "RB information to release list". The UE shall send RADIO BEARER RELEASE COMPLETE message. Finally, SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. The UE shall send a CELL UPDATE message on the uplink CCCH of cell 2. SS shall not respond to this message but SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.1. UE shall send a CELL UPDATE message on the uplink CCCH of cell 1. SS shall then send CELL UPDATE CONFIRM message to UE. UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2			Void	SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.1. The UE shall find that the cell 2 is better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
3		→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". SS set k=0.
4a		→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4b		←	CELL UPDATE CONFIRM	See message content. SS set k=0.
5		→	UTRAN MOBILITY INFORMATION CONFIRM	
6				SS reverses the transmission power level of cell 1 and cell 2.
7		→	CELL UPDATE	
8		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". If $k \geq 0$, new C-RNTI and U-RNTI identities are assigned to the UE. If $k > 0$, IE "Physical channel information elements" is included in this message. If $k > 1$, IE "Transport channel information elements" is included in this message and IE "RRC State Indicator" is set to "CELL_DCH". Increment k by 1.
9		→	UTRAN MOBILITY INFORMATION CONFIRM	If $k=1$ when SS received this message, go to step 6. If $k=1$ and this message is not received, test fails. If this message is not received, proceed to next step.
10		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	If $k=2$ when SS received this message, go to step 6. If $k=2$ and this message is not received, test fails. If this message is not received, proceed to next step.
11		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	If $k=3$ when SS received this message, proceed to next step. If $k=3$ and this message is not received, test fails.
11a		←	PHYSICAL CHANNEL RECONFIGURATION	The UE is in CELL_DCH now. The SS shall send PHYSICAL CHANNEL RECONFIGURATION message to the UE asking the UE to transit to CELL_FACH state.

11b	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
11c			The SS reverses the transmission power level of cell 1 and cell 2.
11d	→	CELL UPDATE	
11e	←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". If $k \geq 0$, new C-RNTI and U-RNTI identities are assigned to the UE. If $k > 0$, IE "Physical channel information elements" is included in this message. If $k > 2$, IE "RB information to be affected list" is included in this message. If $k > 3$, IE "RB information to release list" is included in this message. Increment k by 1.
12	→	RADIO BEARER RECONFIGURATION COMPLETE	If $k=4$ when SS received this message, go to step 11c. If $k=4$ and this message is not received, test fails. If this message is not received, proceed to next step.
13	→	RADIO BEARER RELEASE COMPLETE	If $k=5$ when SS received this message, proceed to next step. If $k=5$ and this message is not received, test fails.
14			SS reverses the transmission power level of cell 1 and cell 2.
15	→	CELL UPDATE	
16			SS reverses the transmission power level of cell 1 and cell 2.
17	→	CELL UPDATE	
18	←	CELL UPDATE CONFIRM	
19	→	UTRAN MOBILITY INFORMATION CONFIRM	
20	↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 3, 7, 11d, 15 and 17)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	Check to see if set to '0000 0000 0001' In step 3, check to see if set to '0000 0000 0000 0000 0001'. In step 7 and when $k < 1$, check to see if set to '0000 0000 0000 0000 0001'. In step 7 and when $k > 0$, check to see if set to same string in IE "S-RNTI" in IE "New U-RNTI" of CELL UPDATE CONFIRM message in previous step 8. In step 15 and 17, check to see if set to same string in IE "S-RNTI" in IE "New U-RNTI" of CELL UPDATE CONFIRM message in previous step 8.
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 4b and 18)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_FACH
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE CONFIRM (Step 8 and k = 0)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI	'0000 0000 0001' An arbitrary 20-bits string which is different from original S-RNTI
New C-RNTI	An arbitrary 16-bits string which is different from original C-RNTI assigned in RRC connection establishment procedure.

CELL UPDATE CONFIRM (Step 8 and k=1)

Use the same message sub-type found in step 8 and k=0, with the following exceptions:

Information Element	Value/remark
Maximum allowed uplink TX power	3 dB below the following value: Minimum of {33 dBm for FDD and 30 dBm for TDD, maximum uplink power allowed under the UE power class}

CELL UPDATE CONFIRM (Step 8 and k=2)

Use the same message sub-type found in step 8 and k=1, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information for all transport channels	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Added or Reconfigured uplink TrCH information	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
DL Transport channel information for all transport channels	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Added or Reconfigured downlink TrCH information	Same as RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
CHOICE <i>channel requirement</i>	
Uplink DPCH info	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information common for all radio links	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)
Downlink information per radio link list	Same as the IE in RADIO BEARER SETUP (Packet to CELL_DCH from CELL_FACH in PS)

CELL UPDATE CONFIRM (Step 11e and k=3)

Use the same message sub-type found in step 8 and k=1, with the following exceptions:

Information Element	Value/remark
RB information to be reconfigure - RB identity - PDCP info - PDCP SN info - RLC info - RB mapping info - RB stop/continue	20 Not Present Not Present Not Present Not Present Stop

CELL UPDATE CONFIRM (Step 11e and k=4)

Use the same message sub-type found in step 11e and k=3, with the following exceptions:

Information Element	Value/remark
RB information to release -RB identity	4

PHYSICAL CHANNEL RECONFIGURATION (Step 11a)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_FACH from CELL_DCH in PS":

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 11b)

Use the same message sub-type found in [9] TS 34.108 clause 9.

8.3.1.1.5 Test requirement

After step 2 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 3 the UE shall transmit CELL UPDATE message which sets the value "cell reselection" in IE "Cell update cause".

After step 4a, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

After step 6 the UE shall sent a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

After step 8, if k=1, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

If k=2, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the new physical channel assigned.

If k=3, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to acknowledge that it has reconfigured the transport channels.

After step 11e, if k=4, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message to acknowledge that it has reconfigured the radio bearers.

If k=5, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message to acknowledge that it has release its radio bearers.

After step 14 the UE shall transmit a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

After step 16 the UE shall transmit a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

8.3.1.2 Cell Update: cell reselection in CELL_PCH

8.3.1.2.1 Definition

8.3.1.2.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

When initiating cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

...

...

1> move to CELL_FACH state, if not already in that state;

1> if the UE performs cell re-selection:

2> clear the variable C_RNTI; and

2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

1> in case of a cell update procedure:

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

2> submit the CELL UPDATE message for transmission on the uplink CCCH.

...

1> set counter V302 to 1;

1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

NOTE: During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes.

1> set the IE "U-RNTI" to the value of the variable U_RNTI;

1> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:

...

1> if the value of the variable FAILURE_INDICATOR is TRUE:

...

...

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

1> stop timer T302;

1> in case of a cell update procedure and the CELL UPDATE CONFIRM message:

...

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:

...

...

1> enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

...

If the UE after state transition enters CELL_PCH state, it shall:

...

1> start the timer T305 using its initial value if timer T305 is not running and periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";

1> select Secondary CCPCH according to subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging Occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2 in CELL_PCH state.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID_CONFIGURATION to TRUE.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

Reference

3GPP TS 25.331 clause 8.3.1.

8.3.1.2.3 Test purpose

1. To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the successful reselection of another UTRA cell.

8.3.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state and is camped onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. When the UE detects the presence of cell 2, it moves to CELL_FACH state and transmits a CELL UPDATE message on the uplink CCCH. The value "cell reselection" shall be set in IE "Cell update cause" in CELL UPDATE message. Upon reception of CELL_UPDATE message, SS replies with a CELL UPDATE CONFIRM message with the IE "RRC State Indicator" set to "CELL_PCH". After receiving this message, the UE returns to CELL_PCH state without transmitting any uplink message. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state in cell 1
2				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.1. The UE shall find that the cell 2 is better and attempt to perform a cell reselection.
3		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection"
4		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
5				The UE is in CELL_PCH state.
6		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Steps 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.2.5 Test requirement

After step 2 the UE shall reselect to cell 2 and transmit a CELL UPDATE message, containing the IE "Cell update cause" set to "cell reselection".

After step 4, the UE shall enter CELL_PCH state.

8.3.1.3 Cell Update: periodical cell update in CELL_FACH

8.3.1.3.1 Definition

8.3.1.3.2 Conformance requirement

UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

...

1> Periodical cell update:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_FACH or CELL_PCH state; and

2> if the timer T305 expires; and

2> if the criteria for "in service area" as specified in TS 25.331 subclause 8.5.5.2 is fulfilled; and

2> if periodic updating has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity":

3> perform cell update using the cause "periodical cell update".

When initiating the cell update procedure, the UE shall:

1> stop timer T305;

...

1> move to CELL_FACH state, if not already in that state;

...

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

1> in case of a cell update procedure:

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

2> submit the CELL UPDATE message for transmission on the uplink CCCH.

1> set counter V302 to 1;

1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

In case of cell update procedure the UE shall transmit a CELL UPDATE message.

The UE shall set the IEs in the CELL UPDATE message as follows:

1> set the IE "Cell update cause" corresponding to the cause specified in TS 25.331 subclause 8.3.1.2 that is valid when the CELL UPDATE message is submitted to lower layers for transmission;

NOTE: During the time period starting from when a cell update procedure is initiated by the UE until when the procedure ends, additional CELL UPDATE messages may be transmitted by the UE with different causes.

1> set the IE "U-RNTI" to the value of the variable U_RNTI;

...

When the UE receives a CELL UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI; or
- if the message is received on DCCH:

the UE shall:

1> stop timer T302;

...

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified otherwise in the following:

1> enter a state according to TS 25.331 subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

If the UE after state transition remains in CELL_FACH state, it shall

1> start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";

1> select PRACH according to TS 25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> not prohibit periodical status transmission in RLC;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

If the UE after the state transition remains in CELL_FACH state; and

- a C-RNTI is stored in the variable C_RNTI;

or

- the UE after the state transition moves to another state than the CELL_FACH state:

the UE shall:

1> in case of a cell update procedure:

2> set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry.

1> transmit a response message as specified in TS 25.331 subclause 8.3.1.7;

1> in case of a cell update procedure:

2> clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS.

1> set the variable CELL_UPDATE_STARTED to FALSE;

1> clear the variable SECURITY_MODIFICATION.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and
- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New C-RNTI"; and
- does not include the IE "New U-RNTI":

the UE shall:

1> transmit no response message.

...

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

1> act on received information elements as specified in TS 25.331 subclause 8.6;

- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
 - 2> for each updated constant value:
 - 3> start using the new value directly;
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;
- ...

Reference

3GPP TS 25.331 clause 8.3.1, 8.3.3.3.

8.3.1.3.3 Test purpose

- 1. To confirm that the UE executes a periodical cell update procedure following the expiry of timer T305.

8.3.1.3.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.3

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.3.1.3 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE is in CELL_FACH state. When the UE detects the expiry of timer T305 according to the settings in system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH with a cause indicating periodical cell updating. SS replies with a CELL UPDATE CONFIRM message, and IE "RRC State Indicator" is set to "CELL_FACH". SS verifies that the UE does not transmit any uplink message. SS then waits for T305 to expire again. The UE shall send another CELL UPDATE message to report periodic cell updating. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" to

the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.3, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS then monitors the uplink CCCH for a period of 60 minutes (ideally the SS should monitor this up to the maximum possible value for timer T305 (720 minutes), but for practical reasons 60 minutes (twice default timer of 30 minutes) is regarded as being sufficient) and verifies that no CELL_UPDATE message is received. After this, the SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to '5', to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.3, causing the UE to enter CELL_FACH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall resume periodic cell updating procedure and transmit CELL_UPDATE message after T305 (5 minutes) expires.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS waits until T305 has expired.
2		→	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell updating"
3		←	CELL UPDATE CONFIRM	No RNTI identities are given. No information on PRACH and S-CCPCH are provided.
4				SS verifies that no uplink message is received from UE. SS waits for another period to allow T305 to expire.
5		→	CELL UPDATE	Set to "periodical cell update" in IE "Cell update cause" upon the expiry of timer T305.
6		←	CELL UPDATE CONFIRM	Including IEs "new C-RNTI", "new U-RNTI" and IE "RRC State Indicator" is set to "CELL_FACH"
7		→	UTRAN MOBILITY INFORMATION CONFIRM	

8	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to 'infintiy'.
9	→	UTRAN MOBILITY INFORMATION CONFIRM	
10			SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.3
11	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".
12	←	CELL UPDATE CONFIRM	
12a	→	UTRAN MOBILITY INFORMATION CONFIRM	
13			SS waits for 60 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.
14	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to '5'.
15	→	UTRAN MOBILITY INFORMATION CONFIRM	
16			SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.3
17	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".
18	←	CELL UPDATE CONFIRM	
18a	→	UTRAN MOBILITY INFORMATION CONFIRM	
19	→	CELL UPDATE	UE shall transmit this message with "cell update cause" set to "periodical cell updating" after T305 expires.
20	←	CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2 and 5)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'periodical cell updating'

CELL UPDATE (Step 11 and 17)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to '0000 0000 0001' Check to see if set to same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6. Check to see if set to "cell reselection"

CELL UPDATE CONFIRM (Step 3 and 20)

Use the same message sub-type found in TS 34.108, clause 9.

CELL UPDATE CONFIRM (Step 6, 12 and 18)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI - SRNC Identity - S-RNTI New C-RNTI	Set to '0000 0000 0001' Set to an arbitrary string different from '0000 0000 0000 0000 0001' '1010 1010 1010 1010'

CELL UPDATE (Step 19)

The same message found in TS 34.108, clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to '0000 0000 0001' Check to see if set to same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6. Check to see if set to 'periodical cell updating'

UTRAN MOBILITY INFORMATION (Step 8)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI New C-RNTI UE Timers and constants in connected mode - T305	Not Present Not Present infinity

UTRAN MOBILITY INFORMATION (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI New C-RNTI UE Timers and constants in connected mode - T305	Not Present Not Present 5

8.3.1.3.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 and then transmits a CELL UPDATE message setting value "periodical cell update" into IE "Cell update cause".

After step 3 the UE shall not send any uplink message as a response to CELL UPDATE CONFIRM message sent in step 3.

After step 4 the UE shall send a CELL UPDATE message, specifying the cell updating cause to be "periodical cell update".

After step 6 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

After step 8, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

Between step 12a and 14, the UE shall not transmit any CELL UPDATE message.

After step 14, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 16, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 18a, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "periodical cell update" on the uplink CCCH.

8.3.1.4 Cell Update: periodical cell update in CELL_PCH

8.3.1.4.1 Definition

8.3.1.4.2 Conformance requirement

UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

...

1> Periodical cell update:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
- 2> if the UE is in CELL_FACH or CELL_PCH state; and
- 2> if the timer T305 expires; and
- 2> if the criteria for "in service area" as specified in TS 25.331 subclause 8.5.5.2 is fulfilled; and
- 2> if periodic updating has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity":
 - 3> perform cell update using the cause "periodical cell update".

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

1> act on received information elements as specified in TS 25.331 subclause 8.6;

1> if the IE "UE Timers and constants in connected mode" is present:

- 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
- 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
- 2> for each updated constant value:
 - 3> start using the new value directly;

1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and

1> clear that entry;

1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;

...

Reference

3GPP TS 25.331 clause 8.3.1, 8.3.3.3.

8.3.1.4.3 Test purpose

1. To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the expiry of timer T305.

8.3.1.4.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.4

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.3.1.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE starts from CELL_PCH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE moves to CELL_FACH state. It shall transmit a CELL UPDATE message on the uplink CCCH and set the value "periodical cell update" into IE "Cell update cause". SS answers with a CELL UPDATE CONFIRM message. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.4, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM with IE "RRC state indicator" set to "CELL_PCH". Then UE shall enter CELL_PCH state. SS then monitors the uplink CCCH for a period of 60 minutes (ideally the SS should monitor this up to the maximum possible value for timer T305 (720 minutes), but for practical reasons 60 minutes (twice default timer of 30 minutes) is regarded as being sufficient) and verifies that no CELL_UPDATE message is received. SS then configures its downlink transmission power settings according to columns "T0" in table 8.3.1.4, causing the UE to enter CELL_FACH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "5", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.4, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM with IE "RRC state indicator" set to "CELL_PCH". Then UE shall enter CELL_PCH state. After T305 expires, UE shall transmit CELL UPDATE message with IE "cell update cause" set to "periodical cell update". SS shall transmit CELL UPDATE CONFIRM message to end the procedure.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS waits until T305 has expired. Wait for CELL UPDATE message and then verify that the time of arrival of this message is in the range of T305 value +/- 10 % after it entered CELL_PCH state
2		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "periodical cell update".
3		←	CELL UPDATE CONFIRM	
3a		→	UTRAN MOBILITY INFORMATION CONFIRM	
4		←	UTRAN MOBILITY INFORMATION	IE "T305" is set to 'infintiy'.
5		→	UTRAN MOBILITY INFORMATION CONFIRM	
6				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.4.
7		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
8		←	CELL UPDATE CONFIRM	UE enters CELL_PCH state after receiving this message.
9				SS waits for 60 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.
10				SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.4.
11		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
12		←	CELL UPDATE CONFIRM	
12a		→	UTRAN MOBILITY INFORMATION CONFIRM	
13		←	UTRAN MOBILITY INFORMATION	IE "T305" is set to '5'.
14		→	UTRAN MOBILITY INFORMATION CONFIRM	
15				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.4.
16		→	CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
17		←	CELL UPDATE CONFIRM	UE enters CELL_PCH state after receiving this message.

Step	Direction		Message	Comment
	UE	SS		
18				SS wait for T305 timer to expire
19		→	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell update".
20		←	CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2 and 19)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'periodical cell updating'

CELL UPDATE (Step 7, 11 and 16)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to "cell reselection"

CELL UPDATE CONFIRM (Step 3 and 12)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE CONFIRM (Step 8, 17 and 20)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC state indicator UTRAN DRX cycle length coefficient	CELL_PCH 3

UTRAN MOBILITY INFORMATION (Step 4 and 13)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New U-RNTI New C-RNTI UE Timers and constants in connected mode - T305	Not Present Not Present Set to 'infinity' in step 4 and '5' in step 13

8.3.1.4.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, it shall then move to CELL_FACH state and transmits a CELL UPDATE message with the IE "Cell update cause" set to "periodical cell update".

After step 3, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 4, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 6, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 8 and before step 10, the UE shall not transmit any CELL UPDATE messages.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 13, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 15, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18 the UE shall transmit a CELL UPDATE message stating the cell update cause to be periodic updating.

<End of Modification>

<Start of Modification>

8.3.1.18 Cell Update: Radio Link Failure (T314>0, T315=0)

8.3.1.18.1 Definition

8.3.1.18.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_DCH state; and

2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

- 1> stop timer T305;
- 1> if the UE is in CELL_DCH state:
 - 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;
 - 2> if the stored values of the timer T314 and timer T315 are both equal to zero; or
 - 2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":
 - ...
 - 2> if the stored value of the timer T314 is equal to zero:
 - ...
 - 2> if the stored value of the timer T315 is equal to zero:
 - 3> release all radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";
 - 3> in the variable RB_TIMER_INDICATOR set the IE "T315 expired" to TRUE.
 - 2> if the stored value of the timer T314 is greater than zero:
 - 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":
 - 4> start timer T314.
 - 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":
 - 4> start timer T314.
 - 2> if the stored value of the timer T315 is greater than zero:
 - ...
 - 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.
 - 2> select a suitable UTRA cell according to TS 25.304;
 - 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> set the variable CELL_UPDATE_STARTED to TRUE;
- 1> move to CELL_FACH state, if not already in that state;
- 1> if the UE performs cell re-selection:
 - 2> clear the variable C_RNTI; and
 - 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

1> in case of a cell update procedure:

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

2> submit the CELL UPDATE message for transmission on the uplink CCCH.

1> set counter V302 to 1;

1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

If the received CELL UPDATE CONFIRM message would cause the UE to transit to CELL_DCH state; and

1> in case of a received CELL UPDATE CONFIRM message:

2> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message

...

the UE shall:

1> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:

2> set the variable ORDERED_RECONFIGURATION to FALSE.

1> if V302 is equal to or smaller than N302:

2> select a suitable UTRA cell according to TS 25.304;

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "Radio link failure";

2> submit the CELL UPDATE message for transmission on the uplink CCCH;

2> increment counter V302;

2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.

1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.18.3 Test purpose

1. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T315 and try to find a new cell after detecting that a radio link failure has occurred.
2. To confirm that the UE performs a cell selection procedure when it fails to configure the physical channel(s) indicated in the CELL UPDATE CONFIRM message.

8.3.1.18.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 is active, Cell 2 is inactive).

UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) in cell 1, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.3.1.18

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS transmits UTRAN MOBILITY INFORMATION message to UE to change to value of T315 timer. UE shall respond with a UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.18. The UE shall detect a radio link failure in cell 1 and indicate to the non-access stratum the release of the radio bearer which is associated with T315. Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated physical channel parameters. SS shall not configure according to this message. Instead, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.18. UE shall fail to establish the dedicated channel in cell 2. UE shall re-select to cell 1 and transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure". Then SS responds with a CELL UPDATE CONFIRM message to end the procedure. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0				In the initial set up procedure, the SS shall request UE to associate timer T315 with the new RAB.
1		←	UTRAN MOBILITY INFORMATION	T315=0
2		→	UTRAN MOBILITY INFORMATION CONFIRM	
3			Void	
4				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.18. SS starts to listen to the uplink CCCH of cell 2.
5			Void	
6				The UE detects the radio link failure which is associated with T315. The UE indicates to the non-access stratum the release of the radio bearer.
7		→	CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
8		←	CELL UPDATE CONFIRM	Including dedicated physical channel parameters.
9				SS does not configure according to the message in step 8. SS configures cell 1 and 2 according to column "T0" in table 8.3.1.18.
10		→	CELL UPDATE	UE shall select cell 1 and enter CELL_FACH state to transmit this message
11		←	CELL UPDATE CONFIRM	See message content.
12		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

UTRAN MOBILITY INFORMATION (Step 1)

The contents of UTRAN MOBILITY INFORMATION message in this test case is identical to those in TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode - T315	0

CELL UPDATE (Step 7)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI -SRNC Identity - S-RNTI Cell Update Cause RB timer indicator - T314 expired - T315 expired	Check to see if set to value assigned in cell 1. Check to see if set to value assigned in cell 1. Check to see if set to 'radio link failure' FALSE TRUE

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in the RADIO BEARER SETUP message in initial condition.

CELL UPDATE (Step 10)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI -SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to value assigned in cell 1. Check to see if set to value assigned in cell 1. Check to see if set to 'radio link failure'

CELL UPDATE CONFIRM (Step 11)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.18.5 Test requirement

After step 1, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message.

After step 6, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 9, the UE shall transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure".

After step 11, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

<End of Modification>

<Start of Modification>

8.3.1.21 Cell Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list

8.3.1.21.1 Definition

8.3.1.21.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1.- Cell reselection:

- if none of the criteria for performing cell update with the causes specified above in the current clause is met; and
- if the UE is in CELL_FACH or CELL_PCH state; and
- if the UE performs cell re-selection or the variable C_RNTI is empty:
 - perform cell update using the cause "cell reselection".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.

- The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
- The cell is not barred.
- The cell is not part of the list of "forbidden LAs for roaming"
- The cell selection criteria are fulfilled.

3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.1.21.3 Test purpose

- 1 To confirm that the UE executes a cell update procedure after a successful reselection to another UTRA cell with a PLMN identity different from the original cell but with a PLMN identity that is part of the equivalent PLMN list in the UE.
2. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

NOTE: Verifies conformance requirement 1, 2 and 3.

3. To confirm that the UE refrains from executing a cell update procedure to a better UTRA cell with another PLMN identity when that PLMN identity is not part of the equivalent PLMN list in the UE.

NOTE: Verifies conformance requirement 1, 2 and 3.

NOTE: Test case in 8.3.1.1 is a test where the UE reselects to a cell with the same PLMN identity as the registered PLMN.

8.3.1.21.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.1.21, while cell 2 and cell 3 is inactive.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored equivalent PLMN list containing PLMN-1 and PLMN-2. The equivalent PLMN list stored in the UE shall not contain PLMN-3.

Test Procedure

The SS activates Cell 1-3 according table 8.3.1.21.

Table 8.3.1.21

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
PLMN identity		PLMN-1			PLMN-2			PLMN-3		
CPICH Ec (FDD)	dBm	-73	-79	-79	Cell 2 is switched off	-73	-79	Cell 3 is switched off	Cell 3 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	-62	Cell 2 is switched off	-62	-68	Cell 3 is switched off	Cell 3 is switched off	-62

Table 8.3.1.21-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

- At T0, the SS activates Cell 1.
- At T1, the SS activates Cell 2, and monitors Cell 2 for received messages from UE.
- UE re-selects to Cell 2, and sends a CELL UPDATE
- At T2, the SS activates Cell 3, and monitors Cell 3 for received messages from UE.

[Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.](#)

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				At T0: UE is camped on Cell 1 and registered to PLMN1
2		→	CELL UPDATE	At T1: Sent in Cell 2 The value "cell reselection" set in IE "Cell update cause".
3		←	CELL UPDATE CONFIRM	
4		→	UTRAN MOBILITY INFORMATION CONFIRM	
5				At T2: No message sent by UE

Specific Message Contents

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type titled "CELL UPDATE CONFIRM message" in TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
- New C-RNTI	Present
- URA identity	Not present

8.3.1.21.5 Test requirement

The UE shall send a CELL UPDATE at T1 but refrain from sending a cell update (or any other message) after T2.

8.3.1.22 Cell update: Restricted cell reselection to a cell belonging to forbidden LA list (Cell_FACH)

8.3.1.22.1 Definition

8.3.1.22.2 Conformance requirement

1. -Cell reselection:

- if none of the criteria for performing cell update with the causes specified above in the current clause is met; and
- if the UE is in CELL_FACH or CELL_PCH state; and
- if the UE performs cell re-selection or the variable C_RNTI is empty:
 - perform cell update using the cause "cell reselection".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.

- The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
- The cell is not barred.
- The cell is not part of the list of "forbidden LAs for roaming"
- The cell selection criteria are fulfilled.

3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.1.22.3 Test purpose

1. To confirm that the UE executes a cell update procedure after a successful reselection of another UTRA cell with a LA identity that is not part of the list of LAs stored in the UE as "forbidden location areas for roaming".
2. To confirm that if the UE get a release message and is moved to idle mode, performs a location registration where the LA list is updated and the UE again enters connected mode, that the UE refrains from selecting that same UTRA cell if that is part of the forbidden LA list.

NOTE: Test case in 8.3.1.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

NOTE: Test case in 8.1.3.2 is a test where normal RRC connection release on DCCH in CELL_FACH state is tested.

NOTE: Test case in 8.1.9 is a test where normal RRC connection request and location registration is tested.

8.3.1.22.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.1.22, while cell 2 is inactive.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have an empty list of LAs stored that are "forbidden location areas for roaming". The UE shall be registered to CS through cell 1 with LA-ID 1.

Test Procedure

Table 8.3.1.22

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
LA identity		LA-ID 1		LA-ID 2	
CPICH Ec (FDD)	dBm	-73	-79	Cell 2 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 2 is switched off	-68

Table 8.3.1.22-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" is to be applied subsequently.

- a) At T1, verify that the UE reselects to cell 2 and sends a cell update.
- b) SS sends a RRC connection release message to the UE from cell2.
- c) The UE performs a location registration to cell 2 (RRC Connection request, setup, initial direct transfer, DL direct transfer (with LA forbidden for roaming), RRC connection release.)
- d) The UE reselects cell 1 again although this is not the best cell.
- e) The UE performs a location registration to cell 1 (RRC Connection request, setup, initial direct transfer, DL direct transfer (without LA forbidden for roaming)).
- f) Keep the UE in RRC Connected mode in CELL_FACH state.

g) Make sure the UE refrains from reselecting cell2 and sends a cell update (or any other message) in cell2.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	CELL UPDATE	At T1: Sent in Cell 2 The value "cell reselection" set in IE "Cell update cause".
2		←	RRC CONNECTION RELEASE	The value "Normal event" is set in IE "Release cause"
3		→	RRC CONNECTION RELEASE COMPLETE	
4		→	RRC CONNECTION REQUEST	The value "Registration" is set in IE "Establishment cause"
5		←	RRC CONNECTION SETUP	
6		→	RRC CONNECTION SETUP COMPLETE	
7		→	INITIAL DIRECT TRANSFER	Includes MM message LOCATION UPDATING REQUEST
8		←	DOWNLINK DIRECT TRANSFER	Includes MM message LOCATION UPDATING REJECT with reject cause "Roaming not allowed in this location area"
9		←	RRC CONNECTION RELEASAE	The value "Normal event" is set in IE "Release cause"
10		→	RRC CONNECTION RELEASE COMPLETE	The value "Normal event" is set in IE "Release cause"
11		→	RRC CONNECTION REQUEST	Sent in Cell 1. The value "Registration" is set in IE "Establishment cause"
12		←	RRC CONNECTION SETUP	
13		→	RRC CONNECTION SETUP COMPLETE	
14		→	INITIAL DIRECT TRANSFER	Includes MM message LOCATION UPDATING REQUEST
15		←	DOWNLINK DIRECT TRANSFER	Includes MM message LOCATION UPDATING ACCEPT

Specific Message Contents

CELL UPDATE (Step 1)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'cell reselection'

RRC CONNECTION RELEASE (Step 2, 9)

Use the same message sub-type found in TS34.108 clause 9.

RRC CONNECTION RELEASE COMPLETE (Step 3, 10)

Use the same message sub-type found in TS34.108 clause 9. Only the message type IE in this message will be checked.

RRC CONNECTION REQUEST (Step 4, 11)

Use the same message sub-type found in TS34.108 clause 9.

RRC CONNECTION SETUP (Step 5, 12)

Use the same message sub-type found in TS34.108 clause 9.

RRC CONNECTION SETUP COMPLETE (Step 6, 13)

Use the same message sub-type found in TS34.108 clause 9.

INITIAL DIRECT TRANSFER (Step 7, 14)

Use the same message sub-type found in TS34.108 clause 9.

DOWNLINK DIRECT TRANSFER (Step 8, 15)

Use the same message sub-type found in TS34.108 clause 9.

8.3.1.22.5 Test requirement

The UE shall send a CELL UPDATE in Cell 2 at T1, attempt Location registration in Cell 2, but, since the location registration is rejected in Cell 2, not send any more messages in Cell 2

8.3.1.23 Cell Update: HCS cell reselection in CELL_FACH

8.3.1.23.1 Definition

8.3.1.23.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Q_{hcs_s}$$

$$H_n = Q_{meas,n} - Q_{hcs_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Q_{hyst_s}$$

$$R_n = Q_{meas,n} - Q_{offset_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS_PRIO_n \triangleleft HCS_PRIO_s$$

$$W(x) = 0 \quad \text{for } x < 0$$

$$W(x) = 1 \quad \text{for } x \geq 0$$

TEMP_OFFSET_n applies an offset to the H and R criteria for the duration of PENALTY_TIME_n after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if HCS_PRIO_n < HCS_PRIO_s and

$$Q_{meas,n} > Q_{hcs_n}$$

Or

- if HCS_PRIO_n = HCS_PRIO_s and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells:	Srxlev > 0 AND Squal > 0
for TDD cells:	Srxlev > 0
for GSM cells:	Srxlev > 0

Where :

$$S_{qual} = Q_{qualmeas} - Q_{qualmin}$$

$$S_{rxlev} = Q_{rxlevmeas} - Q_{rxlevmin} - P_{compensation}$$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS_PRIO among those cells that fulfil the criterion $H \geq 0$. Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion $H \geq 0$. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval $T_{reselection}$.
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.

7. A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
 - 3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or
 - 3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.1.23.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in CELL_FACH state.
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in CELL_FACH state.
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.23.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in Table 8.3.1.23-1. Cell 2 and 3 are switched off.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE

Specific Message Content

For system information blocks 3, 4, 11 & 12 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	5 (gives actual value of 10 dB)
- Qhyst2s	0 dB
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- SsearchHCS	47 dB
- Qhyst1s	5 (gives actual value of 10 dB)
- HCS Serving cell information	
-HCS Priority	6
- Q_HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Test Procedure

Table 8.3.1.23-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm /3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-70
P-CCPCH RSCP (TDD)	dBm	-60	-60	-60	-80	-80	-70	-80	-70	-70
H* (During penalty time)		15	15	5	-inf	-inf	5	-inf	-inf	5
H* (After PenaltyTime)		15	15	15	-5	-5	5	-5	5	5
R* (During PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-60
R* (After PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-50	n.a.	n.a.	-60

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.23-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.23-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2		←	BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.23-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall find still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_FACH State
3				SS changes the power levels as per column 'T1' in the table 8.3.1.23-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4		→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" Received in Cell 3
5		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7				SS changes the power levels as per column 'T2' in the table 8.3.1.23-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8		→	CELL UPDATE	Received in Cell 2
9		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	5 (gives actual value of 10 dB)
- Qhyst2s	0 dB
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- SsearchHCS	47 dB
- Qhyst1s	5 (gives actual value of 10 dB)
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	1
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 9)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.23.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 5 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 9 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.24 Cell Update: HCS cell reselection in CELL_PCH

8.3.1.24.1 Definition

8.3.1.24.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Q_{hcs_s}$$

$$H_n = Q_{meas,n} - Q_{hcs_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Q_{hyst_s}$$

$$R_n = Q_{meas,n} - Q_{offset_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS_PRIO_n <> HCS_PRIO_s$$

$$W(x) = 0 \quad \text{for } x < 0$$

$$W(x) = 1 \quad \text{for } x \geq 0$$

TEMP_OFFSET_n applies an offset to the H and R criteria for the duration of PENALTY_TIME_n after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if $HCS_PRIO_n \neq HCS_PRIO_s$ and

$$Q_{meas,n} > Q_{hcs_n}$$

Or

- if $HCS_PRIO_n = HCS_PRIO_s$ and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells:	$S_{rxlev} > 0$ AND $S_{qual} > 0$
for TDD cells:	$S_{rxlev} > 0$
for GSM cells:	$S_{rxlev} > 0$

Where :

$S_{qual} = Q_{qualmeas} - Q_{qualmin}$
$S_{rxlev} = Q_{rxlevmeas} - Q_{rxlevmin} - P_{compensation}$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS_PRIO among those cells that fulfil the criterion $H \geq 0$. Note that this rule is not valid when UE high-mobility is detected.

- all cells, not considering HCS priority levels, if no cell fulfil the criterion $H \geq 0$. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval $T_{reselection}$.
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.

7. A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.1.24.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in CELL_PCH state.

2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in CELL_PCH state.
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.24.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in table 8.3.1.24-1. Cell 2 and 3 are switched off.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Specific Message Content

For system information blocks 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	FDD
- CHOICE mode	0 dB
- Sintersearch	35 dB
- SsearchHCS	This parameter is configurable
- RAT List	Not Present
- S _{limit,SearchRAT}	-20 dB
- Qqualmin	-115 dBm
- Qrxlevmin	5 (gives actual value of 10 dB)
- Qhyst1s	0 dB
- Qhyst2s	
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	47 dB
- SsearchHCS	5 (gives actual value of 1 dB)
- Qhyst1s	
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Test Procedure

Table 8.3.1.24-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-70
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (During penalty time)		15	15	5	-inf	-inf	5	-inf	-inf	5
H* (After PenaltyTime)		15	15	15	-5	-5	5	-5	5	5
R* (During PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-60
R* (After PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-50	n.a.	n.a.	-60

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_PCH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.24-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink CCCH. UE shall return to CELL_PCH state in Cell 3 and will not transmit anything on PRACH. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.24-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink DCCH. UE shall return to CELL_PCH state in Cell 2 and will not transmit anything on PRACH.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state in cell 1
2		←	BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.24-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall find still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_PCH State
3				SS changes the power levels as per column 'T1' in the table 8.3.1.24-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 3
5		←	CELL UPDATE CONFIRM	Message sent on CCCH with IE "RRC State Indicator" is set to "CELL_PCH".
7				SS changes the power levels as per column 'T2' in the table 8.3.1.24-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 2
9		←	CELL UPDATE CONFIRM	Message sent on DCCH with IE "RRC State Indicator" is set to "CELL_PCH".

Specific Message Contents

The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	FDD
- CHOICE mode	0 dB
- Sintersearch	35 dB
- SsearchHCS	This parameter is configurable
- RAT List	Not Present
- Slimit,SearchRAT	-20 dB
- Qqualmin	-115 dBm
- Qrxlevmin	5 (gives actual value of 10 dB)
- Qhyst1s	0 dB
- Qhyst2s	
- HCS Serving cell information	7
-HCS Priority	40 (results in actual value of -75)
- Q HCS	Not Present
- TcrMax	

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	47 dB
- SsearchHCS	5 (gives actual value of 10 dB)
- Qhyst1s	
- HCS Serving cell information	7
-HCS Priority	40 (results in actual value of -75)
- Q HCS	Not Present
- TcrMax	

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE

- CHOICE mode	FDD
- Primary CPICH info	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary scrambling code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity indicator	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Qoffset2 _{s,n}	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary scrambling code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity indicator	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Qoffset2 _{s,n}	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	1
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 8)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.24.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 6 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

8.3.2 URA Update

8.3.2.1 URA Update: Change of URA

8.3.2.1.1 Definition

8.3.2.1.2 Conformance requirement

A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

- 1> URA reselection:
- 2> if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or
- ...
- 3> perform URA update using the cause "change of URA".

When initiating the URA update procedure, the UE shall:

- 1> stop timer T305;
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> move to CELL_FACH state, if not already in that state;
- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> in case of a URA update procedure:
 - 2> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the URA UPDATE message for transmission on the uplink CCCH.
- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

In case of URA update procedure the UE shall transmit a URA UPDATE message.

The UE shall set the IEs in the URA UPDATE message as follows:

- 1> set the IE "U-RNTI" to the value of the variable U_RNTI;
- 1> set the IE "URA update cause" corresponding to which cause as specified in TS 25.331 subclause 8.3.1.2 that is valid when the URA UPDATE message is submitted to lower layers for transmission;
- 2> if the value of the variable PROTOCOL_ERROR_INDICATOR is TRUE:
 - ...
 - 2> if the value of the variable PROTOCOL_ERROR_INDICATOR is FALSE:
 - 3> if the value of the variable INVALID_CONFIGURATION is TRUE:

...

3> if the value of the variable INVALID_CONFIGURATION is FALSE:

4> set the IE "Protocol error indicator" to FALSE.

If the URA UPDATE CONFIRM message:

- does not include "CN information elements"; and
- does not include the IE "Ciphering mode info"; and
- does not include the IE "Integrity protection mode info"; and
- does not include the IE "New U-RNTI"; and
- does not include the IE "New C-RNTI":

the UE shall:

1> transmit no response message.

...

If the new state is CELL_PCH or URA_PCH, the response message shall be transmitted in CELL_FACH state, and the UE shall:

1> when RLC has confirmed the successful transmission of the response message:

2> for each radio bearer in the variable PDCP_SN_INFO:

3> if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":

4> configure the RLC entity for that radio bearer to "continue".

2> enter the new state (CELL_PCH or URA_PCH, respectively).

1> continue with the remainder of the procedure.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.1.3 Test purpose

1. To confirm that the UE executes an URA update procedure after the successful change of URA.
2. To confirm that the UE responds correctly when it re-selects to a new cell while waiting for URA UPDATE CONFIRM message from SS.

8.3.2.1.4 Method of test

Initial Condition

System Simulator: 2 cells: The URA-ID and transmission power for each cell is shown in Table 8.3.2.1, where the initial condition is shown in column "T0".

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, with URA-ID 1 from the list of URA-ID in cell 1.

Test Procedure

Parameter	Unit	Cell 1							Cell 2						
		T0	T1	T2	T3	T4	T5	T6	T7	T0	T1	T2	T3	T4	T5
UTRA RF Channel Number		Ch. 1							Ch. 1						
CPICH Ec	dBm/3.84MHz	-60	-75	-60	-75	-60	-75	-75	-60	-75	-60	-75	-60		
P-CCPCH RSCP (TDD)	dBm	-60	-75	-60	-75	-60	-75	-75	-60	-75	-60	-75	-60		
URA ID		URA-ID 1	URA-ID 2					URA-ID 1,3 and 4					no SIB2		

The test begins with the downlink power transmission of both cells set according to 'T0' column in table 8.3.2.1. The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. The SS then adjusts the transmission power again according to the 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 2. Since URA-ID 1 is also broadcasted in cell 2, the UE shall not perform any URA update procedure due to the change of URA. Starting from time 'T2', SS modifies the system information in cell 1, so that URA-ID 2 is the only URA identity in that cell. Next SS adjusts the transmission power according to 'T3' column. UE shall perform a cell reselection to cell 1 and when the UE finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits a URA UPDATE CONFIRM message, which includes the IEs "RRC State Indicator" and IE "URA-ID" to the UE on the downlink DCCH. The IE "RRC State Indicator" is set to "URA_PCH". UE returns to URA_PCH state in cell 1 without sending any uplink response message. Next SS adjusts the transmission power according to 'T4' column. UE shall re-select to cell 2 and transmit a URA UPDATE message to SS. However, SS do not acknowledge but adjusts the transmission power according to 'T5' column. UE shall perform cell re-selection to cell 1 and then send a URA UPDATE message to SS. SS shall transmit URA UPDATE CONFIRM message to UE. Starting from time 'T6', SS modifies the system information in cell 2, so that no SIB 2 is sent in that cell. Next the SS adjusts the transmission power according to the 'T7' column. The UE shall re-select to cell 2 and send a URA UPDATE message since no SIB2 is broadcasted in this cell. When the UE receives a URA UPDATE CONFIRM message including a URA identity, the UE will again send a URA UPDATE message. When receiving this last message, the SS releases the RRC connection.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is updated with only 1 URA identity carried currently by cell 1. The starting state of the UE is URA_PCH
2				SS set the power transmission and system information of all cells according to column 'T1' of table 8.3.2.1.
3				UE shall perform a cell reselection but shall not transmit URA UPDATE message with the update cause of "change of URA".
3a				Starting from time 'T2', SS modifies the system information in cell 1, so that URA-ID 2 is the only URA identity in that cell
4				SS set the power transmission and system information of all cells according to column 'T3' of table 8.3.2.1.
5		→	URA UPDATE	The UE shall perform a cell reselection first and when it finds that its current URA-ID 1 is not in the newly broadcasted list of URA-IDs, it shall then transmit this message and set value "change of URA" into IE "URA update cause".
6		←	URA UPDATE CONFIRM	Message comprises IE "RRC State Indicator" set to "URA_PCH", and also IE "URA Identity" equal to "URA-ID 2".
7				SS set the power transmission and system information of all cells according to column 'T4' of table 8.3.2.1.
8		→	URA UPDATE	
9				SS do not respond to the URA UPDATE message from UE and set the power transmission and system information of all cells according to column 'T5' of table 8.3.2.1.
10		→	URA UPDATE	
11		←	URA UPDATE CONFIRM	
11a				Starting from time 'T6', SS modifies the system information in cell 2, so that no SIB 2 is sent in that cell.
12				SS set the power transmission and system informatio of all cells according to column 'T7' of table 8.3.2.1.

13	→	URA UPDATE	The UE shall perform a cell reselection first and when it finds that no URA-ID is broadcasted in this cell, it shall then transmit this message and set value "change of URA" into IE "URA update cause".
14	←	URA UPDATE CONFIRM	Message comprises IE "RRC State Indicator" set to "URA_PCH", and also IE "URA Identity" equals to "URA-ID 2".
15	→	URA UPDATE	
16	←	RRC CONNECTION RELEASE	
17	→	RRC CONNECTION RELEASE COMPLETE	
18			UE enters idle mode

Specific Message Contents

SYSTEM INFORMATION BLOCK TYPE 2

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exceptions.

Cell 1, time T0-T1:

Information Element	Value/remark
- URA identity list - URA identity	0000 0000 0000 0001B

Cell 2, time T0-T5:

Information Element	Value/remark
- URA identity list	0000 0000 0000 0011B
- URA identity	0000 0000 0000 0001B
- URA identity	0000 0000 0000 0100B

Cell 1, time T2-T7 (step 3a):

Information Element	Value/remark
- URA identity list - URA identity	0000 0000 0000 0010B

Cell 2, time T6-T7 (step 11a):

No SYSTEM INFORMATION BLOCK TYPE 2 is broadcasted in cell 2 during this time period.

URA UPDATE (Step 5, 8, 10, 13, and 15)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URA identity	URA-ID 2

URA UPDATE CONFIRM (Step 11)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URA identity	URA-ID 1

8.3.2.1.5 Test requirement

After step 2 the UE shall not transmit a URA UPDATE message with update cause "change of URA".

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit a URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and a transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 9 the UE shall find the new cell and transmit a URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 12 the UE shall find that no URA-ID is broadcasted in the cell, move to CELL_FACH state and transmit a URA UPDATE message setting the update cause to "change of URA".

After step 14 the UE shall find that no URA-ID is broadcasted in the cell and transmit a URA UPDATE message setting the update cause to "change of URA".

<End of Modification>**<Start of Modification>**

8.3.2.11 URA Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list

8.3.2.11.1 Definition

8.3.2.11.2 Conformance requirement

1. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

- URA reselection:
 - if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or
 - if the list of URA identities in system information block type 2 is empty; or
 - if the system information block type 2 can not be found:
 - perform URA update using the cause "change of URA".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
 - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
 - The cell is not barred, see clause 5.3.1.1 in TS 25.304.
 - The cell is not part of the list of "forbidden LAs for roaming" TS 22.011
 - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.2.11.3 Test purpose

1. To confirm that the UE executes a URA update procedure after a successful reselection of another UTRA cell with a URA identity that is not the URA of the UE and with a PLMN identity different from the original cell but with a PLMN that is part of the equivalent PLMN list in the UE.

NOTE: Verifies conformance requirements 1, 2 and 3.

2. To confirm that the UE refrains from executing a URA update procedure to a better UTRA cell with another PLMN identity when that PLMN identity is not part of the equivalent PLMN list in the UE.

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same PLMN identity as the registered PLMN.

8.3.2.11.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.1-1, while cell 2 and cell 3 is inactive.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored equivalent PLMN list containing PLMN-1 and PLMN-2. The equivalent PLMN list stored in the UE shall not contain PLMN-3. The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

Test Procedure

Table 8.3.2.11-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
PLMN identity		PLMN-1			PLMN-2			PLMN-3		
URA identity		URA-ID 1			URA-ID 2			URA-ID 3		
CPICH Ec (FDD)	dBm/3.84 MHz	-73	-79	-79	Cell 2 is switched off	-73	-79	Cell 3 is switched off	Cell 3 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	-68	Cell 2 is switched off	-62	-68	Cell 3 is switched off	Cell 3 is switched off	-62

Table 8.3.2.11-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

- a) At T0, the SS activates Cell 1.
- b) At T1, the SS activates Cell 2, and monitors Cell 2 for received messages from UE.
- c) UE re-selects to Cell 2, and sends a URA UPDATE message
- d) At T2, the SS activates Cell 3, and monitors Cell 3 for received messages from UE.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in URA_PCH state, camped on Cell 1 and registered to PLMN1. SS applies downlink transmission power settings according to values in column "T0" of table 8.3.2.11-1.
1a				SS applies downlink transmission power settings according to values in column "T1" of table 8.3.2.11-1.
2		→	URA UPDATE	The UE moves to CELL_FACH state and transmits this message in Cell 2. The value "change of URA" shall be set in IE "URA update cause".
3		←	URA UPDATE CONFIRM	The value "URA_PCH" set in IE "RRC State Indicator".
4				SS applies downlink transmission power settings according to values in column "T2" of table 8.3.2.11-1.
5				SS monitors that the UE does not send a URA UPDATE message or any other message.

Specific Message Contents

URA UPDATE (Step 2)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URA identity	URA-ID 2

8.3.2.11.5 Test requirement

After Step 1 the UE shall send a URA UPATE message.

After Step 4 the UE shall refrain from sending a URA update (or any other message).

8.3.2.12 Restricted cell reselection to a cell belonging to forbidden LA list (URA_PCH)

8.3.2.12.1 Definition

8.3.2.12.2 Conformance requirement

1. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:
 - URA reselection:
 - if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or
 - if the list of URA identities in system information block type 2 is empty; or
 - if the system information block type 2 can not be found:
 - perform URA update using the cause "change of URA".
2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
 - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
 - The cell is not barred, see clause 5.3.1 in TS 25.304.
 - The cell is not part of the list of "forbidden LAs for roaming" in TS 22.011.
 - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.2.12.3 Test purpose

1. To confirm that the UE refrains from selecting a UTRA cell and performs a URA update if that cell has a LA identity that is part of the list of LAs stored in the UE as "forbidden location areas for roaming".

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

8.3.2.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.12-1, while cell 2 is inactive.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored LA-ID 2 into the list of "forbidden location areas for roaming". The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

Test Procedure

Table 8.3.2.12-1

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
URA identity		URA-ID 1		URA-ID 2	
LA identity		LA-ID 1		LA-ID 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-73	-79	Cell 2 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 2 is switched off	-62

Table 8.3.2.12-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while column marked "T1" are to be applied subsequently.

- a) At T1, verify that the UE does not reselect to cell 2 and not send a URA update in cell 2, although cell 2 is the best cell.
- b) SS calls for generic procedure C.5 to check that UE is in URA_PCH state in cell 1.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in URA_PCH state, camped on Cell 1 and registered to PLMN1. SS applies downlink transmission power settings according to values in column "T0" of table 8.3.2.12-1.
2				SS applies downlink transmission power settings according to values in column "T1" of table 8.3.2.12-1.
3				SS monitors that the UE does not send a URA UPDATE message or any other message.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state in cell 1, the test passes, otherwise it fails.

Specific Message Contents

-

8.3.2.12.5 Test requirement

After Step 2 the UE shall refrain from sending a URA UPDATE (or any other message).

8.3.2.13 URA Update: Change of URA due to HCS Cell Reselection

8.3.2.13.1 Definition

8.3.2.13.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{\text{meas},s} - Q_{\text{hcs}_s}$$

$$H_n = Q_{\text{meas},n} - Q_{\text{hcs}_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{\text{meas},s} + Q_{\text{hyst}_s}$$

$$R_n = Q_{\text{meas},n} - Q_{\text{offset}_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS_PRIO_n \triangleleft HCS_PRIO_s$$

$$W(x) = 0 \quad \text{for } x < 0$$

$$W(x) = 1 \quad \text{for } x \geq 0$$

TEMP_OFFSET_n applies an offset to the H and R criteria for the duration of PENALTY_TIME_n after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if HCS_PRIO_n < HCS_PRIO_s and

$$Q_{meas,n} > Q_{hcs_n}$$

Or

- if HCS_PRIO_n = HCS_PRIO_s and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells: $Srxlev > 0$ AND $Squal > 0$

for TDD cells: $Srxlev > 0$

for GSM cells: $Srxlev > 0$

Where :

$$S_{qual} = Q_{qualmeas} - Q_{qualmin}$$

$$S_{rxlev} = Q_{rxlevmeas} - Q_{rxlevmin} - P_{compensation}$$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS_PRIO among those cells that fulfil the criterion $H \geq 0$. Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion $H \geq 0$. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval $T_{reselection}$.
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.

7. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

1> URA reselection:

- 2> if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or

...

- 3> perform URA update using the cause "change of URA".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.2.13.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in URA_PCH state.
2. To confirm that the UE executes an URA update procedure after the successful change of URA due to HCS Cell Reselection in URA_PCH state.

3. To confirm UE responds correctly when it re-selects to a new cell while waiting from URA UPDATE CONFIRM message from SS.

8.3.2.13.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active with URA-ID 1 and downlink transmission power shown in column marked "T0" in table 8.3.2.13-1. Cell2 with URA-ID 1 and Cell 3 with URA-ID 2 are switched off

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE, with URA-ID 1 from the list of URA-ID in cell 1

Specific Message Content

For system information blocks 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	FDD
- CHOICE mode	0 dB
- Sintersearch	35 dB
- SsearchHCS	This parameter is configurable
- RAT List	Not Present
- S _{limit,SearchRAT}	-20 dB
- Qqualmin	-115 dBm
- Qrxlevmin	10 (gives actual value of 20 dB)
- Qhyst1s	0 dB
- Qhyst2s	
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	47 dB
- SsearchHCS	10 (gives actual value of 20 dB)
- Qhyst1s	
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Test Procedure

Table 8.3.2.13-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm /3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-73
H* (During penalty time)		16	16	6	-14	-14	6	-14	-4	3
H* (After PenaltyTime)		16	16	16	-4	-4	6	-4	6	3
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (After PenaltyTime)		-41	-41	-41	-60	-60	-47	-60	-53	-53

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. SS configures Cell 2 and 3 with power level given in column "T0", and URA-Id 1 and 2 respectively and starts broadcast of BCCH on the primary CCPCH in cells 2 and 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.2.13-1. SS then adjusts the transmission power again according to 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. UE on performing cell reselection to cell 3 finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits URA UPDATE CONFIRM message which includes the IEs "RRC State Indicator" and "URA-ID" to the UE on the downlink CCCH. The "RRC State Indicator" is set to "URA_PCH". UE returns to URA_PCH state in cell 3 without sending a uplink response message. Next SS adjusts the transmission power according to 'T2' column. UE shall re-select to cell 2, and transmit URA UPDATE message to SS. However, SS do not acknowledge but adjusts the transmission power according to 'T0' column. UE shall perform cell re-selection to cell 1 and then sent URA UPDATE message to SS. Finally SS shall transmit URA UPDATE CONFIRM message to UE on the downlink DCCH. UE shall return to URA_PCH state in Cell 1 and will not transmit anything on PRACH.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is updated with only 1 URA identity carried currently by cell 1. The starting state of the UE is URA_PCH
2		←	BCCH	SS configures cell 2 (with URA-ID 1) and Cell 3 (with URA-ID 2) and power levels as given in column T0 of table 8.3.2.13-1 and starts transmission of BCCH.
3				UE shall Remain camped on Cell 1 and in URA_PCH state even after expiry of Penalty time.
4				SS set the power transmission of all cells according to column 'T1' of table 8.3.2.13-1.
5		→	URA UPDATE	The UE shall perform a cell reselection first after the penalty time to cell 3 and when it finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it shall then transmit this message and set value "change of URA" into IE "URA update cause".
6		←	URA UPDATE CONFIRM	Message sent on CCCH. Message comprises IE "RRC State Indicator" set "URA_PCH", and also IE "URA Identity" equals to "URA-ID 2".
7				SS set the power transmission of all cells according to column 'T2' of table 8.3.2.13-1.
8		→	URA UPDATE	In Cell 2
9				SS do not respond to the URA UPDATE message from UE and set the power transmission of all cells according to column 'T0' of table 8.3.2.13-1.
10		→	URA UPDATE	In Cell 1
11		←	URA UPDATE CONFIRM	Message sent on DCCH. Message comprises IE "RRC State Indicator" set "URA_PCH", and also IE "URA Identity" equals to "URA-ID 1".

Specific Message Contents

The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- SsearchHCS	47 dB
- Qhyst1s	10 (gives actual value of 20 dB)
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	1
- Cell info	
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

URA UPDATE (Step 5, 8 and 10)

Information Element	Value/remark
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:.

Information Element	Value/remark
URA identity	URA-ID 2

URA UPDATE CONFIRM (Step 11)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
URA identity	URA-ID 1

8.3.2.13.5 Test requirement

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

<End of Modification>**<Start of Modification>**

8.3.4.2 Active set update in soft handover: Radio Link removal

8.3.4.2.1 Definition

8.3.4.2.2 Conformance requirement

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure B as specified in TS 25.214;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the completion of the Physical Layer synchronization B, specified in TS 25.214;

...

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.2.3 Test purpose

1. To confirm that the UE continues to communicate with the SS on the remaining radio link after radio link removal on the active set.
2. To confirm that the UE is not using the removed radio link to communicate with the SS.

8.3.4.2.4 Method of test

Initial Condition

System Simulator: 2 cells - both Cell 1 and Cell 2 are active

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.2

Parameter	Unit	Cell 1				Cell 2			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 1			
CPICH Ec	dBm/3.84MHz	-60	-60	-75	-60	-75	-60	-60	OFF

Table 8.3.4.2 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE goes to connected mode and establishes a radio access bearer service in the CELL_DCH state in cell 1.

SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID).

When the UE receives this message, the UE shall configure layer 1 to begin reception without affecting the current uplink and downlink activities of existing radio links. The UE shall transmit an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.2. UE shall transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 1 according to IE "Intra-frequency event identity", which is set to '1b' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS remove the radio link from cell 1 and then SS transmits an ACTIVE SET UPDATE message, which includes IE "Radio Link Removal Information" and specifying the P-CPICH information of the cell to be removed.

When the UE receives this message, the UE RRC entity shall request UE L1 entity to terminate transmission and reception of the radio link from cell 1. Then the UE transmits an ACTIVE SET UPDATE COMPLETE message to the SS on the uplink DCCH using AM RLC.

SS shall transmit a UE CAPABILITY ENQUIRY message to confirm that the UE can respond this message through the DPCH in cell 2. The UE shall transmit a UE CAPABILITY INFORMATION message. Then SS transmits a UE CAPABILITY INFORMATION CONFIRM message.

SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.2 so as to generate a radio link failure condition. The UE shall detect the radio link failure UE shall re-select to cell 1 and transmit a CELL UPDATE message. SS transmits a CELL UPDATE CONFIRM message after it receive CELL UPDATE message from UE. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities..

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2
2		→	MEASUREMENT REPORT	See specific message contents for this message
3		←	ACTIVE SET UPDATE	SS transmits this message in cell 1 on downlink DCCH using AM RLC. The message includes IE "Radio Link Addition Information". (e.g. Downlink DPCH information and other optional parameters relevant for the additional radio links with Primary CPICH info used for the reference ID in cell 2)
4		→	ACTIVE SET UPDATE COMPLETE	The UE shall configure a new radio link to cell 2, without interfering with existing connections on the radio link in cell 1.
5				SS configures its downlink transmission power settings according to columns "T2" in table 8.3.4.2
6		→	MEASUREMENT REPORT	See specific message contents for this message
7		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes IE "Radio Link Removal Information".
8		→	ACTIVE SET UPDATE COMPLETE	The UE shall remove the radio link associated with cell 1.
9		←	UE CAPABILITY ENQUIRY	Use default message.
10		→	UE CAPABILITY INFORMATION	Use default message.
11		←	UE CAPABILITY INFORMATION CONFIRM	Use default message.
12				SS configures its downlink transmission power settings according to columns "T3" in table 8.3.4.2
13		→	CELL UPDATE	UE sends this message in cell 1.
14		←	CELL UPDATE CONFIRM	See message content.
15		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

The contents of SIB11 broadcasted in cell 1 shall be in accordance with the default SIB11 as specified in section 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
<ul style="list-style-type: none"> - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code 	1 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
<ul style="list-style-type: none"> - Primary CPICH TX power - TX Diversity indicator - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CPICH info - Primary scrambling code - Primary CPICH TX power - TX Diversity indicator 	Not Present FALSE 2 0dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Not Present FALSE

The contents of SIB12 in cell 1, and SIB11 and SIB12 in cell 2 shall be in accordance with the default SIBs as specified in TS 34.108.

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	1
Measured Results	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- Primary CPICH info	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- Primary scrambling code	
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
- Cell measured results	
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in Annex.A, with the following exceptions:

Information Element	Value/remark
Radio link addition information <ul style="list-style-type: none"> - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - SS DT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - SCCPCH information for FACH 	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 FDD P-CPICH can be used. Calculated value from Cell synchronisation information Not Present This IE is repeated for all existing downlink DPCHs allocated to the UE Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" For each DPCH, assign the same code number in the current code given in cell 1. Not Present 0 Not Present Not Present Not Present Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number Measurement identity Measured Results - Intra-frequency measured results list - Cell measured results - Cell Identity - Cell synchronisation information - CHOICE mode - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information - CHOICE mode - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss Measured results on RACH Additional measured results Event results - CHOICE event result - Intra-frequency event identity - Cell measurement event results - CHOICE mode - Primary CPICH info - Primary scrambling code	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 1 Checked that this IE is absent Checked that this IE is absent FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent FDD Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108 Checked that this IE is absent Checked that this IE is present Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent Intra-frequency measurement event results 1b FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108

ACTIVE SET UPDATE (Step 7)

The message to be used in this test is the same as the message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
Radio link removal information - Primary CPICH info - Primary scrambling code	1 radio link to be removed Set to the same P-CPICH scrambling code assigned for cell 1

CELL UPDATE (Step 13)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 14)

Use the same message sub-type found in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.4.2.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC to acknowledge the completion of the active set additional procedure.

After step 5 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 7 the UE shall remove the radio link from cell 1 and it shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC.

After step 10 the UE shall transmit a UE CAPABILITY INFORMATION message.

After step 12 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 14, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

<End of Modification>

<Start of Modification>

8.3.4.5 Active set update in soft handover: Reception of an ACTIVE SET UPDATE message in wrong state

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

If the UE is in another state than CELL_DCH state upon reception of the ACTIVE SET UPDATE message, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state";
- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received;

2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.4.0

8.3.4.5.3 Test purpose

1. To confirm that the UE transmit an ACTIVE SET UPDATE FAILURE message when it receives an ACTIVE SET UPDATE message in any state other than CELL_DCH.

8.3.4.5.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.4.5

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel Number		Ch. 1	Ch. 1
CPICH Ec	dBm/ 3.84 MHz	-60	-70

Table 8.3.4.5 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE establishes a radio access bearer service in the CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" indicating the addition of cell 2 into the active set. When the UE receives this message, UE shall transmit ACTIVE SET UPDATE FAILURE message, with the IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state", on the uplink DCCH using AM RLC. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
2			Void	
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information".
4		→	ACTIVE SET UPDATE FAILURE	IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".
5		→	MEASUREMENT REPORT	
6		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting	Periodical Reporting
Mode	
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

ACTIVE SET UPDATE

The message to be used in this test is defined in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present ¹
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter set
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present

8.3.4.5.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Message not compatible with receiver state" shall be set in IE "Protocol Error Information".

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

<End of Modification>

<Start of Modification>**8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state****8.4.1.4.1 Definition****8.4.1.4.2 Conformance requirement**

Upon transition from idle mode to CELL_FACH state, the UE shall:

- 1> begin or continue monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);

Reference

3GPP TS 25.331, clause 8.4.1.9.2

8.4.1.4.3 Test Purpose

1. To confirm that the UE begins to monitor the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 11 or 12 messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.4 Method of test**Initial Condition**

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.4-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.4-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially at idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 4 into the "inter-frequency cell list" IE.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for inter-frequency cells belonging

to the monitored set. SS re-adjusts its downlink power settings according to columns marked "T1" in table 8.4.1.4-1. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to cell 4 in order to report this event. Upon receiving this message, SS replies with the CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH. UE shall then reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode in cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
5		→	Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4-1.
8		→	CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9		←	CELL UPDATE CONFIRM	Use message content.
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 Indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	FDD
- CHOICE mode	Not present
- UARFCN uplink (Nu)	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI assigned during the execution of procedure P6.
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 9)

Use the message sub-type in default message content defined in Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.

After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.

After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

- 1> stop intra-frequency type measurement reporting;
- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is not due to a reconfiguration message:
 - 2> delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY.
- 1> begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331).

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;
- 1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":
 - 2> resume the measurement reporting.
- 1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:
 - 2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331);
 - 2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331):
 - 3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5.3 Test Purpose

1. To confirm that the UE stops performing intra-frequency measurement reporting specified in a MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state.
2. To confirm that the UE reads the System Information Block type 11 or 12 messages when it enters CELL_FACH state from CELL_DCH state, and starts to monitor the cells listed in the IE "intra-frequency cell info list".
3. To confirm that the UE performs measurements on uplink RACH transmissions and appends the measured results in RACH messages, when it receives IE "intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" in the System Information Block type 11 or 12 messages.
4. To confirm that the UE applies the reporting criteria in IE "intra-frequency reporting criteria" in System Information Block Type 11 or 12 messages following a state transition from CELL_FACH to CELL_DCH, if no intra-frequency measurements applicable to CELL_DCH are stored.

8.4.1.5.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, while cell 3 is switched off..

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For MASTER INFORMATION BLOCK and system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/Remarks
MIB Value Tag	1

System Information Block type 11

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.5-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.5-1

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm/ 3.84 MHz	-60	-60	-75	-85	-122	-70

The UE is initially in CELL_DCH state. The System Information Block type 11 message is modified compared to the default message contents, in order to prevent the reporting of "Cell synchronisation information". No measurement to be applied by the UE in CELL_DCH state is specified in any of the System Information Block type 11 or 12 messages.

SS sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement for the measurement of cell 2's CPICH RSCP. At the same time, reporting of CPICH RSCP values of active set cells and monitored set cells are requested with the reporting criteria set to "periodic reporting" and "reporting interval" set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message to move the UE to CELL_FACH. After receiving this message, the UE shall reconfigure itself and reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS monitors the uplink channels to verify that no MEASUREMENT REPORT messages are received.

SS reconfigures itself according to the settings in columns marked "T1" in table 8.4.1.5-1. SS transmits System Information Block type 12 messages in cell 1, which include cell 3 into the IE "intra-frequency cell info list" and modifies SIB11 to indicate that SIB12 is now being broadcast. IEs "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in the System Information Type 12 messages. Event type 1a reporting criterion is specified for intra-frequency measurements. SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits until T305 has expired. The UE shall respond with a CELL UPDATE message, which comprises IE "Measured results on RACH" to report the readings of CPICH RSCP for cell 1 and cell 3. SS replies with CELL UPDATE CONFIRM message on the downlink DCCH. This message does not change the physical resources nor allocate any new RNTI identities. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, and configures dedicated physical channel for both uplink and downlink directions. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages.

SS shall receive the MEASUREMENT REPORT messages at 500 milliseconds interval.

SS verifies that it includes CPICH RSCP values of the cells 1, 2 and 3 in IE "Cell measured results" and the triggering of event '1a' on cell 3 in IE "Event results".

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in PS-DCCH+DTCH_DCH (state 6-10) in cell 1.
2			Void	
3			Void	
4			Void	
5		←	MEASUREMENT CONTROL	SS requests for measurement of cell 2's CPICH RSCP value and reporting of CPICH RSCP values of active cells and monitored set cells.
6		→	MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval.
7		←	PHYSICAL CHANNEL RECONFIGURATION	SS moves the UE to CELL_FACH state.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9		←	Master Information Block System Information Block type 11, 12	SS reconfigures itself according to the settings stated in column "T1" of table 8.4.1.5-1. SIB 11 is modified to indicate that SIB12 is now broadcast and to add cell 2 as a neighbour cell. SIB 12 indicates that cell 3 is included in the IE "intra-frequency cell info list". SS waits for 1 minute and verifies that no MEASUREMENT REPORT messages are detected on the uplink.
10		←	SYSTEM INFORMATION CHANGE INDICATION	SS waits until T305 has expired.
11		→	CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and cell 3 present in this message.
12		←	CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
13		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
14		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
15		→	MEASUREMENT REPORT	Repeated at 500 milliseconds interval

Specific Message Content

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Remove no intra-frequency cells
- Intra-frequency cell info list	2
- CHOICE intra-frequency cell removal	0 dB
- New intra-frequency info list	Not Present
- Intra-frequency cell id	FALSE
- Cell info	FDD
- Cell individual offset	Set to same code as used for cell 2
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	Set to same code as used for cell 2
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	CPICH RSCP
- Measurement quantity	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured result list	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)"

MASTER INFORMATION BLOCK (Step 9)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/Remarks
MIB Value Tag	2

System Information Block type 11 (Step 9)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH	Not Present
reporting	
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 9)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	6
- Intra-frequency cell cells	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- Qoffset _{s,n}	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	FDD
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting range constant	20.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present

- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting Interval	500 milliseconds
- Reporting cell status	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- CHOICE <i>reported cell</i>	
- Maximum number of reported cells	3
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not present

SYSTEM INFORMATION CHANGE INDICATION (Step 10)

Information Element	Value/Remarks
BCCH modification info - MIB Value tag	2

CELL UPDATE (Step 11)

Information Element	Value/remark
U-RNTI	Check to see if set to the same value assigned during the execution of procedure P3 or P5.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if it is set to "Periodical cell update"
Failure case	Check to see if it is absent
Measured results on RACH	
- Measurement result for current cell	
- CHOICE measurement quantity	Check to see if set to "CPICH RSCP"
- CPICH RSCP	Check to see if it is present
- Measurement results for monitored cells	
- SFN-SFN observed time difference	Not Checked
- Primary CPICH info	
- Primary scrambling code	Check to see if the same as cell 3's code.
- CHOICE measurement quantity	Check to see if set to "CPICH RSCP"
- CPICH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

MEASUREMENT REPORT (Step 15)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's CPICH RSCP value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values CPICH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".

After step 15, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 9. It shall send MEASUREMENT REPORT messages at 500 milliseconds interval. In these messages, triggering of event '1a' shall be reported in IE "Event results" with IE "Primary CPICH info" containing the primary scrambling code for cell 3.

The message shall contain IE "measured result" to report CPICH RSCP values of cell 1, 2 and 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH/ CELL_PCH/URA_PCH state, the UE shall:

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);
- 1> in CELL_FACH state:
 - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

Reference

3GPP TS 25.331, clause 8.4.1.6.2

8.4.1.6.3 Test Purpose

1. To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL_DCH state to CELL_FACH.
2. To confirm that the UE begins to monitor the cells listed in "inter-frequency cell info" received in System Information Block type 11 or 12 messages, following a state transition from CELL_DCH state to CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 2 are active.

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 12	PS-DCCH+DTCH_DCH (state 6-10) in cell 1. System Information Block type 12 is modified with respect to the default settings. All measurement and reporting activities are disabled in this message.
2			Void	If compressed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12		←	Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13		←	SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16		←	CELL UPDATE CONFIRM	See message content.
17		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL_DCH"

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	Not Present
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE Mode	Set to same code as used for cell 4
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	4
- Cells for measurement	Inter-frequency reporting criteria
- Inter-frequency cell id	0
- Inter-frequency measurement quantity	CPICH RSCP
- CHOICE reporting criteria	
- Filter Coefficient	
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	FALSE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality_measure	CPICH_Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to TS 25.101
	Reference to table 6.1.2 of TS 34.108 for Cell 4
- UARFCN downlink (Nd)	
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH Tx power	Not Present
- TX diversity indicator	FALSE
- Cell selection and re-selection info	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	2

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI	Check to see if same to value assigned in P3 or P5
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;
- 1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":
 - 2> resume the measurement reporting.
- 1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:
 - 2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);
 - 2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):
- 3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

...

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

- 1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;
- 1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

...

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
 - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
...
 - 2> for measurement type "UE positioning measurement":
...
 - 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "Measurement command" has the value "modify":
 - 2> for all IEs present in the MEASUREMENT CONTROL message:
 - 3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":
 - 4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
...
 - 4> for any other measurement type:
 - 5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;
 - 5> resume the measurements according to the new stored measurement control information.
 - 3> otherwise:
...
 - 2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:
 - 3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.
- 1> if the IE "measurement command" has the value "release":
 - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
 - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a and 8.4.1.7.1

8.4.1.7.3 Test Purpose

- To confirm that UE retrieves stored measurement control information for intra-frequency measurement measurement type with "measurement validity" assigned to "CELL_DCH", after it enters CELL_DCH state from CELL_FACH state.
- To confirm that the UE continues to monitor the neighbouring cells listed "intra-frequency cell info" IE in the System Information Block type 11 or 12 messages, if no intra-frequency measurements applicable to CELL_DCH are stored.
- To confirm that the UE transmits MEASUREMENT REPORT messages if reporting criteria stated in IE "intra-frequency measurement reporting criteria" in System Information Block type 11 or 12 messages are fulfilled.
- To confirm that a MEASUREMENT CONTROL message received in CELL_DCH state overrides the measurement and associated reporting contexts maintained in the UE by virtue of System Information Block type 11 or 12 messages.

8.4.1.7.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.7-1

Para-meter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm /3.84 MHz	-60	-122	-70	-60	-75	-75

The UE is brought to CELL_FACH state in cell 1. (step 1) SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

SS send a RADIO BEARER RECONFIGURATION message to UE (step2), and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message (step3). The UE shall send a MEASUREMENT REPORT message containing IE "Measured results" to report cell 2's CPICH RSCP value and IE "event results" to report triggering of event type "1e" (step 4). After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info" (step 5). After receiving such a message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement 11. SS verifies that only measurement readings for cell 3 's CPICH RSCP are report in IE "cell measured results" in these message (step 6). Cell 3 shall also trigger event 1e for the measurement that the UE had stored from system information, so a MEASUREMENT REPORT message shall be received for measurement 10 too (step 6a). The order of steps 6 and 6a is not important and could be reversed.

Next, SS sends PHYSICAL CHANNEL RECONFIGURATION message (step 7). SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE (step 8). SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received (step 9).

SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH (step 9a). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 9b). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e. the UE shall have deleted the measurement measurement configured through the MEASUREMENT CONTROL message of step 5, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE (step 9c).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH once again (step 9d). The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 9e). SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure intra-frequency measurements with validity CELL_DCH (step 10). SS waits, and verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 11).

SS sends RADIO BEARER RECONFIGURATION message and configures dedicated physical channels (step12). The UE shall return to CELL_DCH state, transmit a RADIO BEARER RECONFIGURATION COMPLETE message (step 13). The UE shall also send a MEASUREMENT REPORT message to the SS triggered by cell 2 (step 14).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH (step 14a). The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 14b). SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 14c).

SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH (step 14d). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 14e). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of step 10, instead of the ones that are broadcast in SIB12 (step 14f).

Following the reception of the MEASUREMENT REPORT message, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in "measurement identity" = 12 (step 15). Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 16). After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more (step 17). This message is identical to the one sent in step 10 (see specific message content). A MEASUREMENT REPORT message shall be received from the UE triggered by cell 2 (step 17a).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures common physical channel (step 18). The UE shall transit to CELL_FACH state and then respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 19). SS monitors the uplink DCCH once more to verify that no MEASUREMENT REPORT messages are detected (step 20). SS modifies the downlink transmission power of the respect cells according to the settings in columns "T1" in table 8.4.1.7-1. System information block type 11 and System Information Block 12 for cell 2 shall be different from the default setting according to what is defined in the specific message content part of this section (step 21). The UE shall initiate a cell re-selection procedure. This is verified in the SS when a CELL UPDATE message is received on the uplink CCCH with the "cell update cause" IE set to "cell reselection" (step 22). SS transmits a CELL UPDATE CONFIRM message, which includes "New C-RNTI", on the DCCH (step 23). Then the UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message (step 23a). Next, SS sends a RADIO BEARER RECONFIGURATION message on the downlink DCCH, assigning dedicated physical channels in both uplink and downlink directions (step 24). The UE shall respond with a RADIO BEARER RECONFIGURATION COMPLETE message and then return to CELL_DCH state (step 25). UE shall then send MEASUREMENT REPORT messages reporting cell 1 and 3's CPICH RSCP according of the content in System Information Block type 12 messages broadcasted in cell 2 (step 26).

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents" clause.
1a		←	SYSTEM INFORMATION CHANGE INDICATION	
2		←	RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
3		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4		→	MEASUREMENT REPORT	Reports cell 2's CPICH RSCP measurement value.
5		←	MEASUREMENT CONTROL	Cell 3 is added to the list of monitored set of the UE.
6		→	MEASUREMENT REPORT	Cell 3 shall trigger the event 1e configured in the measurement identity 11.
6a		→	MEASUREMENT REPORT	Cell 3 shall also trigger the event 1e configured in the measurement identity 10. The order of steps 6 and 6a could be reversed.
7		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
9a		←	RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
9b		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
9c		→	MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value
9d		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
9e		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state
10		←	MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement and reporting for cell 2. Measurement validity" IE is set to CELL_DCH state.
11				SS waits and verifies that no MEASUREMENT REPORT messages are sent by UE.
12		←	RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
13		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
14		→	MEASUREMENT REPORT	UE reports cell 2's measured results for CPICH RSCP.
14a		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
14b		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state

Step	Direction		Message	Comment
	UE	SS		
14c				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
14d		←	RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels
14e		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
14f		→	MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 10.
15		←	MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activities related to "measurement identity" = 12.
16				SS waits and verifies that UE stop transmitting MEASUREMENT REPORT messages.
17		←	MEASUREMENT CONTROL	This message is the same as in step 10
17a		→	MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 2.
18		←	PHYSICAL CHANNEL RECONFIGURATION	Allocates common physical channels.
19		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
20				SS checks that no MEASUREMENT REPORT messages are received.
21		←	System Information Block type 11 System Information Block type 12	SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T1" in table 8.4.1.7. SS sends SIB11 and SIB12 with specific values to Cell2.
22		→	CELL UPDATE	UE shall re-selects to cell 2 and then perform a cell update procedure.
23		←	CELL UPDATE CONFIRM	UE shall stay in CELL_FACH state.
23a		→	UTRAN MOBILITY INFORMATION CONFIRM	
24		←	RADIO BEARER RECONFIGURATION	Dedicated physical channels are assigned to the UE in this message.
25		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
26		→	MEASUREMENT REPORT	UE begins to report cell 1 and 3's measured results for CPICH RSCP.

Specific Message Content

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	3

System Information Block type 11 for cell 1 (Step 1)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	CPICH Ec/No
- Cell selection and reselection quality measure	Not present
- Intra-frequency measurement system information	Not present
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	Not present
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	1
- Intra-frequency cell id	1
- Cell info	Not present
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS34.108
- Primary scrambling code	Not present
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH	Not present
reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantityfor RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- W	Not present
- Hysteresis	0 dB
- Threshold used frequency	-80 dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- Time to trigger	0

- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 1a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	3
- BCCH modification time	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 21a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	2
- BCCH modification time	Not Present

RADIO BEARER RECONFIGURATION (Step 2, Step 9a, Step 12, Step 14d and Step 24)

Use the same message type found in Annex A, with condition set to A4.

MEASUREMENT REPORT (Steps 4 and 9c)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold used frequency	-90 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency

- Maximum number of reported cells DPCH compressed mode status info	1 Not Present
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MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent Check to see if this IE is absent
- Cell synchronisation information	
- Primary CPICH Info	Check to see if it's the same code for cell 3
- Primary Scrambling Code	Check to see if this IE is absent
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1e'
- Intra-frequency event identity	
- Cell measurement event results	
- Primary CPICH info	Check to see if it's the same code for cell 3
- Primary scrambling code	

MEASUREMENT REPORT (Step 6a)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	Check to see if it's set to 'Intra-frequency measurement event results'
- CHOICE event result	Check to see if this IE is set to '1e'
- Intra-frequency event identity	
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Steps 7, 9d, 14a and 18)

Use the same message sub-type found in Annex A, which is entitled "Packet to CELL_FACH from CELL_DCH in PS".

MEASUREMENT CONTROL (Steps 10 and 17)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra- frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold Used Frequency	-80 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1

DPCH compressed mode status info	Not Present
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MEASUREMENT REPORT (Steps 14, 14f and 17a)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	Check to see if this IE is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if it's the same code for cell 2
- Primary CPICH Info	Check to see if this IE is absent
- Primary Scrambling Code	Check to see if this IE is present
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1e'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same code for cell 2
- Primary CPICH info	
- Primary scrambling code	

MEASUREMENT CONTROL (Step 15)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

System Information Block type 11 for cell 2 (Step 21)

Information Element	Value/Remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH	Not present
reporting	
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 2 (Step 21)

Information Element	Value/Remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cell
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of cell 2
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

CELL UPDATE (Step 22)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Cell Re-selection'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 23)

Use the default message content of the same message type in Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 23a)

Only the message type is checked.

MEASUREMENT REPORT (Step 26)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is present
- Cell synchronisation information	Check to see if this IE is present
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1b'
- Cell measurement event results	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 1
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 5 the UE shall transmit two MEASUREMENT REPORT messages which contain measured results of cell 3's CPICH RSCP value only, one for measurement identity 10 and one for measurement identity 11.

After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.

After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.

After steps 13 and 14e, the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT messages, containing measured results of cell 2's CPICH RSCP value.

After step 15 the UE shall stop measurement activities pertaining to periodic reporting of cell 2's CPICH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH.

After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.

After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".

After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

After step 25 the UE shall report cell 1 and 3's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

<End of Modification>

<small>CR-Form-v7</small>
<h2 style="margin: 0;">CHANGE REQUEST</h2>
TS 34.123-1 CR 438 # rev - # Current version: 5.2.0

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# CR to 34.123-1 Rel 5; Corrections to package 4 test cases on RB release		
Source:	# Ericsson		
Work item code:	# TEI Date: # 12/02/2003		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> # F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: # Rel 5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	# F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: # Rel 5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
# F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: # Rel 5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change:	# The reasons for the changes proposed in this CR are indicated in the following section, summary of change
Summary of change:	# This CR includes the following changes: <div style="margin-left: 20px;"> <p>General/ several TCs</p> <p>TC 8.2.3.3 (TBR)</p> <ul style="list-style-type: none"> • Only general <p>TC 8.2.3.4 (TBR)</p> <ul style="list-style-type: none"> • <u>Specific message content, MEASUREMENT CONTROL</u>: The conditions for presence of IE "Time interval to take an average or a variance" are not met, so it need not be included as "not present". <p>TC 8.2.3.11</p> <ul style="list-style-type: none"> • <u>Specific message content, MEASUREMENT CONTROL</u>: The command is changed from modify to setup since the measurement is used to configure a new measurement • <u>Specific message content, MEASUREMENT CONTROL</u>: The conditions for </div>

presence of IE "Time interval to take an average or a variance" are not met, so it need not be included as "not present"

TC 8.2.3.12 (TBR)

- Test procedure: To facilitate encryption of new identities, the SS should transmit the CELL UPDATE CONFIRM message on the DCCH rather than on CCCH.

TC 8.2.3.29

- Call generic procedure to verify that CS domain signalling connection exists.

Consequences if not approved: ☞ If this CR is not approved, the errors indicated above will remain in the test specification.

Clauses affected: ☞ 8.2.3.3, 8.2.3.4, 8.2.3.11, 8.2.3.12, 8.2.3.29

		Y	N		
Other specs affected:	☞	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	☞
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test specifications	TS 34.123-2?
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	

Other comments: ☞ Affects both Rel 99, Rel 4 and Rel 5 UEs.
 The clauses marked TBR in the above are proposed to be removed. They are anyhow not part of package 4 anymore and hence should be included in a sperate document. For covenience of the review, everying is currently kept in one document

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.3 Radio Bearer Release

.....

8.2.3.3 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.3.3.1 Definition

8.2.3.3.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a RADIO BEARER RELEASE message:

...

2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.3.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearer according to a RADIO BEARER RELEASE message by timer T312 expiry.

8.2.3.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RELEASE message but it keeps its current dedicated physical channel configuration. This causes the UE to fail to release the radio bearer, and after T312 expires the UE reverts to the old configuration. The UE then transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which specifies "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RELEASE	
2				The SS keeps its current dedicated physical channel configuration.
3		→	RADIO BEARER RELEASE FAILURE	After T312 expires, the UE finds that it fails to release a radio bearer and reverts to the old configuration.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 1a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 1b and 13)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [Clause 9 of TS 34.108 annex A](#).

RADIO BEARER RELEASE FAILURE (Step 3)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.3.3.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which includes the value "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.3.4 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and cell reselection)

8.2.3.4.1 Definition

8.2.3.4.2 Conformance requirement

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
- ...
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a RADIO BEARER RELEASE message:

...

- 2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

8.2.3.4.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update procedure when the UE cannot revert to the old configuration after encountering a physical channel failure during the execution of a radio bearer release procedure.

8.2.3.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RELEASE message to the UE but does not configure dedicated physical channel in accordance with the settings in the message and release the previous configuration. As a result, the UE recognizes that it cannot reconfigure the radio bearers and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH ~~after receiving CELL UPDATE message~~. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RELEASE	
2				The SS does not configure the dedicated physical channel in accordance with the RADIO BEARER RELEASE message and shall release the old configuration.
3		→	CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
5				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	7
Measurement Command	Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 8)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	7
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case are identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in ~~Annex A~~ [clause 9 of TS 34.108](#).

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [clause 9 of TS 34.108](#) ~~Annex A~~ with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0000 0001'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
CHOICE channel requirement	Uplink DPCH info
-UplinkDPCH Info	Same as RADIO BEARER SETUP message used to move to intial condition
Downlink information common for all radio links	Same as RRC CONNECTION SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to intial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
UplinkDPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.3.4.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.3.11 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.3.11.1 Definition

8.2.3.11.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a RADIO BEARER RELEASE message:

...

2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.3.11.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearers in accordance with the specified settings in RADIO BEARER RELEASE message before T312 timer expires.

8.2.3.11.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RELEASE message and keeps its current physical channel configuration. The UE is expected to encounter a failure while releasing the radio bearer. After T312 timer expires, the UE shall revert to the old radio bearer configuration, so the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RELEASE	
2				The SS does not configure the specified L1.
3		→	RADIO BEARER RELEASE FAILURE	After T312 expiry the UE fails to release a radio bearer and reverts to the old configuration.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#).

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.3.11.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.3.12 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.3.12.1 Definition

8.2.3.12.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and

- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

....

The UE shall:

- 1> in case of reception of a RADIO BEARER RELEASE message:

...

- 2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.3.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update procedure following a physical channel failure during the radio bearer release procedure.

8.2.3.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.3.12

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/ 3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.3.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RELEASE message to the UE, but it does not configure the specified L1 in accordance with the settings in the message. This is expected to cause the UE to experience a failure to release the radio bearer and it subsequently tries to revert to the old configuration. The SS

configures its downlink transmission power settings according to columns "T1" in table 8.2.3.12. The UE shall find cell 2 and transmits CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink ~~DCCH~~~~after receiving CELL UPDATE message~~. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	
2				The SS does not configure the specified L1 in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.3.12.
3		←	Void	
4		→	CELL UPDATE	The UE finds a new cell 2 and enter CELL_FACH state. This message includes the value "cell reselection" set in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	See message content.
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#).

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Assigned previously in cell 1
- S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause [Clause 9 of TS 34.108 Annex A](#), with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.3.12.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.3.29 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Associated with signalling connection release during multi call for PS and CS services

8.2.3.29.1 Definition

8.2.3.29.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message:

it shall:

1> set the variable ORDERED_RECONFIGURATION to TRUE;

1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure A as specified in TS_25.214;

1> act upon all received information elements as specified in TS_25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

...

1> enter a state according to TS25.331 subclause 8.6.3.3.

...

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent:

2> not change its current UL Physical channel configuration.1> in TDD:

2> if "Primary CCPCCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:

3> remove any C-RNTI from MAC;

3> clear the variable C_RNTI.

~~1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;~~

~~1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.~~

...

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE message as response message on the uplink DCCH using AM RLC.

~~1> the procedure ends.~~

....

If the IE "Signalling Connection release indication" is present in a message, the UE shall:

- 1> if all radio access bearers for the CN domain identified with the value of the IE "Signalling Connection release indication" would have been released in the variable ESTABLISHED_RABS after processing of the received message:
- 2> indicate release of the signalling connection identified with the value of the IE "Signalling Connection release indication" to the upper layers;
- 2> remove the signalling connection identified with the value of the IE "Signalling Connection release indication" from the variable ESTABLISHED_SIGNALLING_CONNECTIONS.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, 8.6.1.3.

8.2.3.29.3 Test purpose

To confirm that the UE releases the existing radio access bearer and signalling connection according to a RADIO BEARER RELEASE message.

8.2.3.29.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state of cell 1. The UE initiates a session setup to establish a PS signalling connection for multi call. Then UE and SS enter to multi call state. The SS transmits a DISCONNECT message to release a CS domain signalling connection. After the CC procedure, SS transmit a RADIO BEARER RELEASE message which includes IE "Signalling Connection release indication" set to "CS domain" and new configuration for remained service to the UE. The UE shall configure the specified channel and transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1.
2		→	INITIAL DIRECT TRANSFER (SERVICE REQUEST)	GMM (Session setup is initiated for multi call from UE side.)
3		←	DOWNLINK DIRECT TRANSFER (AUTHENTICATION AND CIPHERING REQUEST)	GMM
4		→	UPLINK DIRECT TRANSFER (AUTHENTICATION AND CIPHERING RESPONSE)	GMM
5		←	SECURITY MODE COMMAND	
6		→	SECURITY MODE COMPLETE	
7		→	UPLINK DIRECT TRANSFER (ACTIVATE PDP CONTEXT REQUEST)	SM
8		←	RADIO BEARER SETUP	
9		→	RADIO BEARER SETUP COMPLETE	
10		←	DOWNLINK DIRECT TRANSFER (ACTIVATE PDP CONTEXT ACCEPT)	SM
11		←	DOWNLINK DIRECT TRANSFER (DISCONNECT)	CC
12		→	UPLINK DIRECT TRANSFER (RELEASE)	CC
13		←	DOWNLINK DIRECT TRANSFER (RELEASE COMPLETE)	CC
14		←	RADIO BEARER RELEASE	Including IE "signalling connection release indication" set to "CS domain"
15		→	RADIO BEARER RELEASE COMPLETE	
16		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (STEP 14)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type titled as "Non speech in CS" or "Speech in CS" as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions

Information Element	Value/remark
Signalling Connection release indication - CN domain identity	CS domain

8.2.3.29.5 Test requirement

After step 14 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message.

<small>CR-Form-v7</small>	
CHANGE REQUEST	
⌘ TS 34.123-1 CR 439 ⌘ rev - ⌘ Current version: 5.2.0 ⌘	

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to 34.123-1 Rel 5; Corrections to Package 4 test cases on RB reconfiguration
Source:	⌘ Ericsson
Work item code:	⌘ TEI Date: ⌘ 12/02/2003
Category:	⌘ F Release: ⌘ Rel 5
<i>Use <u>one</u> of the following categories:</i>	
F (correction)	
A (corresponds to a correction in an earlier release)	
B (addition of feature),	
C (functional modification of feature)	
D (editorial modification)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	
<i>Use <u>one</u> of the following releases:</i>	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
Rel-4 (Release 4)	
Rel-5 (Release 5)	
Rel-6 (Release 6)	

Reason for change:	⌘ To correct and complete sections 8.2.2.2, 8.2.2.3, 8.2.2.4, 8.2.2.12, 8.2.2.13, 8.2.2.31, 8.2.2.35.
Summary of change:	⌘ General/ several TCs <ul style="list-style-type: none">• <u>Specific message content, MEASUREMENT CONTROL</u>: The command is changed from modify to setup since the measurement is used to configure a new measurement• <u>Specific message content, MEASUREMENT CONTROL</u>: The conditions for presence of IE "Time interval to take an average or a variance" are not met, so it need not be included as "not present"• Change reference to Annex A to a direct reference to the relevant clause. <p>The following changes to section 8.2.2.2 are proposed :</p> <ol style="list-style-type: none">1. Remove the check that the IE "Failure cause" in the message RADIO BEARER RECONFIGURATION FAILURE. It is set to "configuration unsupported". Other cause values should also be allowed in this Test Case. <p>The following changes to section 8.2.2.3 are proposed :</p> <ol style="list-style-type: none">1. In Section 8.2.2.3.3 (Test Purpose) indicate that ongoing Measurements continue.

The following changes to section 8.2.2.4 are proposed :

1. In Section 8.2.2.4.3 (Test Purpose) change RADIO BEARER SETUP FAILURE to RADIO BEARER RECONFIGURATION FAILURE.
2. Include on "Downlink information common for all radio links" in the CELL UPDATE CONFIRM message.

The following changes to section 8.2.2.12 are proposed :

1. See General.

The following changes to section 8.2.2.13 are proposed :

1. See General.

The following changes to section 8.2.2.31 are proposed :

1. Changes to Section 8.2.2.31.2, Conformance Requirement.
2. Indicate that one Step 3 is for FDD while the other is for TDD.

The following changes to section 8.2.2.35 are proposed :

1. Make a reference to Test Case 12.9.13 for the establishment of multiple RABs (RBs also).
2. Add details to the Section "Specific Message Contents".

Consequences if not approved: ☞ Erroneous and incomplete Test Cases remain.

Clauses affected: ☞ Sections 8.2.2.2, 8.2.2.3, 8.2.2.4, 8.2.2.12, 8.2.2.13, 8.2.2.31, 8.2.2.35.

Other specs affected:

Y	N
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Other core specifications ☞
 Test specifications
 O&M Specifications

Other comments: ☞ Affects R99, Rel 4 and Rel5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.2 Radio Bearer Reconfiguration

....

8.2.2.2 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.2.2.1 Definition

8.2.2.2.2 Conformance requirement

If the UTRAN instructs the UE to use a configuration, which it does not support and/or if the received message causes the variable UNSUPPORTED_CONFIGURATION to be set to TRUE, the UE shall:

- 1> transmit a failure response as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "configuration unsupported".
- 1> set the variable UNSUPPORTED_CONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

- 1> in case of reception of a RADIO BEARER RECONFIGURATION message:
 - ...
 - 2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.

8.2.2.2.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC_ ~~which is set to "configuration unsupported" in IE "failure cause"~~. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.
3		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (FDD) (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink (Nu)	0
- UARFCN downlink (Nd)	950

RADIO BEARER RECONFIGURATION (TDD) (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_DCH in PS" as found in [clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN (Nt)	0

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.2.2.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the value "configuration unsupported" set in IE "failure cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.2.3 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.2.3.1 Definition

8.2.2.3.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a RADIO BEARER RECONFIGURATION message:

...

2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.2.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the radio bearers ~~s~~ ~~expires~~ according to the RADIO BEARER RECONFIGURATION message before timer T312 ~~expires~~.

[To confirm that ongoing Measurements continue after the reception of the RADIO BEARER RECONFIGURATION FAILURE message.](#)

8.2.2.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message including the new radio bearer parameters to the UE but it keeps its current dedicated physical channel configuration. The UE shall revert to the old configuration. Then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	
2				SS does not reconfigure L1.
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE shall detect a failure to reconfigure the new radio bearer, and send this message using the old radio bearer configuration.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [clause 9 of TS 34.108 Annex A](#).

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in [clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.2.3.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC setting value "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.2.4 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and cell reselection)

8.2.2.4.1 Definition

8.2.2.4.2 Conformance requirement

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
- ...
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a RADIO BEARER RECONFIGURATION message:

...

- 2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

8.2.2.4.3 Test purpose

To confirm that the UE transmits a RADIO BEARER ~~SETUP~~ RECONFIGURATION FAILURE message after it completes a cell update procedure when the UE cannot reconfigure the new radio bearer and a subsequent failure to revert to the old configuration.

8.2.2.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE. After the reception of the acknowledgement for the RADIO BEARER RECONFIGURATION message in SS, the SS shall not reconfigure dedicated physical channel in accordance with the settings in the message and release the previous configuration. The UE discovers that it cannot reconfigure the new radio bearer and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the dedicated physical channel in accordance with the RADIO BEARER RECONFIGURATION message and shall release the old configuration.
3		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
4				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
5		←	CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	7
Measurement Command	Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 8)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	7
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION message (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as ~~as~~ found in [Clause 9 of TS 34.108 Annex A](#).

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 5) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Uplink DPCH info
_UplinkDPCH Info	Same as RADIO BEARER SETUP message used to move to intial initial condition
Downlink information common for all radio links	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to intial initial condition

CELL UPDATE CONFIRM (Step 5) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_DCH
Uplink DPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

RADIO BEARER RECONFIGURATION FAILURE (Step 7)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.2.4.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.2.12 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.2.12.1 Definition

8.2.2.12.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a RADIO BEARER RECONFIGURATION message:

...

2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.2.12.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer before timer T312 expires according to a RADIO BEARER RECONFIGURATION message.

8.2.2.12.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE and keeps its current physical channel configuration. Therefore, the UE cannot reconfigure the radio bearers and shall attempt cell reselection procedure after T312 expires. Then the UE shall detect the same serving cell only and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION FAILURE	The SS does not reconfigure L1 and the UE fails to reconfigure its radio bearers.
3		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#).

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the ~~RADIO BEARER RECONFIGURATION FAILURE~~ message as found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.2.12.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE "failure cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.2.13 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.2.13.1 Definition

8.2.2.13.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> if the old configuration does not include dedicated physical channels (CELL_FACH state):

2> select a suitable UTRA cell according to TS 25.304;

2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:

3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";

3> after the cell update procedure has completed successfully:

4> proceed as below.

1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL UPDATE CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- does not include "Physical channel information elements"; and

- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a RADIO BEARER RECONFIGURATION message:

...

- 2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.2.13.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer reconfiguration procedure.

8.2.2.13.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.2.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec	dBm /3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	switched off	-60

Table 8.2.2.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT

REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE but SS does not reconfigure dedicated physical channel in accordance with the settings in the message. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.13. The UE recognize that it cannot synchronize with the SS on the new radio bearers. The UE performs cell reselection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. UE reply with UTRAN MOBILITY INFORMATION CONFIRM message. The UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the dedicated physical channel in accordance with the RADIO BEARER RECONFIGURATION message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.2.13.
3			Void	
4			Void	
5		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	This message includes IE "new C-RNTI". See message content.
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"
9		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 9)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [Clause 9 of TS 34.108 Annex A](#).

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in [Clause 9 of TS 34.108 Annex A](#) with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in ~~clause~~ [Clause 9 of TS 34.108 Annex A](#), with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

RADIO BEARER RECONFIGURATION FAILURE (Step 8)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the ~~RADIO BEARER RECONFIGURATION FAILURE~~ message ~~as~~ found in [Clause 9 of TS 34.108 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.2.13.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 6, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 7 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 8, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.2.31 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.2.31.1 Definition

8.2.2.31.2 Conformance requirement

If the UE receives:

...

-a RADIO BEARER RECONFIGURATION message; or

...

it shall:

...

1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure A as specified in TS 25.214 ~~for (FDD only) and TS 25.224 for TDD;~~

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

...

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

1> in FDD; or

1> in TDD when "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified;

2> remove any C-RNTI from MAC;

2> clear the variable C_RNTI; ~~1> remove any C_RNTI from MAC;~~

~~1> clear the C_RNTI.~~

...

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC; ~~using the new configuration after the state transition.~~

~~1> the procedure ends.~~

...

Reference

3GPP TS 25.331 clause 8.2.2.3, ~~8.2.2.4~~ ~~8.5~~ and ~~8.6~~.

8.2.2.31.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.2.31.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: PS_DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.2.31

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	Off	-60
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.31 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and then enter CELL_DCH state according to receiving RADIO BEARER RECONFIGURATION message. Finally the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL_DCH state [in cell 6](#).

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.31.
3		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔	Call C.3	If the test result of C.3 indicates that UE is in CELL_DCH state in cell 6 , the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 3 [for FDD](#))

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 3 [for TDD](#))

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.2.31.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL_DCH state in cell 6.

8.2.2.35 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Successful channel switching with multiple PS RABs established

8.2.2.35.1 Definition

8.2.2.35.2 Conformance requirement

If the IE "RB information to release" is included, the UE shall apply the following actions on the radio bearer identified with the value of the IE "RB identity". The UE shall:

- 1> if the IE "RB identity" is set to a value less than 4:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if the IE "RB identity" refers to a signalling radio bearer:
 - 2> release the RLC entity for the signalling radio bearer;
 - 2> delete the information about the signalling radio bearer from the variable ESTABLISHED_RABS.
- 1> if the IE "RB identity" refers to a radio bearer:
 - 2> release the PDCP and RLC entities for that radio bearer;
 - 2> indicate release of the RAB subflow associated with the radio bearer to upper layers;
 - 2> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 2> when all radio bearers belonging to the same radio access bearer have been released:
 - 3> indicate release of the radio access bearer to upper layers providing the "CN domain identity" together with the "RAB identity" stored in the variable ESTABLISHED_RABS;
 - 3> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.

...

If the IE "RB mapping info" is included, the UE shall:

- 1> for each multiplexing option of the RB:
 - 2> if a transport channel that would not exist as a result of the message (i.e. removed in the same message in IE "Deleted DL TrCH information" and IE "Deleted UL TrCH information") is referred to:
 - 3> set the variable INVALID_CONFIGURATION to TRUE.
 - 2> if a multiplexing option that maps a logical channel corresponding to a TM-RLC entity onto RACH, CPCH, FACH or DSCH is included:
 - 3> set the variable INVALID_CONFIGURATION to TRUE.
 - 2> if the multiplexing option realises the radio bearer on the uplink (resp. on the downlink) using two logical channels with different values of the IE "Uplink transport channel type" (resp. of the IE "Downlink transport channel type"):
 - 3> set the variable INVALID_CONFIGURATION to TRUE.
 - 2> if that RB is using TM and the IE "Segmentation indication" is set to TRUE and, based on the multiplexing configuration resulting from this message, the logical channel corresponding to it is mapped onto the same transport channel as another logical channel:
 - 3> set the variable INVALID_CONFIGURATION to TRUE.

- 2> if the transport channel considered in that multiplexing option is different from RACH and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:
 - 3> set the variable INVALID_CONFIGURATION to TRUE.
- 2> if that RB is using UM or TM and the multiplexing option realises it using two logical channels:
 - 3> set the variable INVALID_CONFIGURATION to TRUE.
- 2> for each logical channel in that multiplexing option:
 - 3> if the value of the IE "RLC size list" is set to "Explicit list":
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the IE transport format set of that transport channel given in the message; or
 - 4> if the transport channel this logical channel is mapped on in this multiplexing option is different from RACH, and if a "Transport format set" for that transport channel is not included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the stored transport format set of that transport channel; or
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":
 - 5> set the variable INVALID_CONFIGURATION to TRUE.
 - 3> if the value of the IE "RLC size list" is set to "All":
 - 4> if the transport channel this logical channel is mapped on is RACH; or
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":
 - 5> set the variable INVALID_CONFIGURATION to TRUE.
 - 3> if the value of the IE "RLC size list" is set to "Configured":
 - 4> if the transport channel this logical channel is mapped on is RACH; or
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and for none of the RLC sizes defined for that transport channel in the "Transport format set", the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel; or
 - 4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and for none of the RLC sizes defined in the transport format set stored for that transport channel, the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel:
 - 5> set the variable INVALID_CONFIGURATION to TRUE.

1> if, as a result of the message this IE is included in, several radio bearers can be mapped onto the same transport channel, and the IE "Logical Channel Identity" was not included in the RB mapping info of any of those radio

bearers for a multiplexing option on that transport channel or the same "Logical Channel Identity" was used more than once in the RB mapping info of those radio bearers for the multiplexing options on that transport channel:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> delete all previously stored multiplexing options for that radio bearer;

1> store each new multiplexing option for that radio bearer;

1> if the IE "Uplink transport channel type" is set to the value "RACH":

2> refer the IE "RLC size index" to the RACH Transport Format Set of the first PRACH received in the IE "PRACH system information list" received in System Information Block type 5 or System Information Block type 6.

1> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IEs "RLC size list" and/or the IEs "Logical Channel List" included in the applicable "Transport format set" (either the ones received in the same message or the ones stored if none were received); and

1> in case the selected multiplexing option is a multiplexing option on RACH:

2> ignore the RLC size indexes that do not correspond to any RLC size within the Transport Format Set stored for RACH.

1> if RACH is the transport channel to be used on the uplink, if that RB has a multiplexing option on RACH and if it is using AM:

2> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

NOTE: The IE "RB mapping info" is only included in IE "Predefined RB configurations" in system information when used for Inter-RAT handover to UTRAN and there is no AM RLC size change involved in this case.

1> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

2> re-establish the corresponding RLC entity;

2> configure the corresponding RLC entity with the new RLC size;

2> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

2> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

3> if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

4> if this IE was included in CELL UPDATE CONFIRM:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

4> if this IE was included in a reconfiguration message:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

1> if that RB is using UM:

2> indicate the largest applicable RLC size to the corresponding RLC entity.

1> configure MAC multiplexing according to the selected multiplexing option (MAC multiplexing shall only be configured for a logical channel if the transport channel it is mapped on according to the selected multiplexing

option is the same as the transport channel another logical channel is mapped on according to the multiplexing option selected for it);

- 1> configure the MAC with the logical channel priorities according to selected multiplexing option;
- 1> configure the MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB;
- 1> if there is no multiplexing option applicable for the transport channels to be used in the RRC state indicated in the IE "RRC State Indicator" included in the received message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if there is more than one multiplexing option applicable for the transport channels to be used in the RRC state indicated in the IE "RRC State Indicator" included in the received message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.

In case IE "RLC info" includes IE "Downlink RLC mode " ("DL RLC logical channel info" is mandatory present) but IE "Number of downlink RLC logical channels" is absent in the corresponding IE "RB mapping info", the parameter values are exactly the same as for the corresponding UL logical channels. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards the IE "Channel type", the following rule should be applied to derive the DL channel type from the UL channel included in the IE:

Channel used in UL	DL channel type implied by "same as"
DCH	DCH
RACH	FACH
CPCH	FACH
USCH	DSCH

If ciphering is applied, UTRAN should not map Transparent Mode RBs of different CN domains on the same transport channel. In such case the UE behaviour is not specified.

Reference

3GPP TS 25.331 clause 8.6.4.6, 8.6.4.8.

8.2.2.35.3 Test purpose

To confirm that the UE transit from CELL_DCH to CELL_FACH state according to a RADIO BEARER RECONFIGURATION message when having two radio access bearers established.

To confirm that the UE transit from CELL_FACH to CELL_DCH state according to a RADIO BEARER RECONFIGURATION message when having two radio access bearers established.

To confirm that the UE release two radio access bearers included in a single RADIO BEARER RELEASE message.

8.2.2.35.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH + DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Related ICS/IXIT statements

Support of PS service	Yes/No
Secondary PDP context activation procedure	Yes/No

Test Procedure

The UE is in CELL_DCH state of cell 1. The UE initiates the activation of a second PDP context, upon which the SS establishes a PS domain RAB and confirms the PDP context activation.

Next, the SS transmits a RADIO BEARER RECONFIGURATION message to move the UE to CELL_FACH state. The UE shall apply the new configuration and return the RADIO BEARER RECONFIGURATION COMPLETE message.

The SS will then transmit a RADIO BEARER RECONFIGURATION message to move the UE to CELL_DCH state. The UE shall apply the new configuration and return the RADIO BEARER RECONFIGURATION COMPLETE message.

A DEACTIVATE PDP CONTEXT REQUEST message is then sent by the SS to request the UE to deactivate both PDP contexts. The UE shall reply with a DEACTIVATE PDP CONTEXT ACCEPT message. After this procedure, the SS transmits a RADIO BEARER RELEASE. The UE shall release both radio bearers and transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1.
2		→	UPLINK DIRECT TRANSFER (ACTIVATE SECONDARY PDP CONTEXT REQUEST)	SM
3		←	RADIO BEARER SETUP	Establishment of second PS domain RAB
4		→	RADIO BEARER SETUP COMPLETE	
5		←	DOWNLINK DIRECT TRANSFER (ACTIVATE SECONDARY PDP CONTEXT ACCEPT)	SM
6		←	RADIO BEARER RECONFIGURATION	To move the UE to CELL_FACH/ URA_PCH. RB reconfiguration procedure is used to: <ul style="list-style-type: none"> • Modify RLC timer values The message includes a C-RNTI and the Primary Scrambling code of cell 1.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	
8		←	RADIO BEARER RECONFIGURATION	To move the UE to CELL_DCH. RB reconfiguration procedure is used to: <ul style="list-style-type: none"> • Re- specify the DCH configuration (don't re- use stored multiplexing option) • Modify RLC timer values
9		→	RADIO BEARER RECONFIGURATION COMPLETE	
10		←	DEACTIVATE PDP CONTEXT REQUEST	Request a deactivation both PDP contexts
11		→	DEACTIVATE PDP CONTEXT ACCEPT	Accept the PDP context deactivation
12		←	RADIO BEARER RELEASE	Release of two PS domain RABs
13		→	RADIO BEARER RELEASE COMPLETE	

[For Steps 2, 3, 4, 5 see also Test Case 12.9.13 "Service Request / RAB re-establishment / UE initiated / multiple PDP contexts" for additional details.](#)

Specific Message Contents

RADIO BEARER SETUP (Step 3)

The contents of RADIO BEARER SETUP message in this test case are identical the message sub-type indicated by "Packet to CELL_DCH from CELL_DCH in PS" in [9] TS 34.108 clause 9, with the following exception :

<u>Information Element</u>	<u>Value/remark</u>
<u>RAB information for setup</u> - <u>RAB identity</u>	<u>0000 0101C</u>
<u>RB information to setup</u> - <u>RB identity</u>	<u>21</u>

RADIO BEARER RECONFIGURATION (Step 6)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
<u>New C-RNTI</u>	<u>0000 0000 0000 0001B</u>
<u>RB information to reconfigure list</u> - <u>RB information to reconfigure</u> - <u>RB identity</u> - <u>RLC info</u> - <u>CHOICE Uplink RLC mode</u> - <u>Timer_RST</u> - <u>Max_RST</u>	<u>20</u> <u>AM RLC</u> <u>700</u> <u>6</u>
- <u>RB information to reconfigure</u> - <u>RB identity</u> - <u>Timer_RST</u> - <u>Max_RST</u>	<u>21</u> <u>700</u> <u>6</u>
<u>Downlink information per radio link list</u> - <u>Downlink information for each radio link</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u>	<u>Set to same code as used for cell 1</u>

RADIO BEARER RECONFIGURATION (Step 8)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
New C-RNTI	0000 0000 0000 0001B
RB information to reconfigure list	
- RB information to reconfigure	
- RB identity	20
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	6
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
- RB information to reconfigure	(AM DCCH for NAS DT High priority)
- RB identity	21
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	

- Timer status prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer STATUS periodic	Not Present
- RB mapping info	Not Present
- RB mapping info	
- Information for each multiplexing option	
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	6
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
Downlink information per radio link list	
- Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1

RADIO BEARER RELEASE (Step 12)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by " Contents of RADIO BEARER RELEASE message: AM or UM " in [9] TS 34.108 clause 9, with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
RB information to release	
- RB identity	20
RB information to release	
- RB identity	21

~~FPS.~~

8.2.2.35.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER SETUP COMPLETE message.

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message.

After step 7 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message.

After step 12 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message.

<small>CR-Form-v7</small>
CHANGE REQUEST
¶ TS 34.123-1 CR 440 ¶ rev - ¶ Current version: 5.2.0 ¶

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ¶ symbols.

Proposed change affects: UICC apps ¶ ME Radio Access Network ¶ Core Network ¶

Title:	¶ CR to 34.123-1 R5; Corrections to package 4 test cases on Measurements as revision of T1S030093.				
Source:	¶ Ericsson				
Work item code:	¶ TEI	Date:	¶ 12/02/2003		
Category:	¶ F	Release:	¶ Rel 5		
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change:	¶ Changes in this version compared to earlier version marked in yellow. Editorial corrections. 8.4.1.41 - Conformance requirements are incomplete - Tabular for MEASUREMENT REPORT (Step4/5) is incorrect. 8.4.1.42. - Presence of irrelevant conformance requirements - Signal levels are incorrect (would lead to immediate measurement reporting) - Resetting of measurement is incorrectly performed in step 10 - Detailed message contents is missing - Steps 9 and 18 are incorrectly indicated as only including 1 cell in the IE event results. 8.4.1.43. - Presence of irrelevant conformance requirements
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	<ul style="list-style-type: none"> - Initial signal levels are incorrect (would lead to immediate measurement reporting) - Resetting of measurement is incorrectly performed in step 15 - Detailed message contents is missing - Steps 14 and 23 are incorrectly indicated as only including 1 cell in the IE event results.
Summary of change: ⌘	<p>8.4.1.41</p> <ul style="list-style-type: none"> - Conformance requirements are updated - Tabular for MEASUREMENT REPORT (Step4/5) is updated. <p>8.4.1.42.</p> <ul style="list-style-type: none"> - Irrelevant conformance requirements are removed - Initial signal levels are updated - Step 10 is updated in order to enable new triggering of the event 2b (without immediate triggering) - Detailed message contents is added - Steps 9 and 18 have been updated to contain 2 cells in the events results - Several other minor editorial corrections. <p>8.4.1.43.</p> <ul style="list-style-type: none"> - Irrelevant performance requirements are removed - Initial signal levels are updated - Step 15 is updated in order to enable new triggering of the event 2b (without immediate triggering) - Detailed message contents is added - Steps 14 and 23 have been updated to contain 2 cells in the events results - Several other minor editorial corrections.
Consequences if not approved: ⌘	Indicated errors will remain in the TC's.

Clauses affected: ⌘	8.4.1.41; 8.4.1.42; 8.4.1.43										
Other specs Affected:	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Other core specifications Test specifications O&M Specifications 	⌘
Y	N										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments: ⌘	Affects R99, Rel 4 and Rel 5 UEs.										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4 Measurement procedure

8.4.1 Measurement Control and Report

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8.4.1.41 Measurement Control and Report: Additional Measurements list

8.4.1.41.1 Definition

8.4.1.41.2 Conformance requirement

For the measurement, which triggered the MEASUREMENT REPORT message, the UE shall:

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- 1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and
- 2> if more than one additional measured results are to be included:
 - 3> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.

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If the IE "Additional Measurement List" is received in a MEASUREMENT CONTROL message, the UE shall:

- 1> if the received measurement configuration in this MEASUREMENT CONTROL message, or any measurement referenced in the "Additional Measurement List" do not all have the same validity:
 - 2> set the variable CONFIGURATION_INCOMPLETE to TRUE.
- 1> if any of the measurements referenced in the "Additional Measurement List" is an intra-frequency, inter-frequency or inter-RAT measurement, and this measurement is configured with event based reporting:
 - 2> the UE behaviour is not specified.

If the measurement configured with the MEASUREMENT CONTROL message triggers a measurement report, the UE shall also include the reporting quantities for the measurements referenced by the additional measurement identities. The contents of the IE "Additional Measured results" is completely determined by the measurement configuration of the referenced additional measurement.

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Reference

3GPP TS 25.331, clause 8.4.2.2, [8.6.7.22](#)

8.4.1.41.3 Test Purpose

1. To confirm that the UE reports measured results for a referenced additional measurement.
2. To confirm that the UE transmits MEASUREMENT REPORT messages for a measurement, also if this measurement is referenced as an additional measurement by another measurement.

8.4.1.41.4 Method of test

Initial Condition

System Simulator: 1 cell, cell 1.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

The UE is in CELL_DCH state in cell 1, after successfully executing procedures P11 or P13 as specified in clause 7.4 of TS 34.108. Next, SS transmits MEASUREMENT CONTROL message to request the UE to perform UE internal measurements and reporting for events 6A and 6B, followed by a MEASUREMENT CONTROL message to request the UE to perform a periodic intra-frequency measurement. The intra-frequency measurement configuration references as an additional measurement the measurement defined by the first MEASUREMENT CONTROL message.

The UE will start to periodically send MEASUREMENT REPORT messages for the intra-frequency measurement. The reports shall include the UE Tx power as an additional measurement result.

After two MEASUREMENT REPORT messages, the SS increases the UE Tx power above the threshold set to event 6A. After 'time to trigger' the UE sends MEASUREMENT REPORT, triggered by event 6A, to the SS.

Next the SS decreases the UE Tx power below the threshold set for event 6B. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6B, to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state in cell 1. SS sets the UE transmission power between 15 and 18 dBm.
2		←	MEASUREMENT CONTROL	SS requests for measurement and reporting for events 6A and 6B.
3		←	MEASUREMENT CONTROL	SS requests a periodic intra-frequency measurement.
4		→	MEASUREMENT REPORT	
5		→	MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 32 seconds.
6				SS sets the UE transmission power above 18 dBm.
7		→	MEASUREMENT REPORT	UE shall send 6A event measurement report.
8				SS sets the UE transmission power below 15 dBm.
9		→	MEASUREMENT REPORT	UE shall send 6B event measurement report.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement	
- UE internal measurement quantity	Present
-CHOICE <i>mode</i>	FDD
-UE internal measurement quantity	UE Transmitted Power
-Filter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	TRUE
- CHOICE <i>mode</i>	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE <i>report criteria</i>	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6A
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	18 dBm
-UE internal event identity	6B
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	15 dBm
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	
Additional measurements list	5
- Additional measurement identity	Intra-frequency measurement
CHOICE measurement type	Not Present
- Intra-frequency cell info list	
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	CPICH RSCP
- Measurement quantity	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference reporting	
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting	No report
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active set
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 4 and step 5)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present and value is reasonable

- UE RX TX report entry list Event Results	Check to see if it is absent Check to see if this IE is absent
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MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE <i>mode</i>	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE <i>event result</i>	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6A"
-CHOICE <i>mode</i>	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE <i>mode</i>	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE <i>event result</i>	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6B"
-CHOICE <i>mode</i>	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

8.4.1.41.5 Test Requirement

After step 3, the UE shall periodically transmit a MEASUREMENT REPORT message for measurement identity 5. In addition to the CPICH RSCP, these reports shall also include the UL Tx power with a reasonable value.

After step 6, the UE shall transmit a MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6A.

After step 8, the UE shall transmit a MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6B.

8.4.1.42 Measurement Control and Report: Change of Compressed Mode Method

8.4.1.42.1 Definition

8.4.1.42.2 Conformance requirement

~~2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":~~

- 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or
- 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
 - 4> if the measurement is valid in the current RRC state of the UE:
 - 5> begin measurements according to the stored control information for this measurement identity.

...

- 2> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
 - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; and
 - 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
 - 4> resume the measurements according to the new stored measurement control information.
 - 1> if the IE "measurement command" has the value "release":
 - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
 - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.
 - 1> if the IE "DPCH Compressed Mode Status Info" is present:
 - 2> if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE "TGMP" in variable TGPS_IDENTITY):
 - 3> set the variable CONFIGURATION_INCOMPLETE to TRUE.
 - 2> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):
 - 3> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
 - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;
 - 4> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".
 - 3> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
 - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message.
- NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.
- 2> after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
 - 3> activate the pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in this message is set to "activate" at the time indicated by IE "TGCFN"; and
 - 3> set the corresponding "Current TGPS status flag" for this pattern sequence in the variable TGPS_IDENTITY to "active"; and

~~3> begin the inter frequency and/or inter RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;~~

~~3> if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:~~

~~4> start the concerned pattern sequence immediately at that CFN.~~

~~2> not alter pattern sequences stored in variable TGPS_IDENTITY, if the pattern sequence is not identified in IE "TGPSI" in the received message.~~

...

If the IE "Uplink DPCH info" is included, the UE shall:

~~1> release any active uplink physical channels and activate the given physical channels;~~

~~1> if the IE "Number of FBI bits" is not included:~~

~~2> use 0 FBI bits in the Uplink DPCH.~~

~~1> use an SF equal to or greater than the minimum SF indicated in the IE "Spreading Factor" during uncompressed frames or compressed frames by HL scheduling;~~

~~1> use an SF equal to or greater than the minimum SF divided by 2 during compressed frames by SF reduction.~~

...

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

~~1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':~~

~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':~~

~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

~~1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:~~

~~2> set the variable INVALID_CONFIGURATION to TRUE.~~

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):

2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";
- 1> update into the variable TGPS_IDENTITY the configuration information defined by IE group "transmission gap pattern sequence configuration parameters";
- 1> after the new configuration has been taken into use:
 - 2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "Current TGPS status flag" in the variable TGPS_IDENTITY is set to "active" at the time indicated by IE "TGCFN"; and
 - 2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
 - 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.
- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in subclause 8.2.11.2.

~~If the IE "DPCCH-compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:~~

- ~~1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):~~
 - ~~2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

 - ~~3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use;~~
 - ~~3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".~~~~
 - ~~2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:

 - ~~3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.~~~~

~~NOTE:—The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.~~

- ~~1> after the new configuration has been taken into use:

 - ~~2> activate, at the time indicated by IE "TGCFN", the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate"; and~~
 - ~~2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;~~
 - ~~2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":

 - ~~3> start the concerned pattern sequence immediately at that CFN.~~~~~~

~~For transmission gap pattern sequences stored in variable TGPS_IDENTITY, but not identified in IE "TGPSI", the UE shall:~~

- ~~1> if the received message implies a timing re-initialised hard handover (see subclause 8.3.5.1):

 - ~~2> deactivate such transmission gap pattern sequences at the beginning of the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message; and~~
 - ~~2> set IE "Current TGPS Status Flag" in corresponding UE variable TGPS_IDENTITY to 'inactive'.~~~~
- ~~1> if the received message not implies a timing re-initialised hard handover (see subclause 8.3.5.1):~~

~~2> continue such transmission gap pattern sequence according to IE "Current TGPS Status Flag" in the corresponding UE variable TGPS_IDENTITY.~~

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Uplink and downlink compressed mode methods are described in [TS 25.212\[27\]](#). For UL "higher layer scheduling" compressed mode method and transport format combination selection, see [TS 25.321\[15\]](#).

Reference

3GPP TS 25.331 clause ~~8.4.1.3, 8.6.6.6~~, 8.6.6.15

8.4.1.42.3 Test purpose

To confirm that the UE supports change of compressed mode method included in a RADIO BEARER SETUP message.

To confirm that the UE supports change of compressed mode method included in a RADIO BEARER RELEASE message.

8.4.1.42.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 on frequency f_1 , cell 4 on frequency f_2 and cell 5 on frequency f_3 .

UE: "PS-DCCH DCH" (state 6-7) as specified in clause 7.4 of TS 34.108. Ciphering shall be activated.

This test case applies only for UEs requiring compressed mode to perform inter- frequency measurements and supporting both PS and CS domains.

Test Procedure

Table 8.4.1.42-1 illustrates the downlink power to be applied for the 3 cells, as well as the frequency and scrambling code for each cell.

Table 8.4.1.42-1a

Parameter	Unit	Cell 1						
Frequency		f_1						
Scrambling code		Scrambling code 1						
		T0	T1	T2	T3	T4	T5	
CPICH Ec	dBm/3.84 MHz	-60	-70	-70	-60	-70	-70	

Table 8.4.1.42-1b

Parameter	Unit	Cell 4							Cell 5				
Frequency		f_2							f_3				
Scrambling code		Scrambling code 3							Scrambling code 2				
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	- 95 6 0	-60	-60	-60	-60	-60	- 95 6 0	-95	-60	-95	-95	-60

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to download compressed mode parameters in the UE but without activating compressed mode. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

The SS establishes a CS domain RAB and changes the compressed mode method to (from HLS to SF/2), by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T2, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

At instant T3, the downlink power is changed according to what is shown in table 8.4.1.42-1. The increased quality of the used frequency should result in clearing of the concerning TRIGGERED 2B EVENT~~SS then transmits a MEASUREMENT CONTROL message to the UE on DCCH using AM-RLC, to (re-) establish inter-frequency measurements in the UE, to make it trigger event 2b again for both frequencies.~~

The SS establishes PS domain RAB and changes compressed mode method (from SF/2 to HLS) by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T~~4~~³, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, the SS releases the PS domain RAB and changes compressed mode method (from HLS to SF/2) by sending a RADIO BEARER RELEASE message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER ~~RELEASE~~^{SETUP} COMPLETE message.

At instant T~~5~~⁴, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using HLS method) without activating compressed mode
2		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters
3		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE and activates compressed mode
4				The SS changes the power of the cells according to column T1 in table 8.4.1.42 ** -1.
5		→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
6		←	RADIO BEARER SETUP	SS establishes CS domain RAB (speech) and changes to SF/2 compressed mode method

7	→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB <u>and the compressed mode method change.</u>
8			The SS changes the power of the cells according to column T2 in table 8.4.1.42-1.
9	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
10	←	MEASUREMENT CONTROL	The SS (re-) configures inter-frequency measurements in the UE. The SS changes the power of the cells according to T3 in table 8.4.1.42-1 (so the UE <u>can will</u> trigger event 2b again for both frequencies <u>if suitable conditions arise</u>)
11	←	RADIO BEARER SETUP	SS establishes PS domain RAB and changes compressed mode method to HLS.
12	→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the compressed mode method change.
13			The SS changes the power of the cells according to column T 3 4 in table 8.4.1.42-1.
14	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
15	←	RADIO BEARER RELEASE	SS releases the PS domain RAB and changes compressed mode method to SF/2.
16	→	RADIO BEARER RELEASE COMPLETE	The UE acknowledges the release of the RAB and the compressed mode method change.
17			The SS changes the power of the cells according to column T 5 4 in table 8.4.1.42-1.
18	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

All messages shall use the same content as defined in [9] TS 34.108 clause 9, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 1)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Activation time</u>	<u>Not Present</u>
<u>New U-RNTI</u>	<u>Not Present</u>
<u>New C-RNTI</u>	<u>Not Present</u>
<u>New DSCH-RNTI</u>	<u>Not Present</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>Not Present</u>
<u>CN information info</u>	<u>Not Present</u>
<u>URA identity</u>	<u>Not Present</u>
<u>Downlink counter synchronisation info</u>	<u>Not Present</u>
<u>Frequency info</u>	<u>Not Present</u>
<u>Maximum allowed UL TX power</u>	<u>Not Present</u>
<u>CHOICE channel requirement</u>	<u>Not Present</u>
<u>CHOICE mode</u>	<u>FDD</u>
- <u>Downlink PDSCH information</u>	<u>Not Present</u>
<u>Downlink information common for all radio links</u>	
- <u>Downlink DPCH info common for all RL</u>	<u>Not Present</u>
- <u>DPCH compressed mode info</u>	
- <u>TGPSI</u>	<u>1</u>
- <u>TGPS Status Flag</u>	<u>Deactivate</u>
- <u>TGCFN</u>	<u>Not present</u>
- <u>Transmission gap pattern sequence</u>	
<u>configuration parameters</u>	
- <u>TGMP</u>	<u>FDD Measurement</u>
- <u>TGPRC</u>	<u>Infinity</u>
- <u>TGSN</u>	<u>4</u>
- <u>TGL1</u>	<u>7</u>
- <u>TGL2</u>	<u>Not Present</u>
- <u>TGD</u>	<u>0</u>
- <u>TGPL1</u>	<u>3</u>
- <u>TGPL2</u>	<u>Not Present</u>
- <u>RPP</u>	<u>Mode 0</u>
- <u>ITP</u>	<u>Mode 0</u>
- <u>CHOICE UL/DL Mode</u>	<u>UL and DL, UL only or DL only (depending on the UE capability)</u>
- <u>Downlink compressed mode method</u>	<u>HLS(or not sent, depending on the UE capability)</u>
- <u>Uplink compressed mode method</u>	<u>HLS(or not sent, depending on the UE capability)</u>
- <u>Downlink frame type</u>	<u>B</u>
- <u>DeltaSIR1</u>	<u>2.0</u>
- <u>DeltaSIRAfter1</u>	<u>1.0</u>
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRAfter2</u>	<u>Not Present</u>
- <u>N identify abort</u>	<u>Not Present</u>
- <u>T Reconfirm abort</u>	<u>Not Present</u>
- <u>TX Diversity mode</u>	<u>Not Present</u>
- <u>SSDT information</u>	<u>Not Present</u>
- <u>Default DPCH Offset Value</u>	<u>Not Present</u>
<u>Downlink information for each radio link</u>	<u>Not Present</u>

MEASUREMENT CONTROL (Step 3)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Measurement Identity</u>	<u>2</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	<u>Acknowledged Mode RLC</u>
- <u>Periodical Reporting / Event Trigger Reporting Mode</u>	<u>Event Trigger</u>

<u>Additional measurements list</u>	<u>Not Present</u>
<u>CHOICE measurement type</u>	<u>Inter-frequency measurement</u>
<u>- Inter-frequency cell info list</u>	
<u>- CHOICE inter-frequency cell removal</u>	<u>No inter-frequency cells removed</u>
<u>- New inter-frequency info list</u>	<u>2 inter-frequency cells</u>
<u>- Inter-frequency cell id</u>	<u>4</u>
<u>- Frequency info</u>	
<u>- UARFCN uplink (Nu)</u>	<u>UARFCN for the uplink corresponding to f_2</u>
<u>- UARFCN downlink (Nd)</u>	<u>UARFCN for the downlink corresponding to f_2</u>
<u>- Cell info</u>	
<u>- Cell individual offset</u>	<u>0 dB</u>
<u>- Reference time difference to cell</u>	<u>Not present</u>
<u>- Read SFN Indicator</u>	<u>FALSE</u>
<u>- CHOICE Mode</u>	<u>FDD</u>
<u>- Primary CPICH Info</u>	
<u>- Primary Scrambling Code</u>	<u>Scrambling code 3</u>
<u>- Primary CPICH TX power</u>	<u>Not Present</u>
<u>- TX Diversity Indicator</u>	<u>FALSE</u>
<u>- Inter-frequency cell id</u>	<u>5</u>
<u>- Frequency info</u>	
<u>- UARFCN uplink (Nu)</u>	<u>UARFCN for the uplink corresponding to f_3</u>
<u>- UARFCN downlink (Nd)</u>	<u>UARFCN for the downlink corresponding to f_3</u>
<u>- Cell info</u>	
<u>- Cell individual offset</u>	<u>0 dB</u>
<u>- Reference time difference to cell</u>	<u>Not present</u>
<u>- Read SFN Indicator</u>	<u>FALSE</u>
<u>- CHOICE Mode</u>	<u>FDD</u>
<u>- Primary CPICH Info</u>	<u>Not present</u>
<u>- Primary Scrambling Code</u>	<u>Scrambling code 2</u>
<u>- Primary CPICH TX power</u>	<u>Not Present</u>
<u>- TX Diversity Indicator</u>	<u>FALSE</u>
<u>- Cells for measurement</u>	<u>Not present</u>
<u>- Inter-frequency measurement quantity</u>	
<u>- CHOICE reporting criteria</u>	<u>Inter-frequency reporting criteria</u>
<u>- Filter Coefficient</u>	<u>0</u>
<u>- Measurement quantity for frequency quality estimate</u>	<u>CPICH RSCP</u>
<u>- Inter-frequency reporting quantity</u>	
<u>- UTRA Carrier RSSI</u>	<u>FALSE</u>
<u>- Frequency quality estimate</u>	<u>FALSE</u>
<u>- Non frequency related cell reporting quantities</u>	
<u>- SFN-SFN observed time difference reporting indicator</u>	<u>No report</u>
<u>- Cell synchronisation information reporting indicator</u>	<u>FALSE</u>
<u>- Cell Identity reporting indicator</u>	<u>TRUE</u>
<u>- CPICH Ec/No reporting indicator</u>	<u>FALSE</u>
<u>- CPICH RSCP reporting indicator</u>	<u>TRUE</u>
<u>- Pathloss reporting indicator</u>	<u>FALSE</u>
<u>- Reporting cell status</u>	<u>Not present</u>
<u>- Measurement validity</u>	
<u>- UE State</u>	<u>CELL_DCH</u>
<u>- Inter-frequency set update</u>	
<u>- UE autonomous update</u>	<u>On with no reporting</u>
<u>- Non autonomous update mode</u>	<u>Not present</u>
<u>- CHOICE report criteria</u>	<u>Inter-frequency measurement reporting criteria</u>
<u>- Parameters required for each event</u>	
<u>- Inter-frequency event identity</u>	<u>2b</u>
<u>- Threshold used frequency</u>	<u>-70 dBm</u>
<u>- W used frequency</u>	<u>0.0</u>
<u>- Hysteresis</u>	<u>1.0 dB</u>
<u>- Time to trigger</u>	<u>100 ms</u>
<u>- Reporting cell status</u>	<u>Report cells within monitored and/or virtual active set on non-used frequency</u>
<u>- Maximum number of reported cells per reported non-used frequency</u>	<u>2</u>
<u>- Parameters required for each non-used frequency</u>	
<u>- Threshold non used frequency</u>	<u>-65 dBm</u>

- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 5,14)

Information Element	Value/Remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	
- Inter-frequency measured results list	
- Frequency info	FDD
-CHOICE mode	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- UARFCN downlink	Check that this IE is absent
- UTRA carrier RSSI	Check that the value of this IE is set to 1 cell reported
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	FDD
-CHOICE mode	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- UARFCN downlink	
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3

RADIO BEARER SETUP (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Speech to CELL_DCH from CELL_DCH in CS", with the following modifications:

Information Element	Value/Remark
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<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<p>1 Activate (Current CFN + (256 – TTI/10msec))mod 256</p> <p>FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) SF/2(or not sent, depending on the UE capability) SF/2(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present</p>
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[MEASUREMENT REPORT \(Step 9,18\)](#)

Information Element	Value/Remark
<p>Message Type Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Measurement identity Measured Results</p> <ul style="list-style-type: none"> - Inter-frequency measured results list - Frequency info - CHOICE mode - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Frequency info - CHOICE mode - UARFCN uplink 	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</p> <p>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>2</p> <p>FDD</p> <p>Check that the value of this IE is set to UARFCN for the uplink corresponding to f₂ or f₃(Could be absent in case the duplex distance is the default duplex distance)</p> <p>Check that the value of this IE is set to UARFCN for the downlink corresponding to f₂ or f₃</p> <p>Check that this IE is absent</p> <p>Check that the value of this IE is set to 1 cell reported</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f₂) or Scrambling code 2 (on f₃)</p> <p>Check that this IE is absent</p> <p>Check that this IE is present</p> <p>Check that this IE is absent</p> <p>FDD</p> <p>Check that the value of this IE is set to UARFCN for the uplink corresponding to f₂ or f₃(Could be absent in case</p>

<ul style="list-style-type: none"> <u>- UARFCN downlink</u> <u>- UTRA carrier RSSI</u> <u>- Inter-frequency cell measurement results</u> <ul style="list-style-type: none"> <u>- Cell measured results</u> <ul style="list-style-type: none"> <u>- Cell Identity</u> <u>- SFN-SFN observed time difference</u> <u>- Cell synchronisation information</u> <u>- Primary CPICH info</u> <u>- Primary scrambling code</u> <u>- CPICH Ec/N0</u> <u>- CPICH RSCP</u> <u>- Pathloss</u> <u>Measured results on RACH</u> <u>Additional measured results</u> <u>Event results</u> <ul style="list-style-type: none"> <u>- Inter-frequency measurement event results</u> <ul style="list-style-type: none"> <u>- Inter-frequency event identity</u> <u>- Inter-frequency cells</u> <ul style="list-style-type: none"> <u>- Frequency info</u> <u>-CHOICE mode</u> <u>- UARFCN uplink</u> <u>- UARFCN downlink</u> <u>- Non freq related measurement event results</u> <ul style="list-style-type: none"> <u>- Primary CPICH info</u> <u>- Primary scrambling code</u> <u>- Frequency info</u> <u>-CHOICE mode</u> <u>- UARFCN uplink</u> <u>- UARFCN downlink</u> <u>- Non freq related measurement event results</u> <ul style="list-style-type: none"> <u>- Primary CPICH info</u> <u>- Primary scrambling code</u> 	<p><u>the duplex distance is the default duplex distance)</u> <u>Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</u> <u>Check that this IE is absent</u> <u>Check that the value of this IE is set to 1 cell reported</u></p> <p><u>Check that this IE is absent</u> <u>Check that this IE is absent</u> <u>Check that this IE is absent</u></p> <p><u>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</u> <u>Check that this IE is absent</u> <u>Check that this IE is present</u> <u>Check that this IE is absent</u> <u>Check that this IE is absent</u> <u>Check that this IE is absent</u></p> <p><u>2b</u></p> <p><u>FDD</u> <u>Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)</u> <u>Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</u></p> <p><u>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</u></p> <p><u>FDD</u> <u>Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)</u> <u>Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</u></p> <p><u>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</u></p>
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RADIO BEARER SETUP (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

<u>Information Element</u>	<u>Value/Remark</u>
----------------------------	---------------------

<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<ul style="list-style-type: none"> 1 Activate (Current CFN + (256 – TTI/10msec))mod 256 FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) HLS(or not sent, depending on the UE capability) HLS(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present
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RADIO BEARER RELEASE (Step 15)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled “Packet to CELL_DCH from CELL_DCH in PS”, with the following modifications:

<u>Information Element</u>	<u>Value/Remark</u>
<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<ul style="list-style-type: none"> 1 Activate (Current CFN + (256 – TTI/10msec))mod 256 FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) SF/2(or not sent, depending on the UE capability) SF/2(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present

~~FFS~~

8.4.1.42.5 Test Requirement

After step 1, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of compressed mode parameters that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 1.

After step 4, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 6, the UE shall send a RADIO BEARER SETUP COMPLETE message to the SS to acknowledge the establishment of the RAB and the change of compressed mode method that were included in the RADIO BEARER SETUP message of step 6.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 . ~~That message shall only include cell 5 within the IE event results.~~

After step 11, the UE shall send a RADIO BEARER SETUP COMPLETE message to acknowledge the establishment of the RAB and the compressed mode method change that were included in the RADIO BEARER SETUP message of step 11.

After step 13, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 15, the UE shall send a RADIO BEARER RELEASE COMPLETE message to acknowledge the release of the RAB and the compressed mode method change that were included in the RADIO BEARER ~~RELEASE~~SETUP message of step 15.

After step 17, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 . ~~That message shall only include cell 5 within the IE event results.~~

8.4.1.43 Measurement Control and Report: Compressed Mode Reconfiguration

8.4.1.43.1 Definition

8.4.1.43.2 Conformance requirement

~~2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":~~

~~3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or~~

~~3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:~~

~~4> if the measurement is valid in the current RRC state of the UE:~~

~~5> begin measurements according to the stored control information for this measurement identity.~~

~~...~~

~~2> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:~~

~~3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; and~~

~~3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:~~

~~4> resume the measurements according to the new stored measurement control information.~~

~~1> if the IE "measurement command" has the value "release":~~

~~2> terminate the measurement associated with the identity given in the IE "measurement identity";~~

~~2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.~~

~~1> if the IE "DPCH Compressed Mode Status Info" is present:~~

~~2> if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE "TGMP" in variable TGPS_IDENTITY):~~

~~3> set the variable CONFIGURATION_INCOMPLETE to TRUE.~~

~~2> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):~~

~~3> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:~~

~~4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;~~

~~4> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".~~

~~3> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:~~

- 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message.

NOTE:—The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 2> after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:

- 3> activate the pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in this message is set to "activate" at the time indicated by IE "TGCFN"; and

- 3> set the corresponding "Current TGPS status flag" for this pattern sequence in the variable TGPS_IDENTITY to "active"; and

- 3> begin the inter frequency and/or inter RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

- 3> if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:

- 4> start the concerned pattern sequence immediately at that CFN.

- 2> not alter pattern sequences stored in variable TGPS_IDENTITY, if the pattern sequence is not identified in IE "TGPSI" in the received message.

∴

If the IE "Uplink DPCH info" is included, the UE shall:

- 1> release any active uplink physical channels and activate the given physical channels;

- 1> if the IE "Number of FBI bits" is not included:

- 2> use 0 FBI bits in the Uplink DPCH.

- 1> use an SF equal to or greater than the minimum SF indicated in the IE "Spreading Factor" during uncompressed frames or compressed frames by HL scheduling;

- 1> use an SF equal to or greater than the minimum SF divided by 2 during compressed frames by SF reduction.

∴

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':

- 2> set the variable INVALID_CONFIGURATION to TRUE.

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':

- 2> set the variable INVALID_CONFIGURATION to TRUE.

- 1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:

- 2> set the variable INVALID_CONFIGURATION to TRUE.

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):

- 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.
- 2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";
- 1> update into the variable TGPS_IDENTITY the configuration information defined by IE group "transmission gap pattern sequence configuration parameters";
- 1> after the new configuration has been taken into use:
 - 2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "Current TGPS status flag" in the variable TGPS_IDENTITY is set to "active" at the time indicated by IE "TGCFN"; and
 - 2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
 - 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.
- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in subclause 8.2.11.2.

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):
 - 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use;
 - 3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".
 - 2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 1> after the new configuration has been taken into use:
 - 2> activate, at the time indicated by IE "TGCFN", the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate"; and
 - 2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

- 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.

For transmission gap pattern sequences stored in variable TGPS_IDENTITY, but not identified in IE "TGPSI", the UE shall:

- 1> if the received message implies a timing re-initialised hard handover (see subclause 8.3.5.1):
 - 2> deactivate such transmission gap pattern sequences at the beginning of the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message; and
 - 2> set IE "Current TGPS Status Flag" in corresponding UE variable TGPS_IDENTITY to 'inactive'.
- 1> if the received message not implies a timing re-initialised hard handover (see subclause 8.3.5.1):
 - 2> continue such transmission gap pattern sequence according to IE "Current TGPS Status Flag" in the corresponding UE variable TGPS_IDENTITY.

Uplink and downlink compressed mode methods are described in [27]. For UL "higher layer scheduling" compressed mode method and transport format combination selection, see [15].

Reference

3GPP TS 25.331 clause ~~8.4.1.3, 8.6.6.6~~, 8.6.6.15

8.4.1.43.3 Test purpose

To confirm that the UE supports de- activation of compressed mode included in a RADIO BEARER SETUP message.

To confirm that the UE supports reconfiguration of transport channel parameters (rate reduction PS RAB) and change of compressed mode method included in a TRANSPORT CHANNEL RECONFIGURATION message.

To confirm that the UE supports change of compressed mode included in a RADIO BEARER RELEASE message.

To confirm that the UE supports reconfiguration of transport channel parameters (rate reduction PS RAB) without performing hard handover included in a TRANSPORT CHANNEL RECONFIGURATION message.

8.4.1.43.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 on frequency f_1 , cell 4 on frequency f_2 and cell 5 on frequency f_3 .

UE: "CS-DCCCH + DTCH_DCH" (state 6-9) as specified in clause 7.4 of TS 34.108. Ciphering shall be activated.

This test case applies only for UEs requiring compressed mode to perform inter- frequency measurements and supporting both PS and CS domains.

Test Procedure

Table 8.4.1.43-1 illustrates the downlink power to be applied for the 3 cells, as well as the frequency and scrambling code for each cell.

Table 8.4.1.43-1a

Parameter	Unit	Cell 1					
		Frequency	f_1				
Scrambling code	Scrambling code 1						
		T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.8 4 MHz	-60	-70	-70	-60	-70	-70

Table 8.4.1.43-1b

Parameter	Unit	Cell 4						Cell 5					
		f ₂						f ₃					
Frequency		Scrambling code 3						Scrambling code 2					
Scrambling code													
		T0	T1	T2	T ₃	T ₄	T ₅	T0	T1	T2	T ₃	T ₄	T ₅
CPICH Ec	dBm/3.8 4 MHz	- <u>95</u> 0	-60	-60	<u>-95</u>	-60	-60	- <u>95</u> 0	-95	-60	<u>-95</u>	-95	-60

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

Next, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to download compressed mode parameters in the UE without activating compressed mode. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

The SS establishes a PS domain RAB and de-activates compressed mode, by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T₁, the downlink power is changed according to what is shown in table 8.4.1.43-1. The SS shall then verify that the UE does not transmit a MEASUREMENT REPORT message.

Next the SS downloads compressed mode parameters and activates compressed mode by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Frequency f₂ shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to reconfigure transport channel parameters (rate reduction PS RAB) and to change compressed mode method (to SF/2). The UE shall answer with a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message.

At instant T₂, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f₃ shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

~~At instant T₃, the downlink power is changed according to what is shown in table 8.4.1.43-1. The increased quality of the used frequency should result in clearing of the concerning TRIGGERED 2B EVENT. SS then transmits a MEASUREMENT CONTROL message to the UE on DCCH using AM-RLC, to (re-) establish inter-frequency measurements in the UE, to make it trigger event 2b again for both frequencies.~~

Next, SS transmits a RADIO BEARER RELEASE message to release the CS domain RAB and change compressed mode method (from SF/2 to HLS). The UE shall answer with a RADIO BEARER RELEASE COMPLETE message.

At instant T₄, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f₂ shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to reconfigure transport channel parameters (rate increase PS RAB) – without performing hard handover. The UE shall answer with a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message.

At instant T₅, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f₃ shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using SF/2 method) without activating compressed mode.
2		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters.
3		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE and activates compressed mode.
4		←	RADIO BEARER SETUP	SS establishes PS domain RAB and de-activates compressed mode.
5		→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the de-activation of compressed mode.
6				The SS changes the power of the cells according to column T1 in table 8.4.1.43-1.
7				SS verifies that the UE does not transmit a MEASUREMENT REPORT message to the SS.
8		←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using HLS method) and activates compressed mode.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters and the activation of compressed mode.
10		→	MEASUREMENT REPORT	Frequency f2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
11		←	TRANSPORT CHANNEL RECONFIGURATION	SS reconfigures transport channel parameters (rate reduction PS RAB) and changes compressed mode method to SF/2. Rate should be reduced to 0 kbps – no PS RAB room left to use for gap.
12		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the transport channel reconfiguration and the change of compressed mode method.

13			The SS changes the power of the cells according to column T2 in table 8.4.1.43-1.
14	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
15	←	MEASUREMENT CONTROL	<u>The SS changes the power of the cells according to T3 in table 8.4.1.43-1.</u> The SS (re-) configures inter-frequency measurements in the UE (so the UE can <u>will</u> trigger event 2b again for both frequencies).
16	←	RADIO BEARER RELEASE	SS releases the CS domain RAB (speech) and changes compressed mode method to HLS.
17	→	RADIO BEARER RELEASE COMPLETE	The UE acknowledges the release of the RAB and the compressed mode method change.
18			The SS changes the power of the cells according to column T 3 <u>4</u> in table 8.4.1.43-1.
19	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
20	←	TRANSPORT CHANNEL RECONFIGURATION	SS reconfigures transport channel parameters (rate increase PS RAB) – without performing hard handover. SS includes TGCFNs for compressed mode.
21	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the transport channel parameters change.
22			The SS changes the power of the cells according to column T 4 <u>5</u> in table 8.4.1. 43 <u>y</u> -1.
23	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

All messages shall use the same content as defined in [9] TS 34.108 clause 9, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 1)

<u>Information Element</u>	<u>Value/Remark</u>
----------------------------	---------------------

Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2(or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	

- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_3
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm
- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	

- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

RADIO BEARER SETUP (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

Information Element	Value/Remark
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	De-activate
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 8)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0

- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT REPORT (Step 10,19)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Message Type</u> <u>Integrity check info</u> - <u>Message authentication code</u> - <u>RRC Message sequence number</u> <u>Measurement identity</u> <u>Measured Results</u> - <u>Inter-frequency measured results list</u> - <u>Frequency info</u> - <u>CHOICE mode</u> - <u>UARFCN uplink</u> - <u>UARFCN downlink</u> - <u>UTRA carrier RSSI</u> - <u>Inter-frequency cell measurement results</u> - <u>Cell measured results</u> - <u>Cell Identity</u> - <u>SFN-SFN observed time difference</u> - <u>Cell synchronisation information</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u> - <u>CPICH Ec/N0</u> - <u>CPICH RSCP</u> - <u>Pathloss</u> <u>Measured results on RACH</u> <u>Additional measured results</u> <u>Event results</u> - <u>Inter-frequency measurement event results</u> - <u>Inter-frequency event identity</u> - <u>Inter-frequency cells</u> - <u>Frequency info</u> - <u>CHOICE mode</u> - <u>UARFCN uplink</u> - <u>UARFCN downlink</u> - <u>Non freq related measurement event results</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u>	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</p> <p>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>2</p> <p>FDD</p> <p>Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)</p> <p>Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2</p> <p>Check that this IE is absent</p> <p>Check that the value of this IE is set to 1 cell reported</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3</p> <p>Check that this IE is absent</p> <p>Check that this IE is present</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>2b</p> <p>FDD</p> <p>Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)</p> <p>Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2</p> <p>Check that the value of this IE is set to Scrambling code 3</p>

TRANSPORT CHANNEL RECONFIGURATION (Step 11)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in 34.108 [9], with the following exceptions:

Information Element	Value/remark
UL Transport channel information for all transport channels	Do not include TFCs with TF's other than TF0 for PS RAB
Added or Reconfigured UL TrCH information	Reconfigure PS RAB TFS, only include TF0
DL Transport channel information common for all transport channel	Do not include TFCs with TF's other than TF0 for PS RAB
Added or Reconfigured DL TrCH information	Reconfigure PS RAB TFS, only include TF0
Frequency info	Not Present
Maximum allowed UL TX power	Not Present

MEASUREMENT REPORT (Step 14,23)

Information Element	Value/Remark
Message Type	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	FDD
- Inter-frequency measured results list	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3 (Could be absent in case the duplex distance is the default duplex distance)
- Frequency info	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
-CHOICE mode	Check that this IE is absent
- UARFCN uplink	Check that the value of this IE is set to 1 cell reported
- UARFCN downlink	Check that this IE is absent
- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that this IE is absent
- Cell measured results	Check that this IE is absent
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)
- Primary scrambling code	Check that this IE is absent
- CPICH Ec/N0	Check that this IE is present
- CPICH RSCP	Check that this IE is absent
- Pathloss	FDD
- Frequency info	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3 (Could be absent in case the duplex distance is the default duplex distance)
-CHOICE mode	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- UARFCN uplink	Check that this IE is absent
- UARFCN downlink	Check that the value of this IE is set to 1 cell reported
- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that this IE is absent
- Cell measured results	Check that this IE is absent
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)
- Primary scrambling code	Check that this IE is absent
- CPICH Ec/N0	

<ul style="list-style-type: none"> - CPICH RSCP - Pathloss Measured results on RACH Additional measured results Event results <ul style="list-style-type: none"> - Inter-frequency measurement event results - Inter-frequency event identity - Inter-frequency cells - Frequency info - CHOICE mode - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code - Frequency info - CHOICE mode - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	<p>Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>2b</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</p>
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RADIO BEARER RELEASE (Step 16)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

Information Element	Value/Remark
<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<p>1 Activate (Current CFN + (256 – TTI/10msec))mod 256</p> <p>FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) HLS(or not sent, depending on the UE capability) HLS(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present</p>

~~FPS~~

8.4.1.43.5 Test Requirement

After step 1, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters without activating compressed mode that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 1.

After step 4, the UE shall send a RADIO BEARER SETUP COMPLETE message to acknowledge the establishment of the PS domain RAB and the de-activation of compressed mode that were included in the RADIO BEARER SETUP message of step 4.

After step 6, the UE shall not transmit a MEASUREMENT REPORT message.

After step 8, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters and the activation of compressed mode that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 8.

After step 9, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 11, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the change of transport channel parameters and the change of compressed mode method that were included in the TRANSPORT CHANNEL RECONFIGURATION message of step 11.

After step 13, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 . ~~That message shall only include cell 5 within the IE event results.~~

After step 17, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message to the SS to acknowledge the release of the RAB and the change of compressed mode method that were included in the RADIO BEARER RELEASE message of step 17.

After step 18, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 20, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the change of transport channel parameters that were included in the TRANSPORT CHANNEL RECONFIGURATION message of step 20.

After step 22, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 . ~~That message shall only include cell 5 within the IE event results.~~

3GPP TSG-T1 Meeting #18
 San Antonio, USA, 10th - 14th, February 2003

T1-030093

3GPP TSG-T1/SIG Meeting #27
 San Antonio, USA, 10th - 14th, February 2003

T1S030033

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 441 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 Corrections to Low Priority RRC test cases		
Source:	⌘ Panasonic		
Work item code:	⌘ TEI	Date:	⌘ 21/01/03
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘	1. During T1/SIG #26 meeting, it was agreed that RF condition provided in the signalling conformance test cannot guarantee that UE reselect to the right cell when more than one cell is used in the test. It was suggested that re-run of such test case should be allowed if the UE failed the test due to a failure to reselect to the right cell. 2. In order to avoid the duplication of CPICH code(sf256,0) and DPCH(sfXXX,0) in cell 2 in ACTIVE SET UPDATE message, it is proposed to change the secondary scrambling code of cell 2 from "Not present" to other values.
Summary of change:	⌘	1. A note has been added to clause 8.3.4.5 to indicate that these test cases can be re-run if the UE failed due to failure to reselect to the right cell. 2. In ACTIVE SET UPDATE messages of clause 8.3.4.4 and 8.3.4.5, it is revised so that secondary scrambling code of cell 2 is set to '1'.
Consequences if not approved:	⌘	These affected test cases could fail good UE.

Clauses affected:	⌘	8.3.4.4, 8.3.4.5				
Other specs Affected:	⌘	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications ⌘	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N					
<input type="checkbox"/>	<input checked="" type="checkbox"/>					
	⌘	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications ⌘	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="checkbox"/>	<input checked="" type="checkbox"/>					

<input checked="" type="checkbox"/>	O&M Specifications
-------------------------------------	--------------------

Other comments: ⌘ Affects R'99, Rel-4 and Rel-5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modification>**8.3.4.4 Active set update in soft handover: Invalid Configuration****8.3.4.4.1 Definition****8.3.4.4.2 Conformance requirement**

If any of the following conditions are valid:

...

- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or

...

- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends on the UE side.

Reference

3GPP TS 25.331 clause 8.3.4.5

8.3.4.4.3 Test purpose

1. To confirm that the UE transmits an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC, if the received ACTIVE SET UPDATE message includes a radio link which is specified in both IE "Radio Link Addition Information" and IE "Radio Link Removal Information".

8.3.4.4.4 Method of test**Initial Condition**

System Simulator: 2 cells - Cell 1 and 2 are active.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.3.4.4

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec	dBm/3.84 MHz	-60	-75	-60	-60

Table 8.3.4.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.4. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. SS then transmits an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the same primary scrambling code in IE "Primary CPICH Info" of both IE "Radio Link Addition Information" and IE "Radio Link Removal Information". When the UE receives this message, it transmits an ACTIVE SET UPDATE FAILURE message which is set to "Invalid configuration" in IE "failure cause" on the uplink DCCH using AM RLC to the SS. UE then send another MEASUREMENT REPORT to SS 4s after step 2. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.4
2		→	MEASUREMENT REPORT	
3		←	ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes the same primary scrambling code in IE "Primary CPICH Info" of both IE "Radio Link Addition Information" and IE "Radio Link Removal Information".
4		→	ACTIVE SET UPDATE FAILURE	The message shall state "Invalid configuration" in IE "failure cause".
5		→	MEASUREMENT REPORT	
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present ¹
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter set
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Integrity check info	Not Checked
Failure cause	Check to see if it's set to 'Invalid configuration'

8.3.4.4.5 Test requirement

After step 1 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message, setting "Invalid configuration" in IE "failure cause" and sent on the uplink DCCH using AM RLC.

After step 4 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC, 4s after step 2.

8.3.4.5 Active set update in soft handover: Reception of an ACTIVE SET UPDATE message in wrong state

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

If the UE is in another state than CELL_DCH state upon reception of the ACTIVE SET UPDATE message, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "protocol error";

- 1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state";
- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received;
 - 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.4.0

8.3.4.5.3 Test purpose

1. To confirm that the UE transmit an ACTIVE SET UPDATE FAILURE message when it receives an ACTIVE SET UPDATE message in any state other than CELL_DCH.

8.3.4.5.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.4.5

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel Number		Ch. 1	Ch. 1
CPICH Ec	dBm/3.84 MHz	-60	-70

Table 8.3.4.5 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE establishes a radio access bearer service in the CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" indicating the addition of cell 2 into the active set. When the UE receives this message, UE shall transmit ACTIVE SET UPDATE FAILURE message, with the IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state", on the uplink DCCH using AM RLC. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
2			Void	
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information".
4		→	ACTIVE SET UPDATE FAILURE	IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".
5		→	MEASUREMENT REPORT	
6		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

ACTIVE SET UPDATE

The message to be used in this test is defined in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present ¹
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter set
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present

8.3.4.5.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Message not compatible with receiver state" shall be set in IE "Protocol Error Information".

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

<End of Modification>

3GPP TSG- T1 Meeting #18
 San Antonio, USA 10th – 14th February 2003

T1-030094

3GPP TSG- T1 SIG Meeting #27
 San Antonio, USA 10th – 14th February 2003

T1S030222

CR-Form-v6.1	
CHANGE REQUEST	
⌘	TS 34.123-1 CR 442
⌘ rev	-
⌘ Current version:	5.2.0
⌘ Spec Title:	User Equipment (UE) conformance specification; Part 1: Protocol conformance specification

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Correction to clause 8.1.6.4 and 8.1.9a and addition of 8.1.9b		
Source:	⌘ Panasonic and Ericsson, Sony Corporation and Fujitsu		
Work item code:	⌘ TEI Date: ⌘ 12/9/2002		
Category:	⌘ F Release: ⌘ REL-5		
	<table style="width: 100%; font-size: small;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Use <u>one</u> of the following categories:</p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p> </td> </tr> </table>	<p>Use <u>one</u> of the following categories:</p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>
<p>Use <u>one</u> of the following categories:</p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>		

Reason for change: ⌘ Clause 8.1.6.4 and clause 8.1.9a were introduced but left as FFS in T1/SIG #24 meeting.

Clause 8.1.9b is introduced to test that PS only UE re-transmit SIGNALLING CONNECTION RELEASE INDICATION message after a re-establishment of RLC due to SRNS relocation procedure.

Summary of change: ⌘ Test purpose, test method and test requirement for clause 8.1.6.4. and 8.1.9a were added.

Clause 8.1.6.4 [has been revised to](#) check~~s~~ that the UE re-transmit **INITIAL UPLINK** DIRECT TRANSFER message after a re-establishment of RLC due to SRNS relocation procedure.

Clause 8.1.9a checks that the UE re-transmit SIGNALLING CONNECTION RELEASE INDICATION message after a re-establishment of RLC due to SRNS relocation procedure.

New test case 8.1.9b is added to checks that the PS only UE re-transmit SIGNALLING CONNECTION RELEASE INDICATION message after a re-establishment of RLC due to SRNS relocation procedure.

Consequences if not approved: ⌘ Insufficient test coverage.

Clauses affected: ⌘ 8.1.6.4, 8.1.9a, 8.1.9b(new)

Other specs affected:	⌘ <input type="checkbox"/>	Other core specifications	⌘ TS 34.123-2
	<input checked="" type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘	Affects R99, REL-4, REL-5	

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START OF MODIFICATION

8.1.6.4 ~~Initial~~UPLINK Direct Transfer (RLC re-establishment)

8.1.6.4.1 Definition

8.1.6.4.2 Conformance requirement

If signalling radio bearer RB n (where n equals to 3 or 4) was used when transmitting the UPLINK DIRECT TRANSFER message and a re-establishment of RLC on same signalling radio bearer ~~RB3~~RB n occurs before the successful delivery of the ~~INITIAL-UPLINK~~ DIRECT TRANSFER message has been confirmed by RLC, the UE shall:

- 1> retransmit the ~~INITIAL-UPLINK~~ DIRECT TRANSFER message on the uplink DCCH using AM RLC on signalling radio bearer RB3.

Reference

3GPP TS 25.331 clause 8.1.8.2a.

8.1.6.4.3 Test purpose

To confirm that the UE transmits a second UPLINK DIRECT TRANSFER message after the re-establishment of RLC on RB3 which occurs before the successful delivery of the first UPLINK DIRECT TRANSFER message

~~FES~~

8.1.6.4.4 Method of test

Initial Condition

System Simulator: 1 cell – Cell 1 is active.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For RRC CONNECTION SETUP message to be transmitted in the initial setup, use the default message given in TS 34.108 subclause 9 with the following exceptions:.

RRC CONNECTION SETUP

<u>Information Element</u>	<u>Value/Remarks</u>
<u>Signalling RB information to setup</u>	<u>(AM DCCH for NAS DT High priority)</u>
- <u>RB identity</u>	<u>Not Present</u>
- <u>CHOICE RLC info type</u>	
- <u>RLC info</u>	
- <u>CHOICE Uplink RLC mode</u>	<u>AM RLC</u>
- <u>Transmission RLC discard</u>	
- <u>SDU discard mode</u>	<u>No discard</u>
- <u>MAX_DAT</u>	<u>15</u>
- <u>Transmission window size</u>	<u>128</u>
- <u>Timer_RST</u>	<u>500</u>
- <u>Max_RST</u>	<u>1</u>
- <u>Polling info</u>	
- <u>Timer_poll_prohibit</u>	<u>1000</u>
- <u>Timer_poll</u>	<u>1000</u>
- <u>Poll_PDU</u>	<u>Not present</u>
- <u>Poll_SDU</u>	<u>1</u>
- <u>Last transmission PDU poll</u>	<u>TRUE</u>
- <u>Last retransmission PDU poll</u>	<u>TRUE</u>
- <u>Poll_Window</u>	<u>99</u>
- <u>Timer_poll_periodic</u>	<u>Not Present</u>
- <u>CHOICE Downlink RLC mode</u>	<u>AM RLC</u>
- <u>In-sequence delivery</u>	<u>TRUE</u>
- <u>Receiving window size</u>	<u>128</u>
- <u>Downlink RLC status info</u>	
- <u>Timer_status_prohibit</u>	<u>200</u>
- <u>Timer_EPC</u>	<u>Not present</u>
- <u>Missing PDU indicator</u>	<u>TRUE</u>
- <u>Timer_STATUS_periodic</u>	<u>Not Present</u>
- <u>RB mapping info</u>	
- <u>Information for each multiplexing option</u>	<u>2 RBMuxOptions</u>
- <u>RLC logical channel mapping indicator</u>	<u>Not Present</u>
- <u>Number of RLC logical channels</u>	<u>1</u>
- <u>Uplink transport channel type</u>	<u>DCH</u>
- <u>UL Transport channel identity</u>	<u>5</u>
- <u>Logical channel identity</u>	<u>3</u>
- <u>CHOICE RLC size list</u>	<u>Configured</u>
- <u>MAC logical channel priority</u>	<u>3</u>
- <u>Downlink RLC logical channel info</u>	
- <u>Number of RLC logical channels</u>	<u>1</u>
- <u>Downlink transport channel type</u>	<u>DCH</u>
- <u>DL DCH Transport channel identity</u>	<u>10</u>
- <u>DL DSCH Transport channel identity</u>	<u>Not Present</u>
- <u>Logical channel identity</u>	<u>3</u>
- <u>RLC logical channel mapping indicator</u>	<u>Not Present</u>
- <u>Number of RLC logical channels</u>	<u>1</u>
- <u>Uplink transport channel type</u>	<u>RACH</u>
- <u>UL Transport channel identity</u>	<u>Not Present</u>
- <u>Logical channel identity</u>	<u>3</u>
- <u>CHOICE RLC size list</u>	<u>Explicit List</u>
- <u>RLC size index</u>	<u>According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)</u>
- <u>MAC logical channel priority</u>	<u>3</u>
- <u>Downlink RLC logical channel info</u>	
- <u>Number of RLC logical channels</u>	<u>1</u>
- <u>Downlink transport channel type</u>	<u>FACH</u>
- <u>DL DCH Transport channel identity</u>	<u>Not Present</u>
- <u>DL DSCH Transport channel identity</u>	<u>Not Present</u>
- <u>Logical channel identity</u>	<u>3</u>

Test Procedure

UE is in CELL_DCH. SS set the RLC entity for SRB3 to stop. SS requests operator to deactivate the established PDP context. Then the UE shall transmit an UPLINK DIRECT TRANSFER message on the uplink DCCH. SS does not acknowledge the AM PDUs carrying UPLINK DIRECT TRANSFER message. The SS then sends a UTRAN MOBILITY INFORMATION message on SRB1 requesting the UE to do a SRNS relocation, 5s after asking the

operator to deactivate the established PDP context. The UE shall send a UTRAN MOBILITY INFORMATION CONFIRM message on SRB2. The SS set the RLC entity for SRB3 to continue upon receiving UTRAN MOBILITY INFORMATION CONFIRM message. Then UE shall retransmit an UPLINK DIRECT TRANSFER message on the uplink DCCH.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
1				<u>SS set the RLC entity for SRB3 to stop. SS requests operator to make an outgoing cal.</u>
2	→		<u>UPLINK DIRECT TRANSFER</u>	.
3		←	<u>UTRAN MOBILITY INFORMATION</u>	
4	→		<u>UTRAN MOBILITY INFORMATION CONFIRM</u>	<u>UE sends this message on uplink DCCH on AM RLC. After the reception, SS configures RB 3 to continue.</u>
5	→		<u>UPLINK DIRECT TRANSFER</u>	<u>DEEACTIVATE PDP CONTEXT REQUEST message is embedded in UPLINK DIRECT TRANSFER message.</u>

Specific Message Contents

UTRAN MOBILITY INFORMATION (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9 with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
<u>Ciphering mode info</u> <u>- Ciphering mode command</u> <u>- Ciphering algorithm</u> <u>- Ciphering activation time for DPCH</u> <u>- Radio bearer downlink ciphering activation time info</u> <u>- Radio bearer activation time</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u>	This presence of this IE is dependent on I X IT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. <u>Start/restart</u> UEA0 or UEA1. The indicated algorithm must be one of the algorithms supported by the UE as indicated in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message. (256+CFN-(CFN MOD 8 + 8))MOD 256, this IE is set to "Not present" if only PS RABs are established during the initial setup procedure. 1 Current RLC SN + 2 2 Current RLC SN + 2 3 Current RLC SN + 2 4 Current RLC SN + 2 20, this IE is set to "Not present" if PS RAB is not established during the initial setup procedure. Current RLC SN + 2
<u>Integrity protection mode info</u> <u>- Integrity protection mode command</u> <u>- Downlink integrity protection activation info</u> <u>- Integrity protection algorithm</u> <u>- Integrity protection initialisation number</u>	The presence of this IE is dependent on I X IT statements in TS 34.123- 3 2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. <u>Start</u> Not Present UIA1 SS selects an arbitrary 32 bits number for FRESH
<u>New U-RNTI</u> <u>- SRNC identity</u> <u>- S-RNTI</u>	0000 0000 0010B 0000 0000 0000 0000 0001B
<u>Downlink counter synchronisation info</u> <u>- RB with PDCP information list</u>	Not present

UTRAN MOBILITY INFORMATION CONFIRM (Step 4)

Check that the UE uses the same message sub-type found in TS 34.108 clause 9, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>Uplink counter synchronisation info</u> <u>- RB with PDCP information list</u> <u>- START list</u>	Not present Not checked.

INITIAL DIRECT TRANSFER (Step 5)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Integrity check info</u>	<u>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</u>
<u>- Message authentication code</u>	<u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u>
<u>- RRC Message sequence number</u>	<u>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</u>
<u>CN domain identity</u>	<u>PS domain</u>
<u>NAS message</u>	<u>DEACTIVATE PDP CONTEXT REQUEST</u>
<u>Measured results on RACH</u>	<u>Not checked</u>

~~FFS~~

8.1.6.4.5 Test requirement

After step 3, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message using uplink DCCH on AM RLC and then retransmit UPLINK DIRECT TRANSFER message on the uplink DCCH.

~~FFS~~

END OF MODIFICATION

START OF MODIFICATION

8.1.9a Signalling Connection Release Indication (RLC re-establishment):
CS signalling connection release

8.1.9a.1 Definition

8.1.9a.2 Conformance requirement

If a re-establishment of RLC on signalling radio bearer RB2 occurs before the successful delivery of the SIGNALLING CONNECTION RELEASE INDICATION message has been confirmed by RLC, the UE shall:

- 1> retransmit the SIGNALLING CONNECTION RELEASE INDICATION message on the uplink DCCH using AM RLC on signalling radio bearer RB2.

Reference

3GPP TS 25.331 clause 8.1.14.2a.

8.1.9a.3 Test purpose

To confirm that the UE re-transmits a SIGNALLING CONNECTION RELEASE INDICATION message after it re-establishes the RLC entity on signalling radio bearer RB2 if SRNS relocation occurs before the successful delivery of SIGNALLING CONNECTION RELEASE INDICATION message.

~~FFS~~

8.1.9a.4

Method of test

Initial Condition

System Simulator: 1 cells – Cell 1.

UE: CS-DCCH+DTCH_DCH (state 6-9) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH mode. The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain). The UE shall transmit an UPLINK DIRECT TRANSFER message (AUTHENTICATION RESPONSE) using AM on DCCH. After SS responds with a DOWNLINK DIRECT TRANSFER message (AUTHENTICATION REJECT), SS shall set the RLC entity for SRB2 to stop and wait for T3240 to expire in the UE. The UE shall send a SIGNALLING CONNECTION RELEASE INDICATION message which includes the CN domain identity with the same value as that in the UPLINK DIRECT TRANSFER message. But SS do not respond with STATUS PDU for the AM DATA PDU with POLL. The SS then sends a UTRAN MOBILITY INFORMATION message on SRB1 requesting the UE to do a SRNS relocation. SS shall set the RLC entity for SRB2 to continue. The UE shall send a UTRAN MOBILITY INFORMATION CONFIRM message. The UE shall re-transmit a SIGNALLING CONNECTION RELEASE INDICATION message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	<u>DOWNLINK DIRECT TRANSFER (AUTHENTICATION REQUEST)</u>	<u>Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.</u>
2		→	<u>UPLINK DIRECT TRANSFER (AUTHENTICATION RESPONSE)</u>	
3		←	<u>DOWNLINK DIRECT TRANSFER (AUTHENTICATION REJECT)</u>	<u>After SS transmits this message, SS sets the RLC entity for SRB2 to stop and waits for T3240 to expire.</u>
4		→	<u>SIGNALLING CONNECTION RELEASE INDICATION</u>	
5		←	<u>UTRAN MOBILITY INFORMATION</u>	<u>. SS sets RLC for SRB2 to continue.</u>
6		→	<u>UTRAN MOBILITY INFORMATION CONFIRM</u>	<u>UE sends this message on uplink DCCH on AM.</u>
7		→	<u>SIGNALLING CONNECTION RELEASE INDICATION</u>	<u>UE re-transmits this message.</u>

Specific Message ContentDOWNLINK DIRECT TRANSFER (Step 1)

Use the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

<u>Information Element</u>	<u>Value/remark</u>
<u>CN domain identity</u> <u>NAS message</u>	<u>CS domain or PS domain</u> <u>AUTHENTICATION REQUEST (CS domain) or</u> <u>AUTHENTICATION AND CIPHERING REQUEST</u> <u>(PS domain)</u>

UPLINK DIRECT TRANSFER (Step 2)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Integrity check info</u>	<u>The presence of this IE is dependent on IXIT</u> <u>statements in TS 34.123-2. If integrity protection is</u> <u>indicated to be active, this IE shall be present with</u> <u>the values of the sub IEs as stated below. Else, this</u> <u>IE and the sub-IEs shall be absent.</u>
<u>- Message authentication code</u>	<u>This IE is checked to see if it is present. The value is</u> <u>compared against the XMAC-I value computed by</u> <u>SS.</u>
<u>- RRC Message sequence number</u>	<u>This IE is checked to see if it is present. The value is</u> <u>used by SS to compute the XMAC-I value.</u>
<u>CN domain identity</u> <u>NAS message</u>	<u>CS domain or PS domain</u> <u>AUTHENTICATION FAILURE(CS domain) or</u> <u>AUTHENTICATION AND CIPHERING FAILURE (PS</u> <u>domain)</u>
<u>Measured results on RACH</u>	<u>Not checked</u>

UTRAN MOBILITY INFORMATION (Step 5)

Use the same message sub-type found in [9] TS 34.108 clause 9 with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
<u>Ciphering mode info</u> <u>- Ciphering mode command</u> <u>- Ciphering algorithm</u> <u>- Ciphering activation time for DPCH</u> <u>- Radio bearer downlink ciphering activation time info</u> <u>- Radio bearer activation time</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u>	This presence of this IE is dependent on I_XIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. <u>Start/restart</u> UEA0 or UEA1. The indicated algorithm must be one of the algorithms supported by the UE as indicated in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message. (256+CFN-(CFN MOD 8 + 8))MOD 256, this IE is set to "Not present" if only PS RABs are established during the initial setup procedure. 1 Current RLC SN + 2 2 Current RLC SN + 2 3 Current RLC SN + 2 4 Current RLC SN + 2 20, this IE is set to "Not present" if PS RAB is not established during the initial setup procedure. Current RLC SN + 2
<u>Integrity protection mode info</u> <u>- Integrity protection mode command</u> <u>- Downlink integrity protection activation info</u> <u>- Integrity protection algorithm</u> <u>- Integrity protection initialisation number</u>	The presence of this IE is dependent on I_XIT statements in TS 34.123-32. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. <u>Start</u> Not Present UIA1 SS selects an arbitrary 32 bits number for FRESH
<u>New U-RNTI</u> <u>- SRNC identity</u> <u>- S-RNTI</u>	0000 0000 0010B 0000 0000 0000 0000 0001B
<u>Downlink counter synchronisation info</u> <u>- RB with PDCP information list</u>	Not present

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Check that the UE uses the same message sub-type found in TS 34.108 clause 9, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>Uplink counter synchronisation info</u> <u>- RB with PDCP information list</u> <u>- START list</u>	Not present Not checked.

SIGNALLING CONNECTION RELEASE INDICATION (Step 7)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Integrity check info</u> - <u>Message authentication code</u> - <u>RRC Message sequence number</u>	<u>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</u> <u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u> <u>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</u>
<u>CN domain identity</u>	<u>Check to see if this value is the same as in the UPLINK DIRECT TRANSFER message.</u>

~~FFS~~

8.1.9a.5 Test requirement

After step 1 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 5, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message using uplink DCCH on AM RLC.

After step 6 the UE shall re-transmit a SIGNALLING CONNECTION RELEASE INDICATION message which includes the same CN domain identity as that found in the UPLINK DIRECT TRANSFER message.

~~FFS~~**END OF MODIFICATION****START OF MODIFICATION****8.1.9b Signalling Connection Release Indication (RLC re-establishment):
PS signalling connection release**8.1.9b.1 Definition8.1.9b.2 Conformance requirement

If a re-establishment of RLC on signalling radio bearer RB2 occurs before the successful delivery of the SIGNALLING CONNECTION RELEASE INDICATION message has been confirmed by RLC, the UE shall:

- 1> retransmit the SIGNALLING CONNECTION RELEASE INDICATION message on the uplink DCCH using AM RLC on signalling radio bearer RB2.

Reference

3GPP TS 25.331 clause 8.1.14.2a.

8.1.9b.3 Test purpose

To confirm that the UE re-transmits a SIGNALLING CONNECTION RELEASE INDICATION message after it re-establishes the RLC entity on signalling radio bearer RB2 if SRNS relocation occurs before the successful delivery of SIGNALLING CONNECTION RELEASE INDICATION message.

8.1.9b.4 Method of test

Initial Condition

System Simulator: 1 cells – Cell 1 is active.

UE: Registered Idle Mode on PS (state 3) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in idle mode of cell 1. SS requests operator to initial an outgoing PS call. UE shall send RRC CONNECTION REQUEST message on the uplink CCCH. Then the SS shall respond with a RRC CONNECTION SETUP message, which request the UE to enter CELL_DCH state, on a downlink CCCH. The UE shall then send a RRC CONNECTION SETUP COMPLETE message on the uplink DCCH. After this, the UE shall send a INITIAL DIRECT TRANSFER message to SS. This message contains a NAS message (SERVICE REQUEST). After SS has acknowledge the INITIAL DIRECT TRANSFER message, the SS shall set the RLC entity for SRB3 to stop wait for T3240 to expire in the UE. The UE shall send a SIGNALLING CONNECTION RELEASE INDICATION message which includes the CN domain identity with the same value as that in the INITIAL DIRECT TRANSFER message. But SS do not respond with STATUS PDU for the AM DATA PDU with POLL. The SS then sends a UTRAN MOBILITY INFORMATION message requesting the UE to do SRNS relocation. The UE shall send a UTRAN MOBILITY INFORMATION CONFIRM message. The UE shall re-transmit a SIGNALLING CONNECTION RELEASE INDICATION message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	SS request the operator to make an outgoing PS call.
2		←	RRC CONNECTION SETUP	
3		→	RRC CONNECTION SETUP COMPLETE	
4		→	INITIAL DIRECT TRANSFER (SERVICE REQUEST)	After SS acknowledges this message, SS set the RLC entity for SRB2 to stop and waits for T3240 to expire.
5		→	SIGNALLING CONNECTION RELEASE INDICATION	SS do not send any RLC response (STATUS PDU).
6		←	UTRAN MOBILITY INFORMATION	SS sets RLC for SRB2 to continue.
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	SIGNALLING CONNECTION RELEASE INDICATION	UE re-transmits this message.

Specific Message Content

RRC CONNECTION REQUEST (Step 1)

Check that the UE sends the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

<u>Information Element</u>	<u>Value/remark</u>
<u>Establishment cause</u>	<u>Originating Interactive Call or Originating Background Call</u>
<u>Measured results on RACH</u>	<u>Not checked.</u>

RRC CONNECTION SETUP (Step 2)

Use the same message sub-type “RRC CONNECTION SETUP message: UM (Transition to CELL_DCH)” as found in TS 34.108 clause 9.

RRC CONNECTION SETUP COMPLETE (Step 3)

Check that the UE sends the same message sub-type as found in TS 34.108 clause 9.

INITIAL DIRECT TRANSFER (Step 4)

Check that the UE sends the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

<u>Information Element</u>	<u>Value/remark</u>
<u>CN domain identity</u> <u>NAS message</u>	<u>PS domain</u> <u>SERVICE REQUEST</u>

UTRAN MOBILITY INFORMATION (Step 5)

Use the same message sub-type found in [9] TS 34.108 clause 9 with the following exception:

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled “Speech to CELL_DCH from CELL_DCH in CS” or “Non speech to CELL_DCH from CELL_DCH in CS”, with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
<u>Ciphering mode info</u> <u>- Ciphering mode command</u> <u>- Ciphering algorithm</u> <u>- Ciphering activation time for DPCH</u> <u>- Radio bearer downlink ciphering activation time info</u> <u>- Radio bearer activation time</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u> <u>- RB identity</u> <u>- RLC sequence number</u>	This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. <u>Start/restart</u> UEA0 or UEA1. The indicated algorithm must be one of the algorithms supported by the UE as indicated in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message. (256+CFN-(CFN MOD 8 + 8))MOD 256, this IE is set to "Not present" if only PS RABs are established during the initial setup procedure. 1 Current RLC SN + 2 2 Current RLC SN + 2 3 Current RLC SN + 2 4 Current RLC SN + 2 20, this IE is set to "Not present" if PS RAB is not established during the initial setup procedure. Current RLC SN + 2
<u>Integrity protection mode info</u> <u>- Integrity protection mode command</u> <u>- Downlink integrity protection activation info</u> <u>- Integrity protection algorithm</u> <u>- Integrity protection initialisation number</u>	The presence of this IE is dependent on IXIT statements in TS 34.123-32. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. <u>Start</u> Not Present UIA1 SS selects an arbitrary 32 bits number for FRESH
<u>New U-RNTI</u> <u>- SRNC identity</u> <u>- S-RNTI</u>	0000 0000 0010B 0000 0000 0000 0000 0001B
<u>Downlink counter synchronisation info</u> <u>- RB with PDCP information list</u>	Not present

UTRAN MOBILITY INFORMATION CONFIRM (Step 4)

Check that the UE uses the same message sub-type found in TS 34.108 clause 9, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>Uplink counter synchronisation info</u> <u>- RB with PDCP information list</u> <u>- START list</u>	Not present Not checked.

SIGNALLING CONNECTION RELEASE INDICATION (Step 8)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Integrity check info</u> - <u>Message authentication code</u> - <u>RRC Message sequence number</u>	<u>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</u> <u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u> <u>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</u>
<u>CN domain identity</u>	<u>Check to see if this value is the same as in the INITIAL DIRECT TRANSFER message.</u>

8.1.9b.5 Test requirement

In step 1, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on uplink CCCH.

After step 2, the UE shall transmit RRC CONNECTION SETUP COMPLETE message using AM RLC on uplink DCCH.

After step 3 the UE shall transmit INITIAL DIRECT TRANSFER messages using AM on DCCH.

After step 6, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message using uplink DCCH on AM RLC.

After step 7 the UE shall re-transmit a SIGNALLING CONNECTION RELEASE INDICATION message which includes the same CN domain identity as that found in the INITIAL DIRECT TRANSFER message.

END OF MODIFICATION

3GPP TSG-T1 Meeting #18
San Antonio, TX, USA, 10th – 14th February 2003

Tdoc # T1-030103

3GPP TSG-T1 SIG Meeting #27
San Antonio, TX, USA, 10th – 14th February 2003

Tdoc # T1S030219

CR-Form-v7

CHANGE REQUEST

⌘ TS 34.123-1 CR 451 ⌘ rev - ⌘ Current version: 5.2.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1 REL-5; Corrections to package 4 test cases on RRC Security
Source:	⌘ Ericsson
Work item code:	⌘ TEI Date: ⌘ 12/02/2003
Category:	⌘ F Release: ⌘ REL-5
Use <u>one</u> of the following categories:	
F (correction)	
A (corresponds to a correction in an earlier release)	
B (addition of feature),	
C (functional modification of feature)	
D (editorial modification)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	
Use <u>one</u> of the following releases:	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
Rel-4 (Release 4)	
Rel-5 (Release 5)	
Rel-6 (Release 6)	

Reason for change:	⌘ 8.1.7.1b
	1. Conformance requirement not up to date
	2. Test procedure do not reflect that there is activated security before the test (ciphering and integrity protection on SRBs) and the test performs a change of keys and activation of ciphering for a RB.
	3. A second valid SECURITY MODE COMMAND seems not needed to perform what is mentioned in the test purpose.
	4. X and Y notation in Specific message content of Step 6 is confusing. In addition More reasonable deltas for the activation times should be used.
	5. SECURITY MODE COMPLETE message is not correctly reflecting the content of the message and what should be used by SS.
	8.1.12
	6. Step 5-7 is not necessary since the 25.331 specifies that also erroneous messages should affect the variable.
Summary of change:	⌘ 8.1.7.1b
	1. Conformance requirement re-written and with extracts from TS 25.331 instead.
	2. Test purpose re-written to better reflect what is tested.
	3. Second valid SECURITY MODE COMMAND is removed (only mentioned in Test Procedure before the CR).
	4. X is replaced with 0 and Y is replaced with 0. In addition, ciphering activation time for SRB2 is changed to "Current RLC SN + 2" instead of "...+ 4". Also the delta activation times for integrity protection is changed to 1 from 2. However, for SRB2 the activation time is set to 0 to make sure that the UE ignores this value

(according to core specifications). The meaning of "Current RLC SN" is clarified to be the RLC SN of the next transmitted RLC PDU, i.e. the same as the value of the VT(S) variable in SS.

5. In Specific message content the SECURITY MODE COMPLETE message in step 7 is updated. It should contain activation times for both ciphering and integrity protection. All activation times as listed separately to better illustrate what the SS should check the IEs and the values for the UE to pass the test.

8.1.12

6. Step 5-7 is removed.

Additional editorial and reference corrections are also done,

Consequences if not approved:

⌘ Test cases on Security are not aligned with core requirements.

Clauses affected:

⌘ 8.1.7.1b and 8.1.12

Other specs affected:

Y	N
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Other core specifications ⌘
 Test specifications ⌘
 O&M Specifications ⌘

Other comments:

⌘ Affects Rel 99, Rel 4 and Rel 5 test cases.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.7 Security mode command

.....

8.1.7.1b Security mode command in CELL_DCH state (PS Domain)

8.1.7.1b.1 Definition

8.1.7.1b.2 Conformance requirement

Upon reception of the SECURITY MODE COMMAND message, the UE shall:

1> if neither IE "Ciphering mode info" nor IE "Integrity protection mode info" is included in the SECURITY MODE COMMAND:

2> set the variable INVALID_CONFIGURATION to TRUE.

...

1> prior to sending the SECURITY MODE COMPLETE message:

...

2> if the SECURITY MODE COMMAND message contained the IE "Integrity protection mode info":

3> include and set the IE "Uplink integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO for each signalling radio bearer:

...

2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted SECURITY MODE COMPLETE message;

2> transmit the SECURITY MODE COMPLETE message on the uplink DCCH in AM RLC;

...

If the IE "Ciphering mode info" is present and if the IE "Reconfiguration" in the variable CIPHERING_STATUS is set to FALSE, the UE shall:

...

1> apply the new ciphering configuration in the lower layers for all RBs that belong to a CN domain for which the IE "Status" of the variable SECURITY_MODIFICATION is set to "Affected" and all signalling radio bearers:

1> apply the new ciphering configuration as follows:

2> consider an activation time in downlink to be pending:

...

3> for AM-RLC until all AMD PDUs with sequence numbers up to and including activation time -1 have been received;

2> if the IE "Radio bearer downlink ciphering activation time info" is present:

3> apply the following procedure for each radio bearer and signalling radio bearers using RLC-AM or RLC-UM indicated by the IE "RB identity":

...

4> select an "RLC send sequence number" at which (activation) time the new ciphering configuration shall be applied in uplink for that radio bearer according to the following:

...

6> set a suitable value that would ensure a minimised delay in the change to the latest security configuration.

...

5> use the old ciphering configuration for the transmitted and received RLC PDUs with RLC sequence numbers smaller than the corresponding RLC sequence numbers indicated in the IE "Radio bearer uplink ciphering activation time info" sent to UTRAN and in the received IE "Radio bearer downlink ciphering activation time info" received from UTRAN, respectively;

5> use the new ciphering configuration for the transmitted and received RLC PDUs with RLC sequence numbers greater than or equal to the corresponding RLC sequence numbers indicated in the IE "Radio bearer uplink ciphering activation time info" sent to UTRAN and in the received IE "Radio bearer downlink ciphering activation time info" received from UTRAN, respectively;

...

If the IE "Integrity protection mode info" is present and if the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO is set to FALSE, the UE shall:

...

1> if IE "Integrity protection mode command" has the value "modify" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" and this IE was included in SECURITY_MODE_COMMAND:

...

2> start applying the new integrity protection configuration in the downlink at the RRC sequence number, for each signalling radio bearer n, indicated by the entry for signalling radio bearer n in the "RRC message sequence number list" in the IE "Downlink integrity protection activation info", included in the IE "Integrity protection mode info";

...

4> select a value of the RRC sequence number at which (activation) time the new integrity protection configuration shall be applied in uplink for that signalling radio bearer according to the following:

...

6> set a suitable value that would ensure a minimised delay in the change to the latest integrity protection configuration.

...

2> start applying the new integrity protection configuration in the uplink at the RRC sequence number, for each RBn, except for signalling radio bearer RB2, indicated by the entry for signalling radio bearer n in the "RRC message sequence number list" in the IE "Uplink integrity protection activation info", included in the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

2> start applying the new integrity protection configuration in the uplink at the RRC sequence number for signalling radio bearer RB2, as specified for the procedure initiating the integrity protection reconfiguration;

2> start applying the new integrity protection configuration in the downlink at the RRC sequence number, for each RBn, except for signalling radio bearer RB2, indicated by the entry for signalling radio bearer n in the "RRC message sequence number list" in the IE "Downlink integrity protection activation info";

NOTE: For signalling radio bearers that have a pending activation time as set for integrity protection by a previous procedure changing the integrity protection configuration, UTRAN should set this value in IE "Downlink integrity protection activation info".

2> start applying the new integrity protection configuration in the downlink at the RRC sequence number for signalling radio bearer RB2, as specified for the procedure initiating the integrity protection reconfiguration.

- ~~1. This procedure is used to trigger the start of ciphering or to command the restart of ciphering with the new ciphering configuration for the signalling radio bearers and any radio bearers of a particular CN Domain. It is also used to start integrity protection or modify integrity protection configuration for the signalling radio bearers.~~
- ~~2. When the UE receives a SECURITY MODE COMMAND message from the UTRAN, which indicates a downlink activation time for each effected SRB and RB, and new ciphering mode configuration, the UE shall apply the old ciphering configuration, for each particular SRB or RB, before the stated downlink activation time. It shall start to decipher using the new ciphering configuration at the downlink activation time.~~
- ~~3. After the UE has transmitted a SECURITY MODE COMPLETE message using the new integrity protection configuration which includes uplink activation time, it shall start to cipher transmission in the uplink using the new configuration at the respective uplink activation time for each SRB or RB.~~

Reference

3GPP TS 25.331 clauses 8.1.12.3, 8.6.3.4, 8.6.3.5.

8.1.7.1b.3 Test purpose

To confirm that the UE modifies an integrity protection configuration and applies new keys on reception of a correct SECURITY MODE COMMAND message.

To confirm that the UE ~~activates~~modifies ~~the a new~~ ciphering configurations in the uplink and downlink and applies new keys~~after the~~according to ~~transmitted~~stated activation times. Also confirms that the UE accepts a new ciphering configuration for a RB when ciphering is started for SRBs.

To confirm that after the UE receives a SECURITY MODE COMMAND message, it transmits a SECURITY MODE COMPLETE message to the UTRAN using the old ciphering configuration ~~together with the application of the~~and new integrity protection configuration.

To confirm that UE send SECURITY MODE FAILURE message when SS transmits a SECURITY MODE COMMAND message with a non comprehended critical extension~~that causes an invalid configuration.~~

To confirm that the UE sends a SECURITY MODE FAILURE message when UE receives an invalid SECURITY MODE COMMAND message.

8.1.7.1b.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH DCH ~~CELL_DCH~~ (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state with integrity protection and ciphering started for SRBs. The SS initiates an Authentication and Ciphering procedure, which will result in the generation of a new security keyset (CK/IK).

The SS transmits a SECURITY MODE COMMAND message which contains an unexpected critical message extension . The UE shall respond by sending SECURITY MODE FAILURE message on the DCCH.

Then SS transmits a SECURITY MODE COMMAND message with IEs "Ciphering mode info" and "Integrity protection mode info both omitted". Again the UE shall not trigger any ciphering algorithm and it shall respond by sending SECURITY MODE FAILURE message on the DCCH.

Next, the SS transmits a valid SECURITY MODE COMMAND message which includes the correct downlink activation times and "Integrity check info" IE. ~~Following that, the SS immediately transmits another valid SECURITY MODE COMMAND message to the UE. Then T~~ the UE shall check the integrity check info and shall start to configure ciphering in downlink according to the ~~first valid~~ SECURITY MODE COMMAND message.

Then UE shall transmit a SECURITY MODE COMPLETE message which contains ~~the correct~~ uplink activation times and also the correct "Integrity check info" IE using the new integrity protection configuration. SS records the uplink ciphering activation time for RB 2.

Next, the SS transmits UE CAPABILITY ENQUIRY message repeatedly on the downlink DCCH using RLC-AM mode. The UE shall respond to each downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS ~~then shall~~ send UE CAPABILITY INFORMATION CONFIRM messages to the UE for each received UE CAPABILITY INFORMATION message from the UE.

This cycle repeats itself until both the uplink and downlink ciphering activation time for RB 2 has elapsed. SS checks all uplink UE CAPABILITY INFORMATION messages are integrity-protected by UIA algorithm, and that the messages contain the correct values for "Integrity check info" IE. This can be verified in the SS through the reception of a correctly ciphered and integrity-protected UE CAPABILITY INFORMATION message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on DCH_state.
1a		←	AUTHENTICATION AND CIPHERING REQUEST	GMM message which will result in the generation of a new security keyset
1b		→	AUTHENTICATION AND CIPHERING RESPONSE	GMM
2		←	SECURITY MODE COMMAND	See message content.
3		→	SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "Protocol Error" and IE "Protocol Error Information" shall be set to "Message extension not comprehended".
4		←	SECURITY MODE COMMAND	See message content.
5		→	SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "invalid configuration".
6		←	SECURITY MODE COMMAND	See specific message contents.
7		→	SECURITY MODE COMPLETE	SS verifies that this message is sent using the old ciphering configuration <u>and with the new integrity protection configuration</u> . SS records the uplink ciphering activation time for RB 2.
8		←	UE CAPABILITY ENQUIRY	SS repeats step 8, 9 and 10 until its internal uplink and downlink RLC SN have both surpassed the uplink and downlink ciphering activation time specified for RB2. This message is sent on the downlink DCCH using RLC-AM.
9		→	UE CAPABILITY INFORMATION	UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
10		←	UE CAPABILITY INFORMATION CONFIRM	

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

[Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:](#)

Information Element	Value/remark
Integrity check info	Calculated result in SS Next RRC SN '01'H
Message authentication code	
RRC Message sequence number	
Critical extensions	

SECURITY MODE FAILURE (Step 3)

[Message content is ~~T~~The same ~~message-as~~ found in ~~\[9\] \(TS 34.108\)~~ Clause 9 ~~of TS 34.108~~ shall be transmitted by the UE on the uplink DCCH, with the exception of the following IEs:](#)

Information Element	Value/remark
Failure cause	Protocol error
Failure cause	
Protocol error information	Message extension not comprehended
Protocol error cause	

SECURITY MODE COMMAND (Step 4)

[Use the same message content as found in clause 9 of TS 34.108, with the following exceptions:](#)

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	Calculated result in SS Next RRC SN Same as originally sent by UE (and stored in SS)
Message authentication code	
RRC Message sequence number	
Security Capability	
Ciphering mode info	Not Present
Integrity protection mode info	Not Present
CN domain identity	PS Domain

SECURITY MODE FAILURE (Step 5)

[Message content is ~~T~~The same ~~message-as~~ found in ~~\[9\] \(TS 34.108\)~~ Clause 9 ~~of 34.108~~ shall be transmitted by the UE on the uplink DCCH, with the exception of the following IEs:](#)

Information Element	Value/remark
Failure cause	Invalid configuration

SECURITY MODE COMMAND (Step 6)

[See notes below for the value of Y.](#)

Information Element	Value/remark
RRC transaction identifier	X 0
Integrity check info	
Message authentication code	Calculated result in SS
RRC Message sequence number	Next RRC SN
Security Capability	Same as originally sent by UE (and stored in SS)
Ciphering mode info	
Ciphering mode command	Start/restart
Ciphering algorithm	UEA1
Activation time for DPCH	Not Present
Radio bearer downlink ciphering activation time info	
RB Identity	1
RLC sequence number	Current RLC SN X Y
RB Identity	2
RLC sequence number	Current RLC SN X Y + 2 X Y
RB Identity	3
RLC sequence number	Current RLC SN X Y
RB Identity	4
RLC sequence number	Current RLC SN X Y
RB Identity	20
RLC sequence number	Current RLC SN X Y
Integrity protection mode info	
Integrity protection mode command	Modify
Downlink integrity protection activation info	
	Current RRC SN for SRB0 X Y
	Current RRC SN for SRB1 X Y
	Current RRC SN for SRB2 + 20
	Current RRC SN for SRB3 X Y
	Current RRC SN for SRB4 X Y
Integrity protection algorithm	UIA1
CN domain identity	PS Domain

NOTE: "Current RLC SN" is defined as the value of VT(S) in the SS at the time when the SECURITY MODE COMMAND is submitted to RLC for transmission, that is, the RLC send sequence number of the next transmitted RLC PDU on the particular radio bearer. "Current RRC SN" is defined as the RRC message sequence number of the next transmitted RRC message on the particular radio bearer.

Note — X = 0 (Step 6), and Y = 1 (Step 6).

SECURITY MODE COMPLETE (Step 7)

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	
- Message Authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. Checked to see if present
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. Checked to see if present
Uplink integrity protection activation info	
- RRC message sequence number list	Check to see if the RRC SN for RB 0 to RB 4 are present
Radio bearer uplink ciphering activation info	
-RRC message sequence number	Check to see if the RRC SN for RB 0 is present
-RRC message sequence number	Check to see if the RRC SN for RB 1 is present
-RRC message sequence number	Check to see if the RRC SN for RB 2 is present
-RRC message sequence number	Check to see if the RRC SN for RB 3 is present
-RRC message sequence number	Check to see if the RRC SN for RB 4 is present
Radio bearer uplink ciphering activation time info	
- Radio bearer activation time	
- RB Identity	1
- RB Identity other than RB2 RLC sequence number	Check to see if the RLC SN for RB1, 3, 4 and 20 are is present
number	2
- RB Identity	SS records this value. See step 8 in 'expected sequence'
- RLC sequence number	
- RB Identity	3
- RLC sequence number	Check to see if the RLC SN for RB3 is present
- RB Identity	4
- RLC sequence number	Check to see if the RLC SN for RB4 is present
- RB Identity	20
- RLC sequence number	Check to see if the RLC SN for RB20 is present

8.1.7.1b.5 Test requirement

After step 2 the UE shall transmit a SECURITY MODE FAILURE message to report the protocol error detected in the first SECURITY MODE COMMAND message.

After step 4 the UE shall transmit a SECURITY MODE FAILURE message to report on the invalid configuration detected in the second SECURITY MODE COMMAND message.

At step 7 SS checks that the SECURITY MODE COMPLETE message is received ciphered using the old configuration and that the calculated "integrity check info" IE is correct [according to the new integrity protection configuration \(new key and HFN set to zero\)](#).

After step 7 SS verifies that all uplink signalling messages on RB2 are integrity protected with ~~UIA1 algorithm~~ [the new integrity protection configuration](#).

After uplink ciphering activation time has elapsed, SS verifies that the UE CAPABILITY INFORMATION message received is ~~integrity protected with UIA algorithm and~~ ciphered with the new ciphering configuration ~~and algorithm~~ [as](#) indicated in the SECURITY MODE COMMAND (Step 6) message.

After downlink ciphering activation time has elapsed, SS shall apply ciphering to all downlink messages using the new [ciphering](#) configuration. At least one more cycle between step 8 and step 10 shall be repeated correctly after activation time on both directions has elapsed and the messages on both direction shall be ciphered and integrity protected.

.....

8.1.12 Integrity Protection

8.1.12.1 Definition

8.1.12.2 Conformance requirement

If the UE receives an RRC message on signalling radio bearer with RB identity n, the "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" and the IE 'Integrity check info' is present the UE shall:

- 1> check the value of the IE "RRC message sequence number" included in the IE "Integrity check info";
- 2> if the "Downlink RRC Message sequence number" is not present in the variable INTEGRITY_PROTECTION_INFO:
 - 3> initialise the "Downlink RRC Message sequence number" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO with the value of the IE "RRC message sequence number" included in the IE "Integrity check info" of the received message.
- 2> if the "Downlink RRC Message sequence number" is present in the variable INTEGRITY_PROTECTION_INFO:
 - 3> if the RRC message sequence number is lower than the "Downlink RRC Message sequence number" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO:
 - 4> increment "Downlink RRC HFN" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO with one.
 - 3> if the RRC message sequence number is equal to the "Downlink RRC Message sequence number" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO:
 - 4> discard the message.
- 1> calculate an expected message authentication code in accordance with subclause 8.5.10.3 of TS25.331;
- 1> compare the expected message authentication code with the value of the received IE "message authentication code" contained in the IE "Integrity check info";
- 2> if the expected message authentication code and the received message authentication code are the same, the integrity check is successful:
 - 3> update the "Downlink RRC Message sequence number" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO with the value of the IE "RRC message sequence number" included in the IE "Integrity check info" of the received RRC message.
- 2> if the calculated expected message authentication code and the received message authentication code differ:
 - 3> if the IE "RRC message sequence number" included in the IE "Integrity check info" is lower than the "Downlink RRC Message sequence number" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO (in this case the "Downlink RRC HFN" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO was incremented by one, as stated above):
 - 4> decrement "Downlink RRC HFN" for signalling radio bearer RBn in the variable INTEGRITY_PROTECTION_INFO by one.
 - 3> discard the message.

If the UE receives an RRC message on signalling radio bearer with identity n, the "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" and the IE 'Integrity check info' is not present the UE shall:

1> discard the message.

Reference

3GPP TS 25.331 clause 8.5.101, ~~clause 13.5.2~~

8.1.12.3 Test purpose

To confirm that the UE discards any RRC messages that include wrong message authentication code, or RRC message sequence number, or do not include IE "Integrity Check Info" after integrity protection is activated.

8.1.12.4 Method of test

Initial Condition

System Simulator: 1cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE after integrity protection is activated on all SRBs.

Test Procedure

The UE is in CELL_DCH state, ~~with~~ radio access bearer and integrity protection is already activated in generic setup procedure.

SS transmits RRC CONNECTION RELEASE message which does not include IE "Integrity Check Info" on downlink DCCH. The UE shall discard this message and shall not respond using RRC CONNECTION RELEASE COMPLETE message.

Then SS transmits RRC CONNECTION RELEASE message which includes wrong message authentication code on downlink DCCH. The UE shall discard [this message](#) and shall not respond using RRC CONNECTION RELEASE COMPLETE message.

~~To assign the Downlink RRC message sequence number on SRB1 SS transmits UE CAPABILITY ENQUIRY message on downlink DCCH using UM RLC. The UE shall transmit UE CAPABILITY INFORMATION message. Then SS transmits UE CAPABILITY INFORMATION CONFIRM message on downlink DCCH using UM RLC. Since Downlink RRC message sequence number is stored in the variable INTEGRITY_PROTECTION_INFO, Then SS transmits RRC CONNECTION RELEASE message which includes IE "RRC Message sequence number" as set to the same sequence number as the number in previous received RRC message. The UE shall discard this message and shall not respond using RRC CONNECTION RELEASE COMPLETE message.~~

Then SS transmits RRC CONNECTION RELEASE message which includes correct RRC Message sequence number and message authentication code. The UE shall transmit RRC CONNECTION RELEASE COMPLETE message on uplink DCCH and enter to idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RRC CONNECTION RELEASE	See specific message content.
2				During 5s after step 1, confirm that UE does not transmit RRC CONNECTION RELEASE COMPLETE message. If RRC CONNECTION RELEASE COMPLETE message is received, the test is ended as fail.
3		←	RRC CONNECTION RELEASE	See specific message content.
4				During 5s after step 3, confirm that UE does not transmit RRC CONNECTION RELEASE COMPLETE message. If RRC CONNECTION RELEASE COMPLETE message is received, the test is ended as fail.
5		←	Void UE CAPABILITY ENQUIRY	Use default message
6		→	Void UE CAPABILITY INFORMATION	Use default message
7		←	Void UE CAPABILITY INFORMATION CONFIRM	Use default message
8		←	RRC CONNECTION RELEASE	See specific message content.
9				During 5s after step 8, confirm that UE does not transmit RRC CONNECTION RELEASE COMPLETE message. If RRC CONNECTION RELEASE COMPLETE message is received, the test is end as fail.
10		←	RRC CONNECTION RELEASE	Use default message content.
11		→	RRC CONNECTION RELEASE COMPLETE	
12		↔	CALL C.1	If the test result of C.1 indicates that UE is in Idle state, the test passes, otherwise it fails.

Specific Message Content

RRC CONNECTION RELEASE (Step 1)

Use the same message type found in clause 9 of TS 34.108, with the following exception:

Information Element	Value/remark
Integrity check info	Not Present

RRC CONNECTION RELEASE (Step 3)

Use the same message type found in clause 9 of TS 34.108, with the following exception:

Information Element	Value/remark
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and set different value from the calculated result to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its previous internal counter value.

RRC CONNECTION RELEASE (Step 8)

Use the same message type found in clause 9 of TS 34.108, with the following exception:

Information Element	Value/remark
Integrity check info - Message authentication code - RRC Message sequence number	SS calculates the value of MAC-I for this message and set the result to this IE. SS provides the value of this IE, from its previous internal counter value .

8.1.12.5 Test requirement

After step 1 the UE shall not transmit RRC CONNECTION RELEASE COMPLETE message on the uplink DCCH.

After step 3 the UE shall not transmit RRC CONNECTION RELEASE COMPLETE message on the uplink DCCH.

After step 8 the UE shall not transmit RRC CONNECTION RELEASE COMPLETE message on the uplink DCCH.

After step 10 the UE shall transmit RRC CONNECTION RELEASE COMPLETE message on the uplink DCCH.

<<Start modified section>>

Specific Message Content

RRC CONNECTION REQUEST

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Originating Conversational Call or Originating Interactive Call or Originating Background Call or Originating Streaming Call

RRC CONNECTION SETUP (FDD)

For this message, the contents of the message to be used are basically identical to the message sub-type entitled "RRC CONNECTION SETUP message (Transition to CELL_FACH)" found in TS 34.108, clause 9 with the following exception:

Information Element	Value/remark
Capability update requirement	
UE radio access FDD capability update requirement	TRUE
UE radio access TDD capability update requirement	FALSE
System specific capability update requirement list	gsm

<<End of modified section>>