

Source: T1
Title: CR's to TS 34.123-1 v5.4.0 for approval
Agenda item: 5.1.3
Document for: Approval

This document contains the CRs to TS 34.123-1 v5.4.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

34.123-1

Tdoc #	CR #	Rev	Phase	Title	cat	Versi on in	Versi on out	WI	Conclusion
T1-030801	531	0	Rel-5	Corrections and updates on 8.2.1 Radio Bearer Establishment for TDD mode	F	5.4.0	5.5.0	TEI5	Approved.
T1-030802	532	0	Rel-5	Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH test updated for TDD mode (clause 8.2.2.35), TS 34.123-1	F	5.4.0	5.5.0	TEI5	Approved.
T1-030895	534	0	Rel-5	Correction to RLC testcases 7.2.3.21 and 7.2.3.22	F	5.4.0	5.5.0	TEI5	Approved.
T1-030978	535	0	Rel-4	Inclusion of tests for combinations on SCCPCH for TDD 1.28 Mcps option	F	5.4.0	5.5.0	TEI4	Approved.
T1-030979	536	0	Rel-4	Inclusion of test for 34.123-1 for combination on PRACH for TDD 1.28 Mcps option, Rel-4	F	5.4.0	5.5.0	TEI4	Approved.
T1-030989	537	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 4 GMM test cases 12.4.1.2 and 12.4.1.4d	F	5.4.0	5.5.0	TEI5	Approved.
T1-030991	538	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 1 RRC test cases in clause 8.1	F	5.4.0	5.5.0	TEI5	Approved.
T1-030993	539	0	Rel-5	CR to TS 34.123-1 [REL-5] Low priority PDCP test case 7.3.3.1	F	5.4.0	5.5.0	TEI5	Approved.
T1-031039	540	0	Rel-5	CR 34.123-1 Rel-5: Mobile identity field removed in TC 12.4.2.2	F	5.4.0	5.5.0	TEI5	Approved.
T1-031043	541	0	Rel-5	CR to 34.123-1 REL-5; Removal of package 2 MAC test case 7.1.2.2.1	F	5.4.0	5.5.0	TEI5	Approved.
T1-031067	542	0	Rel-5	Corrections to Package 1 RRC test case 8.1.2.2	F	5.4.0	5.5.0	TEI5	Approved.
T1-031068	543	0	Rel-5	Corrections to P2 MM test case 9.4.2.2/test 2	F	5.4.0	5.5.0	TEI5	Approved.
T1-031074	544	0	Rel-5	CR to 34.123-1 REL-5; Corrections to package 4 and low priority RRC test cases on Unsupported configuration	F	5.4.0	5.5.0	TEI5	Approved.
T1-031078	545	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 2 MM test case 9.4.5.3 Location updating/ periodic normal/ test 2	F	5.4.0	5.5.0	TEI5	Approved.
T1-031084	546	0	Rel-5	Corrections to 34.123-1 v5.4.0 Package 4 test case (8.2.3.11)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031085	547	0	Rel-5	Corrections to 34.123-1 v5.4.0 Package 4 test case (8.2.6.11)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031086	548	0	Rel-5	Corrections to 34.123-1 v5.4.0 Package 4 test case (8.2.6.12)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031089	549	0	Rel-5	Corrections to 34.123-1 v5.4.0 low priority test case (8.2.6.14)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031090	550	0	Rel-5	Corrections to 34.123-1 v5.4.0 low priority test case (8.3.1.23)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031091	551	0	Rel-5	Corrections to 34.123-1 v5.4.0 low priority	F	5.4.0	5.5.0	TEI5	Approved.

				test case (8.3.4.5)					
T1-031092	552	0	Rel-5	Correction to 34.123-1 v5.4.0 Low priority test case (8.4.1.22)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031093	553	0	Rel-5	Corrections to 34.123-1 v5.4.0 low priority test case (8.4.1.39)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031099	554	0	Rel-5	CR to 34.123-1 REL-5; Correction of Package 4 RRC test case 8.2.6.37	F	5.4.0	5.5.0	TEI5	Approved.
T1-031135	555	0	Rel-5	Removal of test case 8.2.2.20	F	5.4.0	5.5.0	TEI5	Approved.
T1-031143	556	0	Rel-5	CR to 34.123-1, Rel-5; correction to idle mode section according to RP-030289	F	5.4.0	5.5.0	TEI5	Approved.
T1-031144	557	0	Rel-5	CR to 34.123-1, Rel-5; correction to package 1 RLC test case 7.2.3.18 according to RP-030292	F	5.4.0	5.5.0	TEI5	Approved.
T1-031147	558	0	Rel-5	Correction to 34.123-1 v5.4.0 Package 1 test case (8.4.1.5) – Revision of T1-031080	F	5.4.0	5.5.0	TEI5	Approved.
T1-031148	559	0	Rel-5	Corrections to 34.123-1 v5.4.0 Package 3 test case (8.4.1.24) – Revision of T1-031082	F	5.4.0	5.5.0	TEI5	Approved.
T1-031149	560	0	Rel-5	Corrections to 34.123-1 v5.4.0 Package 4 test case (8.4.1.12) – Revision of T1-031088	F	5.4.0	5.5.0	TEI5	Approved.
T1-031161	561	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 4 RRC test cases: 8.1.3.5 and 8.3.1.15	F	5.4.0	5.5.0	TEI5	Approved.
T1-031180	562	0	Rel-5	Corrections to 34.123-1 v5.4.0 Package 2 test cases (8.3.1.21 and 8.3.1.22) – Revision of T1-031081	F	5.4.0	5.5.0	TEI5	Approved.
T1-031199	563	0	Rel-5	CR to TS 34.123-1 [REL-5] Low priority GMM test cases 12.2.2.8, 12.3.2.4 and 12.9.9	F	5.4.0	5.5.0	TEI5	Approved.
T1-031200	564	0	Rel-5	Correction to 34.123-1, section 7.2.3.19 and 7.2.3.24	F	5.4.0	5.5.0	TEI5	Approved.
T1-031201	565	0	Rel-5	Correction to GCF package 1 RLC testcases 7.2.3.26 and 7.2.3.27	F	5.4.0	5.5.0	TEI5	Approved.
T1-031203	566	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 1 RRC test cases 8.3.4.3 and 8.4.1.1	F	5.4.0	5.5.0	TEI5	Approved.
T1-031204	567	0	Rel-5	CR to 34.123-1 REL-5; Periodical RLC STATUS PDU detection in RRC Radio Bearer Reconfiguration Package 2 and 3 test cases	F	5.4.0	5.5.0	TEI5	Approved.
T1-031209	568	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 2 RRC test case 8.2.2.19	F	5.4.0	5.5.0	TEI5	Approved.
T1-031210	569	0	Rel-5	CR to 34-123-1, Rel-5; URA Identity in Cell Update Confirm and URA Update Confirm	f	5.4.0	5.5.0	TEI5	Approved.
T1-031212	570	0	Rel-5	CR to 34.123-1 on Correction to C/T field value for test case 7.1.1.8	F	5.4.0	5.5.0	TEI5	Approved.
T1-031213	571	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 2 RRC test case 8.3.1.10 Cell Update: expiry of T307 timer after T305 expiry and being out of service area.	F	5.4.0	5.5.0	TEI5	Approved.
T1-031214	572	0	Rel-5	CR to 34.123-1 REL-5; Correction to CC test cases 10.1.2.2.1 (package 4), 10.1.2.2.2 (package 3) and 10.1.2.9.2 (low prio)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031216	573	0	Rel-5	CR to TS 34.123-1 [REL-5] Package 2 GMM test case 12.4.2.2	F	5.4.0	5.5.0	TEI5	Approved.
T1-031218	574	0	Rel-5	CR 34.123-1 Rel-5: TC 12.8 Ready Timer in use	F	5.4.0	5.5.0	TEI5	Approved.
T1-031244	575	0	Rel-5	CR to 34.123-1 REL-5; Correction to package 1 GMM test case 12.3.1.2	F	5.4.0	5.5.0	TEI5	Approved.
T1-031069	576	0	Rel-5	Corrections to low priority Multi RAB test cases	F	5.4.0	5.5.0	TEI5	Approved.
T1-031219	577	0	Rel-5	Corrections to P3 Inter RAT measurement test case 8.4.1.31	F	5.4.0	5.5.0	TEI5	Approved.
T1-031254	578	0	Rel-5	CR to 34.123-1 R5; Correction to Package 1 RRC test case 8.2.5.1	F	5.4.0	5.5.0	TEI5	Approved.
T1-031256	579	0	Rel-5	CR to 34.123-1 REL-5; Correction to package 2 MAC test case 7.1.3.1	F	5.4.0	5.5.0	TEI5	Approved.
T1-031041	580	0	Rel-5	Introduction of new test cases for a routing area updating procedure due to a change of DRX parameter IE	F	5.4.0	5.5.0	TEI5	Approved.
T1-031037	581	0	Rel-5	CR 34.123-1 Rel-5: TC 9.4.2.3 doesn't	F	5.4.0	5.5.0	TEI5	Approved

				correspond to conformance claim					
T1-031208	582	0	Rel-5	Corrections to 34.123-1 v5.4.0 low priority test case (8.2.3.26)	F	5.4.0	5.5.0	TEI5	Approved.
T1-031279	583	0	Rel-5	CR 34.123-1 Rel-5: Automatic MO SMS repeat at TP layer	F	5.4.0	5.5.0	TEI5	Approved

T1-030890	533	0	Rel-5	Modifications to Package 1 RRC measurement test cases (revision to T1-030739)	F	5.3.0	5.5.0	TEI5	Withdrawn.
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CHANGE REQUEST

⌘ **34.123-1 CR 531** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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:	⌘ Corrections and updates on 8.2.1 Radio Bearer Establishment for TDD mode		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 20/07/2003
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:	⌘ Some corrections and updates are needed to apply the RB establishment methods to TDD mode
Summary of change:	⌘ <ul style="list-style-type: none"> • Conformance requirement updated for TDD in different clauses. • References for Annex A corrected to clause 9 in TS 34.108 • 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) <ul style="list-style-type: none"> ○ RADIO BEARER SETUP (Step 1) • 8.2.1.7 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration) <ul style="list-style-type: none"> ○ RADIO BEARER SETUP (Step 3) applicable for FDD and TDD • 8.2.1.14 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration) <ul style="list-style-type: none"> ○ RADIO BEARER RECONFIGURATION (Step1) • 8.2.1.18 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success (Subsequently received) <ul style="list-style-type: none"> ○ RADIO BEARER SETUP (Step 1) • Table 8.2.1.23 updated for FDD
Consequences if not approved:	⌘ RAB for TDD option could not be tested properly

Clauses affected:	⌘ 8.2.1										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <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 ⌘	Y	N								
Y	N										
	Test specifications										
	O&M Specifications										

Other comments: ☒

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

8.2.1 Radio Bearer Establishment

8.2.1.1 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Success

8.2.1.1.1 Definition

8.2.1.1.2 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 ([FDD only](#));
- 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;~~

1> in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):

2> set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.

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.

8.2.1.1.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message.

8.2.1.1.4 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		
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.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP 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.

8.2.1.1.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER SETUP COMPLETE message.

8.2.1.2 Void

8.2.1.3 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.1.3.1 Definition

8.2.1.3.2 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 SETUP message:

...

2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.

8.2.1.3.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of receiving a RADIO BEARER SETUP message which includes parameters of its unsupported configuration.

8.2.1.3.4 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 in which the frequency cannot be supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP 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 SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the 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	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 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 indicated as "Non-speech in CS" 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 (FDD)

Information Element	Value/remark
Frequency info CHOICE mode - UARFCN uplink (Nu) - UARFCN downlink (Nd)	FDD 0 950

RADIO BEARER SETUP (TDD)

Information Element	Value/remark
Frequency info CHOICE mode - UARFCN (Nt)	TDD 0

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 ~~Annex A~~ [TS 34.108 clause 9](#), with the following exceptions:

Information Element	Value/remark
Message Type Failure cause	Configuration unsupported

8.2.1.3.5 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 1 the UE transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" 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.

8.2.1.4 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".

NOTE: The criteria defined in this subclause only apply in case the UE performs synchronisation procedure A (FDD only).

...

If the received message caused the UE to be in CELL_DCH state and the UE according to subclause 8.5.4 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: 2 cells. – Cell 1 is active and cell 2 is inactive.
 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

Table 8.2.1.4

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	-60	OFF	-75
P-CCPCH RSCP (TDD)	dBm	-60	-60	OFF	-75

Table 8.2.1.4 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. 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 8.2.1.4. The SS transmits a RADIO BEARER SETUP message to the UE specifying a configuration in cell 2 and SS keeps its old dedicated channel configuration in cell 1. Then after T312 expiry, the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH in cell 1

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 in cell 1 and does not configure a physical channel in cell 2 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	Setup
Measurement reporting mode	Acknowledged mode RLC Periodical Reporting
- Measurement Report Transfer Mode	
- 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
- 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) ([FDD](#))

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 clause 9 of TS 34.108, with the following exceptions.

Information Element	Value/remark
Downlink information for each radio link list	
- Downlink information for each radio links	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary CPICH scrambling code	Ref. to the Default setting for cell 2 in TS34.108 clause 6.1 (FDD)

[RADIO BEARER SETUP \(Step 1\) \(TDD\)](#)

[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 clause 9 of TS 34.108, with the following exceptions:](#)

Information Element	Value/remark
Downlink information for each radio link list	
- Downlink information for each radio links	
- CHOICE mode	TDD
- Primary CCPCCH info	Ref. to the Default setting for cell 2 in TS34.108 clause 6.1 (TDD)

RADIO BEARER SETUP FAILURE (Step 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, 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 Void

8.2.1.6 Void

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.

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 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 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 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	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
- 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	Traffic volume measured results list
- CHOICE measurement	
- 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
- RB identity	
- 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 clause 9 of TS 34.108 with the following exceptions:

RADIO BEARER SETUP (Step 3) (FDD)

Information Element	Value/remark
RAB information for setup list	
- RAB information for setup	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)"

~~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, with the following exceptions:

Information Element	Value/remark
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.

8.2.1.8 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH: Success

8.2.1.8.1 Definition

8.2.1.8.2 Conformance requirement

If the UE receives:

- a RADIO BEARER SETUP message; or

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS 25.214 ([FDD only](#));
- 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 IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS 25.304.
- 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:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select PRACH according to TS 25.331 subclause 8.5.17;
- 1> select Secondary CCPCCH 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";
 - 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 TS 25.331 subclause 8.3.1 using the cause "Uplink data transmission";
 - 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;

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.

8.2.1.8.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message.

8.2.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell.

NOTE: The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

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, after the test operator is asked to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE. After the UE receives this message, it transits from CELL_DCH to CELL_FACH state. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state. 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		←	RADIO BEARER SETUP	SS requests test operator to make an outgoing packet-switched data call.
2		→	RADIO BEARER SETUP COMPLETE	The UE selects PRACH and S-CCPCH indicated in SIB5 or SIB6 after entering CELL_FACH state.
3		↔	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

For RADIO BEARER SETUP message in step 1, 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
New C-RNTI	0000 0000 0000 0001B

8.2.1.8.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER SETUP COMPLETE message.

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

- If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:
 -
 - if the contents of the variable C_RNTI is empty:
 - perform a cell update procedure according to clause 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:

- transmit a UTRAN MOBILITY INFORMATION CONFIRM as response message using AM RLC.
3. In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:
- 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, 8.3.1.7, 8.2.2.4.

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.

NOTE: The 'timer poll' value in the SS RLC transmit entity should be set to 800 ms.

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 DCCH 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.

8.2.1.9.5 Test requirement

1. After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".
2. After step 5 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.
3. After step 6 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

8.2.1.10 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success

8.2.1.10.1 Definition

8.2.1.10.2 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 [\(FDD only\)](#);
- 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_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI.

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.

8.2.1.10.3 Test purpose

To confirm that the UE establishes a new radio bearer according to a RADIO BEARER SETUP message.

8.2.1.10.4 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, after SS prompts the test operator to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE . After the UE receives this message, it configures them and establishes the required radio bearers. 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		
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.

Specific Message Contents

RADIO BEARER SETUP

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" in [9] TS 34.108 clause 9.

8.2.1.10.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

8.2.1.11 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.1.11.1 Definition

8.2.1.11.2 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 SETUP message:

...

2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.

8.2.1.11.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of it receiving a RADIO BEARER SETUP message, which includes parameters of an unsupported configuration.

8.2.1.11.4 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 with a stated frequency that cannot be supported by the UE. After the UE receives this message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting value "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 SETUP	This message includes an unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE shall transmit this message using RLC-AM mode and do not change the current 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	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	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	Traffic volume measured results list
- CHOICE measurement	
- 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 "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

RADIO BEARER SETUP (FDD)

Information Element	Value/remark
Frequency info	
- UARFCN uplink (Nu)	0
- UARFCN downlink (Nd)	950

RADIO BEARER SETUP (TDD)

Information Element	Value/remark
Frequency info - CHOICE mode - UARFCN (Nt)	TDD 0

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 Annex A, with the following exceptions:

Information Element	Value/remark
Message Type Failure cause	Configuration unsupported

8.2.1.11.5 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 1 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" 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.

8.2.1.12 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	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	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- 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" clause 9 of TS 34.108.

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, with the following exceptions:

Information Element	Value/remark
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 "Cipherring 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.

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	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	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- 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.

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 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 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, 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.

8.2.1.14 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.1.14.1 Definition

8.2.1.14.2 Conformance requirement

If the received message is any of the messages:

- RADIO BEARER SETUP; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or

...

- 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:

...

- 3> else:

- 4> reject the transaction; and

- 4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS:

- 5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:

- 1> not apply the configuration contained in the received reconfiguration message;
- 1> transmit a failure response message as specified in subclause TS 25.331 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 "incompatible simultaneous reconfiguration".
- 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 8.2.2.9, 8.2.2.12, clause 8.6.3.11.

8.2.1.14.3 Test purpose

To confirm that if the UE receives a RADIO BEARER SETUP message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER SETUP, it shall keep its configuration as if the RADIO BEARER SETUP message had not been received and complete the reconfiguration procedure according to the previously received message.

8.2.1.14.4 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 to the UE. The SS transmits a RADIO BEARER SETUP message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER SETUP message, the UE shall keep its current configuration as if it had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER SETUP FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on 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	←		RADIO BEARER RECONFIGURATION	
2	←		RADIO BEARER SETUP	
3		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration because of the RADIO BEARER SETUP message, and transmit this message on its uplink DCCH using the same RLC-AM mode radio bearer before step 1.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
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 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Not present
Uplink DPCH Info - Scrambling code number	1

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8] Not present
- Uplink DPCH timeslots and codes - First timeslot code list	Assigned in step 1

RADIO BEARER SETUP (for Step 2) (FDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Not present
Uplink DPCH Info - Scrambling code number	2

RADIO BEARER SETUP (for Step 2) (TDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in the default message content. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Not Present
- Uplink DPCH timeslots and codes - First timeslot code list	A different code combination to that used in step 1.

RADIO BEARER SETUP FAILURE

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 Failure cause	Incompatible simultaneous reconfiguration

8.2.1.14.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".
After step 3 the UE shall configure the new configuration on the activation time and transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.1.15 Void

8.2.1.16 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH: Success

8.2.1.16.1 Definition

8.2.1.16.2 Conformance requirement

If the UE receives:

- a RADIO BEARER SETUP message; or

it shall:

- 1> perform the physical layer synchronisation procedure 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 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.

8.2.1.16.3 Test purpose

To confirm that the UE establishes a new radio access bearer according to a RADIO BEARER SETUP message.

8.2.1.16.4 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, after the test operator is being prompted to make an outgoing packet-switched call. The SS transmits a RADIO BEARER SETUP message to the UE. After the UE receives this message, it configures them and establishes a new radio access bearer. Finally 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	←		RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	The UE select PRACH and S-CCPCH using SIB5 or SIB6.
3	↔		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

None.

8.2.1.16.5 Test requirement

After step 1, the UE shall transmit a RADIO BEARER SETUP COMPLETE message.

8.2.1.17 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: success (Subsequently received)

8.2.1.17.1 Definition

8.2.1.17.2 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 SETUP; 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.

8.2.1.17.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER SETUP message before the UE completes the configuration of the radio bearer according to a previous RADIO BEARER SETUP message, it ignores the new RADIO BEARER SETUP message and configures according to the previous RADIO BEARER SETUP message received.

8.2.1.17.4 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 transmits a RADIO BEARER SETUP message to the UE before the UE completes the configuration of the radio bearer according to the RADIO BEARER SETUP message prior to this new message. The UE ignores the new RADIO BEARER SETUP message and configures according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the 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		←	RADIO BEARER SETUP	Scrambling code number is set to "1" for FDD mode.
2		←	RADIO BEARER SETUP	SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1. For FDD the IE "Scrambling code number" is set to "2" and for TDD mode a different code combination to that used in step 11 is used.
3		→	RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and completes configuration according to the RADIO BEARER SETUP message 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 SETUP (Step 1) (FDD)

For RADIO BEARER SETUP in step 1, use the message sub-type indicated as "Non speech to CELL_DCH from CELL_DCH in CS" or "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, with the exception of the following Information Elements:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH Info	
- Scrambling code number	1

RADIO BEARER SETUP (Step 1) (TDD)

For RADIO BEARER SETUP in step 1, use the message sub-type indicated as "Non speech in CS" as found in clause 9 of TS 34.108, with the exception of the following Information Elements:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned in step 1

RADIO BEARER SETUP (Step 2) (FDD)

For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Non speech to CELL_DCH from CELL_DCH in CS" or "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, with the exception of the following:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH Info	
- Scrambling code number	2

RADIO BEARER SETUP (Step 2) (TDD)

For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Non speech in CS" as found in clause 9 of TS 34.108, with the exception of the following:

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.

8.2.1.17.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

8.2.1.18 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.1.18.1 Definition

8.2.1.18.2 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 SETUP; 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.

8.2.1.18.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER SETUP message before the UE completes the configuration of the radio bearer according to a previous RADIO BEARER SETUP message, it ignores the new RADIO BEARER SETUP message and configures according to the previous RADIO BEARER SETUP message received.

8.2.1.18.4 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. The SS transmits a RADIO BEARER SETUP message, requesting the UE to setup radio bearers using DPCH physical channels. SS transmits another RADIO BEARER SETUP message before the activation time specified in the first message has lapsed. The UE ignores the new RADIO BEARER SETUP message and configures the radio bearers according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the 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	←		RADIO BEARER SETUP	Scrambling code number is set to "1" for FDD mode.
2	←		RADIO BEARER SETUP	For FDD mode the IE "Scrambling code number" is set to "2" and for TDD mode a different code combination to that used in step 1 is used.
3	→		RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and confirms configuration according to the RADIO BEARER SETUP message 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 SETUP (Step 1) (FDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9.

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not present
- Uplink DPCH Info	
- Scrambling code number	1

RADIO BEARER SETUP (Step 1) (TDD)

For RADIO BEARER SETUP in step 1, use the message sub-type indicated as "Non speech in CS" as found in clause 9 of TS 34.108, with the exception of the following Information Elements:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present $[256 + \text{Current CFN} - \{\text{current CFN} \bmod 8 + 8\}] \bmod 256$
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned in step 1

RADIO BEARER SETUP (for Step 2) (FDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH Info	
- Scrambling code number	2

RADIO BEARER SETUP (Step 2) (TDD)

For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Non speech in CS" as found in clause 9 of TS 34.108, with the exception of the following:

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.

8.2.1.18.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC specified in step 1.

After step 3 the UE shall communicate with the SS on the radio bearer specified in the RADIO BEARER SETUP message in step 1.

8.2.1.19 Void

8.2.1.20 Void

8.2.1.21 Void

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" ([FDD only](#)):

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 (FDD)	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

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.

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 ([FDD only](#));
- 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. The first/ leftmost bit of the bit string contains the most significant bit of the START.

8.2.1.26.5

Test requirement

After step 1 the UE shall transmit a RADIO BEARER SETUP COMPLETE message.

CHANGE REQUEST

⌘ **34.123-1 CR 532** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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:	⌘	8.2.2.35 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Successful channel switching with multiple PS RABs established for TDD mode	
Source:	⌘	T1	
Work item code:	⌘	TEI	Date: ⌘ 20/07/2003
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 for Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Successful channel switching with multiple PS RABs established to be applied for TDD	
Summary of change:	⌘	<ul style="list-style-type: none"> RADIO BEARER RECONFIGURATION (Step 6) is specified for FDD and a new table for TDD is included. RADIO BEARER RECONFIGURATION (Step 8) is specified for FDD and a new table for TDD is included. 	
Consequences if not approved:	⌘	RAB for TDD option could not be tested properly	

Clauses affected:	⌘	8.2.2.35										
Other specs affected:	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	Y	N							Other core specifications	⌘
		Y	N									
Test specifications												
O&M Specifications												
Other comments:	⌘											

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.

8.2.2.35 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 :

Information Element	Value/remark
RAB information for setup - RAB identity	0000 0101B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
RB information to setup - RB identity	21

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_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
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
- Timer_RST	700
- Max_RST	6
- RB information to reconfigure	
- RB identity	21
- Timer_RST	700
- Max_RST	6
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 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_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
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
- Timer_RST	700
- Max_RST	6
- RB information to reconfigure	
- RB identity	21
- Timer_RST	700
- Max_RST	6
Downlink information per radio link list	
-Downlink information for each radio link	
- Primary CCPCH info	Set to same as used for cell 1

RADIO BEARER RECONFIGURATION (Step 8) [\(FDD\)](#)

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
New C-RNTI	0000 0000 0000 0001B
RB information to reconfigure list	
- RB information to reconfigure	
- RB identity	20
- RLC info	AM RLC
- 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	250
- Timer_poll_prohibit	250
- Timer_poll	Not present
- Poll_PDU	1
- Poll_SDU	TRUE
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	99
- Poll_Window	Not Present
- Timer_poll_periodic	AM RLC
- 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	Not Present
- RLC logical channel mapping indicator	1
- Number of uplink RLC logical channels	DCH
- Uplink transport channel type	1
- UL Transport channel identity	Not Present
- Logical channel identity	Configured
- CHOICE RLC size list	6
- MAC logical channel priority	
- 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	AM RLC
- 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	250
- Timer_poll_prohibit	250
- Timer_poll	Not present
- Poll_PDU	1
- Poll_SDU	TRUE
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	99
- Poll_Window	Not Present
- Timer_poll_periodic	AM RLC
- 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 RECONFIGURATION \(Step 8\) \(TDD\)](#)

[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:](#)

<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>20</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>600</u>
<u>- Max_RST</u>	<u>4</u>
<u>- Polling info</u>	
<u>- Timer_poll_prohibit</u>	<u>250</u>
<u>- Timer_poll</u>	<u>250</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>- RLC logical channel mapping indicator</u>	<u>Not Present</u>
<u>- Number of uplink RLC logical channels</u>	<u>1</u>
<u>- Uplink transport channel type</u>	<u>DCH</u>
<u>- UL Transport channel identity</u>	<u>1</u>
<u>- Logical channel identity</u>	<u>Not Present</u>
<u>- CHOICE RLC size list</u>	<u>Configured</u>
<u>- MAC logical channel priority</u>	<u>6</u>
<u>- Downlink RLC logical channel info</u>	
<u>- Number of downlink RLC logical channels</u>	<u>1</u>
<u>- Downlink transport channel type</u>	<u>DCH</u>
<u>- DL DCH Transport channel identity</u>	<u>6</u>
<u>- DL DSCH Transport channel identity</u>	<u>Not Present</u>
<u>- Logical channel identity</u>	<u>Not Present</u>
<u>- RB information to reconfigure</u>	<u>(AM DCCH for NAS DT High priority)</u>
<u>- RB identity</u>	<u>21</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>600</u>
<u>- Max_RST</u>	<u>4</u>
<u>- Polling info</u>	
<u>- Timer_poll_prohibit</u>	<u>250</u>
<u>- Timer_poll</u>	<u>250</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>	

- 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 CCPCH info	Set to same 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:

Information Element	Value/remark
RB information to release	
- RB identity	20
RB information to release	
- RB identity	21

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.

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 1 August 2003

Tdoc # T1-030895

CR-Form-v7	
CHANGE REQUEST	
# 34.123-1 CR 534 # rev #	# Current version: 5.4.0 #

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 RLC testcases 7.2.3.21 and 7.2.3.22
Source:	# T1
Work item code:	#
Date:	# 11/06/2003
Category:	# F
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
Release:	# Rel-5
<p>Use <u>one</u> of the following releases:</p> <p>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)</p>	

Reason for change:	# Failure to handle received PDUs with the P bit set after the measurement has been made prevents the test case from operating correctly
Summary of change:	# In clauses 7.2.3.21 and 7.2.3.22 amend test procedure to handle received PDUs with the P bit set after the measurement has been made.
Consequences if not approved:	# TTCN test case implemented according to the test prose will not operate as expected.

Clauses affected:	# 7.2.3.21, 7.2.3.22				
Other specs affected:	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications # <input checked="" type="checkbox"/> Test specifications <input checked="" type="checkbox"/> O&M Specifications	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N				
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Other comments:	# Also affects R'99, Rel-4. The changes described here have also been implemented in 34.123-3 and CRs raised as T1-030891 and T1-030893				

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.

7.2.3.21 Polling for status / Operation of Timer_Poll timer / Timer expiry

7.2.3.21.1 Definition

This case tests that the UE will retransmit a poll for status if it does not receive a STATUS PDU within Timer_Poll ms after a poll for status is transmitted. Incorrect operation of polling will cause degradation of service, or possible service failure.

7.2.3.21.2 Conformance requirement

Timer_Poll.

This timer shall only be used when so configured by upper layers. The value of the timer is signalled by upper layers. In the UE this timer shall be started when the successful or unsuccessful transmission of an AMD PDU containing a poll is indicated by lower layer. In UTRAN it should be started when an AMD PDU containing a poll is submitted to lower layer. If x is the value of the state variable VT(S) after the poll was submitted to lower layer, the timer shall be stopped upon receiving:

- positive acknowledgements for all the AMD PDUs with "Sequence Number" up to and including $x - 1$; or
- a negative acknowledgement for the AMD PDU with "Sequence Number" = $x - 1$.

If the timer expires and no STATUS PDU fulfilling the criteria above has been received:

- the Receiver shall be polled once more;
- the timer shall be restarted; and
- the new value of VT(S) shall be saved.

If a new poll is sent when the timer is active, the timer shall be restarted at the time specified above, and the value of VT(S) shall be saved.

[...]

The Sender shall:

- if a poll has been triggered by one or several poll triggers (see subclause 9.7.1):
 - if polling is not prohibited, see subclause 9.5:
 - set the "Polling bit" in the AMD PDU header to "1";
 - otherwise:
 - set the "Polling bit" in the AMD PDU header to "0".

Reference

TS 25.322 clauses 11.3.2.1.1 and 11.3.4.1.

7.2.3.21.3 Test purpose

To verify that if the timer expires and no STATUS PDU containing an acknowledgement or negative acknowledgement of the AMD PDUs up to that which triggered the timer has been received, the receiver is polled once more.

7.2.3.21.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS 34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Uplink RLC Polling info	First run	Second run
Last transmission PDU poll	FALSE	FALSE
Timer_poll	600	1000
Timer_Poll_Periodic	2000	2000

These settings apply to both the uplink and downlink DTCH.

The Radio Bearer is placed in UE test loop mode 1 with the UL SDU size set to AM_7_PayloadSize - 1 bytes.

Test procedure

Let T be the value of the Timer_Poll_Periodic timer.

- a) The SS transmits at least $2 * T / TTI$ SDUs of size AM_7_PayloadSize - 1 bytes.
- b) The SS receives PDUs from the UE, and notes the time on receiving the first PDU with the P bit set, but does not respond. This time will be recorded as T_1 .
- c) The SS continues to receive PDUs from the UE and notes the time on receipt of the next PDU with the P bit set. This time will be recorded as T_2 .
- [d\) The SS continues to receive PDUs from the UE until all transmitted PDUs have been received. The SS responds to any PDU received with the P bit set by transmitting a STATUS PDU containing an acknowledgement of the AMD PDUs received.](#)
- [e\) The SS waits for at least Timer_Poll_Periodic to acknowledge any last Poll PDU from the UE.](#)
- [ef\) The SS may optionally release the radio bearer.](#)

The test case is run once for each set of initial RLC parameters.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1
2		←	...	SS continues to transmit RLC SDUs
3		←	DOWNLINK RLC PDU	SDU $\text{ceil}(2T/TTI)$
4		→	UPLINK RLC PDU	SDU 1
5		→	UPLINK RLC PDU	SDU 2
6		→	...	SS continues to receive RLC PDUs
7		→	UPLINK RLC PDU	SN = $\text{ceil}(T/TTI)$, Poll: Note T_1
8		→	UPLINK RLC PDU	SN = $\text{ceil}(T/TTI)+1$
9		→	...	SS continues to receive RLC PDUs
10		→	UPLINK RLC PDU	Poll: Note T_2
11		→	...	SS continues to receive PDUs, acknowledging with STATUS PDUs when polled until all PDUs have been received and acknowledged
11 2			RB RELEASE	Optional step
<p>NOTE: The Expected Sequence shown is informative. The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity. Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.</p>				

7.2.3.21.5 Test requirements

For the first run, the measured time $T_2 - T_1$ shall be 600 ms.

For the second run, the measured time $T_2 - T_1$ shall be 1000 ms.

7.2.3.22 Polling for status / Operation of Timer_Poll timer / Stopping Timer_Poll timer

7.2.3.22.1 Definition

This case tests that the UE will stop the Timer_Poll timer if it receives a STATUS PDU within Timer_Poll ms after a poll for status is transmitted. Incorrect operation of polling will cause degradation of service, or possible service failure.

7.2.3.22.2 Conformance requirement

Timer_Poll.

This timer shall only be used when so configured by upper layers. The value of the timer is signalled by upper layers. In the UE this timer shall be started when the successful or unsuccessful transmission of an AMD PDU containing a poll is indicated by lower layer. In UTRAN it should be started when an AMD PDU containing a poll is submitted to lower layer. If x is the value of the state variable VT(S) after the poll was submitted to lower layer, the timer shall be stopped upon receiving:

- positive acknowledgements for all the AMD PDUs with "Sequence Number" up to and including $x - 1$; or
- a negative acknowledgement for the AMD PDU with "Sequence Number" = $x - 1$.

If the timer expires and no STATUS PDU fulfilling the criteria above has been received:

- the Receiver shall be polled once more;
- the timer shall be restarted; and
- the new value of VT(S) shall be saved.

If a new poll is sent when the timer is active, the timer shall be restarted at the time specified above, and the value of VT(S) shall be saved.

[...]

The Sender shall:

- if a poll has been triggered by one or several poll triggers (see subclause 9.7.1):
 - if polling is not prohibited, see subclause 9.5:
 - set the "Polling bit" in the AMD PDU header to "1";
- otherwise:
 - set the "Polling bit" in the AMD PDU header to "0".

Reference

TS 25.322 clause 9.5.

7.2.3.22.3 Test purpose

To verify that the Timer_Poll timer is stopped when receiving a STATUS PDU that acknowledges all AMD PDUs with SN up to and including VT(S)-1 at the time the poll was transmitted.

7.2.3.22.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS 34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Uplink RLC	First run	Second run
Tx_Window_Size	256	256
Polling info		
Last transmission PDU poll	FALSE	FALSE
Timer_poll	500	1000
Timer_Poll_Periodic	2000	2000

These settings apply to both the uplink and downlink DTCH.

The Radio Bearer is placed in UE test loop mode 1 with the UL SDU size set to AM_7_PayloadSize - 1 bytes.

Test procedure

Let T be the value of the Timer_Poll_Periodic timer.

- a) The SS transmits at least $2 * T / TTI$ SDUs of size AM_7_PayloadSize - 1 bytes.
- b) The SS receives PDUs from the UE, and notes the time on receiving the first PDU with the P bit set. This time will be recorded as T_1 .
- c) The SS sends a STATUS PDU acknowledging all the PDUs up to and including the PDU carrying the poll request.
- d) The SS continues to receive PDUs from the UE and notes the time on receipt of the next PDU with the P bit set. This time will be recorded as T_2 .
- e) The SS continues to receive PDUs from the UE until all transmitted PDUs have been received. The SS responds to any PDU received with the P bit set by transmitting a STATUS PDU containing an acknowledgement of the AMD PDUs received.
- f) The SS waits for at least Timer_Poll_Periodic to acknowledge any last Poll PDU from the UE.
- eg) The SS may optionally release the radio bearer.

The test case is run once for each set of initial RLC parameters.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1
2		←	...	SS continues to transmit RLC SDUs
3		←	DOWNLINK RLC PDU	SDU $\text{ceil}(2T/\text{TTI})$
4		→	UPLINK RLC PDU	SDU 1
5		→	UPLINK RLC PDU	SDU 2
6		→	...	SS continues to receive RLC PDUs
7		→	UPLINK RLC PDU	SN = $\text{ceil}(T/\text{TTI})$, Poll: Note T ₁
8		←	STATUS PDU	ACK SN 0 to SN $\text{ceil}(T/\text{TTI})$
9		→	UPLINK RLC PDU	SN = $\text{ceil}(T/\text{TTI})+1$
10		→	...	SS continues to receive RLC PDUs
11		→	UPLINK RLC PDU	SN = $\text{ceil}(2T/\text{TTI})$, Poll: Note T ₂
12		→	...	SS continues to receive PDUs, acknowledging with Status PDUs when polled until all PDUs have been received and acknowledged
12 13			RB RELEASE	Optional step

NOTE 1: The Expected Sequence shown is informative.
The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity.
Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.

7.2.3.22.5 Test requirements

For both execution runs, the measured time $T_2 - T_1$ shall be 2000 ms.

CHANGE REQUEST

⌘ **34.123-1 CR 535** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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:	⌘ Inclusion of tests for combinations on SCCPCH for TDD 1.28 Mcps option		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 20/07/2003
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:	⌘ RAB for TDD 1.28 Mcps option must be tested.		
Summary of change:	⌘ <ul style="list-style-type: none"> • 18.1.3.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH <ul style="list-style-type: none"> - 18.1.3.2.1 One SCCPCH: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH - 18.1.3.2.2 Two SCCPCHs: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH - 18.1.3.2.3 One SCCPCH/connected mode: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH • 18.1.3.3 Interactive/Background 32 kbps RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH 		
Consequences if not approved:	⌘ RABs for TDD 1.28 Mcps option could not be tested		

Clauses affected:	⌘ 18								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <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> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N						
Y	N								
Other comments:	⌘								

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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.

18.1.3.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.2.

This radio bearer configuration is tested with three different SYSTEM INFORMATION (BCCH) configurations:

1. The contents of System Information Block type 5 and 6 as specified in TS 34.108, clause 6.1.1.

Two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

This configuration is verified in test case 18.1.3.2.1.

2. The contents of System Information Block type 5 as specified in TS 34.108, clause 6.1.3.

Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

This configuration is verified in test case 18.1.3.2.2.

3. The contents of System Information Block type 5 and 6 as specified in TS 34.108, clause 6.1.2.

Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

This configuration is verified in test case 18.1.3.2.3.

18.1.3.2.1 One SCCPCH: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.1.3.2.1.1 Conformance requirement

See 18.1.2.4.1

18.1.3.2.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.1 for the case when two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.2.1.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.1.

Uplink TFS:

	TFI	RB7+SRB (32kbps on RACH)
TFS	<u>TF0, bits</u>	<u>1x171</u>
	<u>TF1, bits</u>	<u>1x363</u>

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

		SRBs	RB7 (32 kbps)
TFS	TF0, bits	0x171	0x363
	TF1, bits	1x171	1x363
	TF2, bits	2x171	N/A

Downlink TFCS:

TFCI	(SRB, RB7)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits	RB7: 312 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
 RB7: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

See 18.1.1 for test procedure.

18.1.3.2.1.4 Test Requirements

See 18.1.1 for definition of step 15

- At step 15 the UE transmitted transport format shall be RB7/TF1 (1x363).
- At step 15 the UE shall return an RLC SDU on RB7 having the same content as sent by SS

18.1.3.2.2 Two SCCPCHs: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.1.3.2.2.1 Conformance requirement

See 18.1.2.4

18.1.3.2.2.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.1 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.2.2.3 Method of Test

The contents of System Information Block type 5 shall be as specified in TS 34.108, clause 6.1.3.

Uplink TFS:

	TFI	RB7+SRB (32kbps on RACH)
TFS	TF0, bits	1x171
	TF1, bits	1x363

Uplink TFCS:

TFI	RB7+SRB
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

		SRBs	RB7 (32 kbps)
TFS	TF0, bits	0x171	0x363
	TF1, bits	1x171	1x363
	TF2, bits	2x171	N/A

Downlink TFCS:

TFI	(SRB, RB7)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCSs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits	RB7: 312 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

RB7: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

See 18.1.1 for test procedure.

18.1.3.2.2.4 Test Requirements

See 18.1.1 for definition of step 15

1. At step 15 the UE transmitted transport format shall be RB7/TF1 (1x363).

2. At step 15 the UE shall return an RLC SDU on RB7 having the same content as sent by SS

18.1.3.2.3 One SCCPCH/connected mode: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.1.3.2.3.1 Conformance requirement

See 18.1.2.4.1

18.1.3.2.3.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.1 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle

mode UEs. The third SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.2.3.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.2.

Uplink TFS:

	TFI	RB7+SRB (32kbps on RACH)
TFS	TF0, bits	1x171
	TF1, bits	1x363

Uplink TFCs:

TFCI	RB7+SRB
UL TFC0	TF0
UL TFC1	TF1

Downlink TFS:

		SRBs	RB7 (32 kbps)
TFS	TF0, bits	0x171	0x363
	TF1, bits	1x171	1x363
	TF2, bits	2x171	N/A

Downlink TFCs:

TFCI	(SRB, RB7)
DL TFC0	(TF0, TF0)
DL TFC1	(TF1, TF0)
DL TFC2	(TF2, TF0)
DL TFC3	(TF0, TF1)
DL TFC4	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size	Test data size
					(note)	(note)
1	DL TFC3	UL TFC1	DL TFC0, UL TFC0	UL TFC1, UL TFC0	RB7: 312 bits	RB7: 312 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

RB7: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

See 18.1.1 for test procedure.

18.1.3.2.3.4 Test Requirements

See 18.1.1 for definition of step 15

1. At step 15 the UE transmitted transport format shall be RB7/TF1 (1x363).
2. At step 15 the UE shall return an RLC SDU on RB7 having the same content as sent by SS

18.1.3.3 Interactive/Background 32 kbps RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

18.1.3.3.1 Conformance requirement

See 18.1.2.4

18.1.3.3.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.3 and 6.11.5.4.5.1 for the case when one SCCPCH is used in this SYSTEM INFORMATION (BCCH) configuration. The SCCPCH carries the PCH, the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH. To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.3.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1. Uplink TFS:

	TFI	RB8 (32kbps on RACH)
TFS	<u>TF0, bits</u>	<u>1x171</u>
	<u>TF1, bits</u>	<u>1x363</u>

Uplink TFCS:

TFCI	RB8
<u>UL_TFC0</u>	<u>TF0</u>
<u>UL_TFC1</u>	<u>TF1</u>

Downlink TFS:

		PCCH	SRBs	RB8 (32 kbps)
TFS	<u>TF0, bits</u>	<u>0x240</u>	<u>0x171</u>	<u>0x363</u>
	<u>TF1, bits</u>	<u>1x240</u>	<u>1x171</u>	<u>1x363</u>
	<u>TF2, bits</u>	<u>N/A</u>	<u>2x171</u>	<u>N/A</u>

Downlink TFCS:

TFCI	(PCCH, SRB, RB8)
<u>DL_TFC0</u>	<u>(TF0, TF0, TF0)</u>
<u>DL_TFC1</u>	<u>(TF1, TF0, TF0)</u>
<u>DL_TFC2</u>	<u>(TF0, TF1, TF0)</u>
<u>DL_TFC3</u>	<u>(TF1, TF1, TF0)</u>
<u>DL_TFC4</u>	<u>(TF0, TF2, TF0)</u>
<u>DL_TFC5</u>	<u>(TF1, TF2, TF0)</u>
<u>DL_TFC6</u>	<u>(TF0, TF0, TF1)</u>
<u>DL_TFC7</u>	<u>(TF0, TF1, TF1)</u>

Sub-tests:

<u>Sub-test</u>	<u>Downlink TFCs under test</u>	<u>Uplink TFCs Under test</u>	<u>Implicitely tested</u>	<u>Restricted UL TFCIs</u>	<u>UL RLC SDU size</u>	<u>Test data size</u>
1	<u>DL_TFC6</u>	<u>UL_TFC1</u>	<u>DL_TFC0, UL_TFC0</u>	<u>UL_TFC1, UL_TFC0</u>	(note) <u>RB8: 312 bits</u>	(note) <u>RB8: 312 bits</u>
<u>NOTE:</u> See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. <u>RB8: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size paramater has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).</u>						

See 18.1.1 for test procedure.

18.1.3.3.4 Test requirements

See 18.1.1 for definition of step 15

1. At step 15 the UE transmitted transport format shall be RB8/TF1 (1x360).
2. At step 15 the UE shall return an RLC SDU on RB8 having the same content as sent by SS

CHANGE REQUEST

⌘ **34.123-1 CR 536** ⌘ rev **-** ⌘ Current version: **5.4.0** ⌘

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

Title:	⌘ Inclusion of test for combination on PRACH for TDD 1.28 Mcps option		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 20/07/2003
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:	⌘ RAB for TDD 1.28 Mcps option must be tested		
Summary of change:	⌘ Test case included:		
	18.1.4 Combinations on PRACH		
	18.1.4.1 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH		
Consequences if not approved:	⌘ RAB for TDD 1.28 Mcps option could not be tested		

Clauses affected:	⌘ 18										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <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;"><input type="checkbox"/></td> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Y	N										
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<input type="checkbox"/>	<input type="checkbox"/>										
Other comments:	⌘										

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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.

18.1.4 Combinations on PRACH

18.1.4.1 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH

The reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.5.1 is implicitly tested by the test cases 18.1.3.2.1, 18.1.3.2.2, 18.1.3.2.3 and 18.1.3.3.

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 537 ⌘ rev - ⌘ Current version: 5.4.0 ⌘	

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] Package 4 GMM test case: 12.4.1.2 Routing area updating / rejected / IMSI invalid / illegal ME 12.4.1.4d Routing area updating / rejected / Roaming not allowed in this location area
Source:	⌘ T1
Work item code:	⌘ TEI Date: ⌘ 15/07/03
Category:	⌘ F Release: ⌘ REL-5

Reason for change:	⌘ 12.4.1.2 At test sequence step 13 the UE is expected to 'prefer' cell C i.e. a cell of a different PLMN. However, as cell A is still 'suitable' the UE will prefer cell A. 12.4.1.4d (both procedures) When the routing area update is rejected in cell B at step 10, the UE will try to camp on a suitable neighbour cell (cell A) when it enters the PLMN search. Procedure 2 When the routing area update is rejected at step 10 the P-TMSI-2 signature will not be deleted and, therefore, it will be used in the subsequent attach request at step 21. Also, as it is not a combined attach the TMSI status IE is invalid at (see TS 24.008 clause 9.4.14.4).
Summary of change:	⌘ 12.4.1.2 At step 12 cell A is made 'non-suitable' to force the UE to select a different PLMN and 'prefer' cell C. This is required to fulfil the test case requirement that the UE does not attempt an attach in a different PLMN. 12.4.1.4d (both procedures) At step 7 cell A is made a 'non-suitable cell' to prevent the UE from camping on it after the rejected routing area update at step 10. Procedure 2 At step 21 the signature in the attach request is updated to P-TMSI-2 and the TMSI status IE is omitted.
Consequences if not approved:	⌘ The UE will not behave in the expected manner.

Clauses affected:	⌘	12.4.1.2, 12.4.1.4d										
Other specs Affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
		Y	N									
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<input type="checkbox"/>	<input checked="" type="checkbox"/>											
	Test specifications											
	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:

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12.4.1.2 Routing area updating / rejected / IMSI invalid / illegal ME

12.4.1.2.1 Definition

12.4.1.2.2 Conformance requirement

- 1) If the network rejects a routing area updating procedure from the User Equipment with the cause 'Illegal ME', the User Equipment shall consider USIM invalid for PS services until power is switched off or USIM is removed.
- 2) If the network rejects a routing area updating procedure from the User Equipment with the cause 'Illegal ME', the User Equipment shall delete the stored RAI, PS-CKSN, P-TMSI and P-TMSI signature.

Reference

3GPP TS 24.008 clause 4.7.5.1.

12.4.1.2.3 Test purpose

To test the behaviour of the UE if the network rejects the routing area updating procedure of the UE with the cause 'Illegal ME'.

12.4.1.2.4 Method of test

Initial condition

System Simulator:

Three cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1 (RAI-1), cell B in MCC1/MNC1/LAC1/RAC2 (RAI-4), cell C in MCC2/MNC1/LAC1/RAC1 (RAI-2).
All three cells are operating in network operation mode II (in case of UE operation mode A)

User Equipment:

The UE has a valid P-TMSI-1 and RAI-1.

Related ICS/IXIT statements

Support of PS service Yes/No
UE operation mode C Yes/No
UE operation mode A Yes/No (only if mode C not supported)
USIM removal possible without powering down Yes/No
Switch off on button Yes/No
Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

The SS rejects a routing area updating with the cause value 'Illegal ME'. The SS checks that the UE does not perform PS attach in the same or another PLMN.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The following messages are sent and shall be received on cell A. The UE is set in UE operation mode C (see ICS).
2	SS			The SS is set in network operation mode II. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Non-Suitable cell". Set the cell type of cell C to the "Non-Suitable cell". (see note)
3	UE			The UE is powered up or switched on and initiates an attach (see ICS). Cell A is preferred by the UE.
3a	UE		Registration on CS	See TS 34.108 This is applied only for UE in UE operation mode A.
4	->		ATTACH REQUEST	Attach type = 'PS attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
4a	<-		AUTHENTICATION AND CIPHERING REQUEST	
4b	->		AUTHENTICATION AND CIPHERING RESPONSE	
4c	SS			The SS starts integrity protection. No new mobile identity assigned. P-TMSI and P-TMSI signature not included. Attach result = 'PS only attached'
5	<-		ATTACH ACCEPT	Routing area identity = RAI-1
6	SS			The following messages are sent and shall be received on cell B. Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
7	UE			Cell B is preferred by the UE.
8	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating'
9	<-		ROUTING AREA UPDATE REJECT	Routing area identity = RAI-1 GMM cause = 'Illegal ME'
10	<-		PAGING TYPE1	Mobile identity = P-TMSI-1 PAGING TYPE1 (used for NW-mode II). Paging order is for PS services.
11	UE			No response from the UE to the request. This is checked for 10 seconds.
12	SS			The following messages are sent and shall be received on cell C. Set the cell type of cell B to the "Non-Suitable cell". Set the cell type of cell A to the "Non-Suitable cell" . Set the cell type of cell C to the "Serving cell". (see note)
13	UE			Cell C is preferred by the UE.
14	UE			No ATTACH REQUEST sent to the SS (SS waits 30 seconds).
15	UE			If possible (see ICS) USIM removal is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed.
16	UE			The UE gets the USIM replaced, is powered up or switched on and initiates an attach (see ICS).

16a			Step 16b is only performed by UE in operation mode A
16b	UE	Registration on CS	See TS 34.108
17	->	ATTACH REQUEST	Parameter mobile identity is IMSI. Attach type = 'PS attach' Mobile identity = IMSI
17a	<-	AUTHENTICATION AND CIPHERING REQUEST	
17b	->	AUTHENTICATION AND CIPHERING RESPONSE	
17c	SS		The SS starts integrity protection.
18	<-	ATTACH ACCEPT	Attach result = 'PS only attached' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-2
19	->	ATTACH COMPLETE	
20	UE		The UE is switched off or power is removed (see ICS).
21	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
22	SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
NOTE: The definitions for "Non-Suitable cell", "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

None.

12.4.1.2.5 Test requirements

At step4, when the UE is powered up or switched on, UE shall:

- initiate the PS attach procedure with the information elements specified in the above Expected Sequence.

At step8, UE shall;

- initiate the routing area updating procedure with the information elements specified in the above Expected Sequence.

At step11, after the routing area updating procedure is rejected with GMM cause = 'Illegal ME', UE shall;

- not respond to the paging message for PS domain.

At step14, UE shall,

- not initiate PS attach procedure.

At step17, after the UE is powered up or USIM is replaced, UE shall;

- initiate the PS attach procedure.

12.4.1.4d Routing area updating / rejected / Roaming not allowed in this location area

12.4.1.4d.1 Definition

12.4.1.4d.2 Conformance requirement

- 1) If the network rejects a routing area updating procedure from the User Equipment with the cause 'roaming not allowed in this location area' the User Equipment:
 - 1.1 shall not perform PS attach when in the same location area.
 - 1.2 shall store the LA in the 'forbidden location areas for roaming'.
 - 1.3 shall perform a routing area updating when entering into a new location area if the LAI or the PLMN identity is not contained in any of the lists "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" or "forbidden PLMNs" and the current status is different from "IDLE NO IMSI".
- 2) The User Equipment shall erase the list of 'Forbidden location areas for roaming' when switched off or when the USIM is removed.

References

3GPP TS 24.008 clause 4.7.5.1.4.

3GPP TS 23.122 clause 4.5.2.

3GPP TS 24.008 clause 4.4.1.

12.4.1.4d.3 Test purpose

Test purpose1

To test that on receipt of a rejection using the 'Roaming not allowed in this area' cause code, the UE ceases trying a routing area updating procedure on that location area. Successful routing area updating procedure is possible in other location areas.

Test purpose2

To test that if the UE is switched off or the USIM is removed the list of 'forbidden location areas for roaming' is cleared.

12.4.1.4d.4 Method of test

12.4.1.4d.4.1 Test procedure1

Initial condition

System Simulator:

Two cells, cell A in MCC2/MNC1/LAC1/RAC1 (RAI-2), cell B in MCC2/MNC1/LAC2/RAC1 (RAI-6).
Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service Yes/No
UE operation mode A Yes/No

Switch off on button Yes/No

Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

The SS rejects a routing area updating with the cause value 'Roaming not allowed in this area'. A new attempt for a PS attach is not possible. Successful PS attach procedure is performed in another location area. The UE is moved back to the 1st location area. A routing area updating shall not be performed, as the LA is on the forbidden list.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		The following messages are sent and shall be received on cell A. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
3	UE		Registration on CS	See TS34.108 Parameter mobile identity is IMSI
4	->		ATTACH REQUEST	SS allocates Mobile identity = TMSI-1. Attach type = ' PS attach ' Mobile identity =IMSI TMSI status = no valid TMSI available
4a	<-		AUTHENTICATION AND CIPHERING REQUEST	
4b	->		AUTHENTICATION AND CIPHERING RESPONSE	
4c	SS			The SS starts integrity protection.
5	<-		ATTACH ACCEPT	Attach result = 'PS only attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-2
6	->		ATTACH COMPLETE	
7		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell A to the "Suitable neighbour cell, Non-suitable cell". Set the cell type of cell B to the "Serving cell". (see note)
8	UE			Cell B is preferred by the UE.
8a	UE		Registration on CS	See TS 34.108 Location Update Procedure initiated from the UE. Parameter mobile identity is TMSI-1.
9	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-2
10	<-		ROUTING AREA UPDATE REJECT	GMM cause = 'Roaming not allowed in this area'
11	UE			The UE initiates an attach by MMI or by AT command.
12	UE			No ATTACH REQUEST sent to SS (SS waits 30 seconds).
13	<-		PAGING TYPE1	Mobile identity = P-TMSI-2 Paging order is for PS services.
14	UE			No response from the UE to the request. This is checked for 10 seconds.
15	<-		PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services.
16	UE			The UE shall not initiate an RRC connection. This is checked during 3 seconds.
17		SS		The following messages are sent and shall be received on cell A. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
18	UE			Cell A is preferred by the UE.
19	UE		Registration on CS	See TS 34.108 Location Update Procedure initiated from the UE. Parameter mobile identity is TMSI-1.
20			Void	

Step	Direction		Message	Comments
	UE	SS		
21	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' Mobile identity = P-TMSI-2
21a	<-		AUTHENTICATION AND CIPHERING REQUEST	
21b	->		AUTHENTICATION AND CIPHERING RESPONSE	
21c		SS		The SS starts integrity protection.
22	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-2
23	->		ROUTING AREA UPDATE COMPLETE	
24	<-		PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services.
25			Void	
26			Void	
27			Void	
28	->		PAGING RESPONSE	Mobile identity = TMSI-1
29		SS		The SS releases the RRC connection.
30			Void	
31	<-		PAGING TYPE1	Mobile identity = P-TMSI-1 Paging order is for PS services.
32			Void	
33			Void	
34			Void	
35	->		SERVICE REQUEST	service type = "paging response"
36		SS		The SS releases the RRC connection.
37			Void	
38		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
39		UE		No ROUTING AREA UPDATE REQUEST sent to SS (SS waits 30 seconds).
40	<-		PAGING TYPE1	Mobile identity = P-TMSI-2 Paging order is for PS services.
41		UE		No response from the UE to the request. This is checked for 10 seconds.
NOTE: The definitions for "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

12.4.1.4d.4.2 Test procedure2

Initial condition

System Simulator:

Two cells, cell A in MCC2/MNC1/LAC1/RAC1 (RAI-2), cell B in MCC2/MNC1/LAC2/RAC1 (RAI-6). Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid IMSI. UE is Idle Updated on cell A.

Related ICS/IXIT statements

Support of PS service Yes/No
UE operation mode A Yes/No

USIM removal possible without powering down Yes/No
Switch off on button Yes/No
Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

The SS rejects a routing area updating with the cause value 'Roaming not allowed in this area'. The UE is switched off for 10 seconds and switched on again. The SS checks that a PS attach is possible on the cell on which the previous routing area updating had been rejected.

If USIM removal is possible without switching off:

The SS rejects a routing area updating with the cause value 'Roaming not allowed in this area'. The USIM is removed and inserted in the UE. The SS checks that a PS attach procedure and routing area updating procedure is possible on the cell on which the routing area updating had previously been rejected.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		The following messages are sent and shall be received on cell A. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
3	UE		Registration on CS	See TS34.108 Parameter mobile identity is IMSI
4	->		ATTACH REQUEST	SS allocates Mobile identity = TMSI-1. Attach type = ' PS attach ' Mobile identity =IMSI TMSI status = no valid TMSI available
4a	<-		AUTHENTICATION AND CIPHERING REQUEST	
4b	->		AUTHENTICATION AND CIPHERING RESPONSE	
4c	SS			The SS starts integrity protection.
5	<-		ATTACH ACCEPT	Attach result = 'PS only attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-2
6	->		ATTACH COMPLETE	
7		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell A to the "Suitable neighbourNon-suitable cell". Set the cell type of cell B to the "Serving cell". (see note)
8	UE			Cell B is preferred by the UE.
8a	UE		Registration on CS	See TS 34.108 Location Update Procedure initiated from the UE. Parameter mobile identity is TMSI-1.
9	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-2
10	<-		ROUTING AREA UPDATE REJECT	GMM cause = 'Roaming not allowed in this area'
11	UE			The UE initiates an attach by MMI or by AT command.
12	UE			No ATTACH REQUEST sent to SS (SS waits 30 seconds).
13	<-		PAGING TYPE1	Mobile identity = P-TMSI-2 Paging order is for PS services.
14	UE			No response from the UE to the request. This is checked for 10 seconds.
15	<-		PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services.
16	UE			The UE shall not initiate an RRC connection. This is checked during 3 seconds.
17	UE			If possible (see ICS) USIM removal is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed.
18	UE			The UE gets the USIM replaced, is powered up or switched on.
19	UE		Registration on CS	See TS 34.108 Location Update Procedure initiated from the UE.
20	UE			The UE initiates an attach automatically (see ICS) by MMI or AT command.

Step	Direction		Message	Comments
	UE	SS		
21	->		ATTACH REQUEST	Attach type = ' PS attach ' Mobile identity = IMSIP-TMSI-2 TMSI-status = no valid TMSI available
22a	<-		AUTHENTICATION AND CIPHERING REQUEST	
22b	->		AUTHENTICATION AND CIPHERING RESPONSE	
22c	SS			The SS starts integrity protection.
22	<-		ATTACH ACCEPT	Attach result = 'PS only attached' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-6 Mobile identity = TMSI-1
23	->		ATTACH COMPLETE	
24	<-		PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services.
25			Void	
26			Void	
27			Void	
28	->		PAGING RESPONSE	Mobile identity = TMSI-1
29	SS			The SS releases the RRC connection.
30			Void	
31	<-		PAGING TYPE1	Mobile identity = P-TMSI-1
32			Void	
33			Void	
34			Void	
35	->		SERVICE REQUEST	service type = "paging response"
36	SS			The SS releases the RRC connection.
37			Void	
38	UE			The UE is switched off or power is removed (see ICS).
39	->		DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
40	SS			The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
NOTE: The definitions for "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Specific message contents

None.

12.4.1.4d.5 Test requirements

Test requirements for Test procedure1

At step4, when the UE is powered up or switched on, UE shall:

- initiate the PS attach procedure with information elements specified in the above Expected Sequence.

At step9, when the RF level of the attached cell is lower than the RF level of the new cell, UE shall:

- initiate the routing area update procedure with the information elements specified above Expected Sequence

At step12, when the SS rejects the routing area update procedure with GMM cause = 'Roaming not allowed in this area', UE shall:

- not initiate a PS attach procedure.

At step14, when the UE receives the paging message for PS domain, UE shall;

- not respond to the paging message for PS domain.

At step16, when the UE receives the paging message for CS domain, UE shall:

- not respond to the paging message for CS domain.

At step21, UE shall:

- initiate the routing area update procedure.

At step28, when the UE receives the paging message for CS domain, UE shall;

- respond to the paging message for CS domain by sending the PAGING RESPONSE message.

At step35, when the UE receives the paging message for PS domain, UE shall:

- respond to the paging message for PS domain by sending the SERVICE REQUEST message.

At step41, when the UE receives the paging message for PS domain, UE shall;

- not respond to the paging message for PS domain.

Test requirements for Test procedure2

At step4, when the UE is powered up or switched on, UE shall:

- initiate the PS attach procedure with information elements specified in the above Expected Sequence.

At step9, UE shall:

- initiate the routing area update procedure with the information elements specified above Expected Sequence.

At step14, when the UE receives the paging message for PS domain, UE shall;

- not respond to the paging message for PS domain.

At step16, when the UE receives the paging message for CS domain, UE shall:

- not respond to the paging message for CS domain.

At step21, UE shall:

- initiate the PS attach procedure.

At step28, when the UE receives the paging message for CS domain, UE shall;

- respond to the paging message for CS domain by sending the PAGING RESPONSE message.

At step35, when the UE receives the paging message for PS domain, UE shall:

- respond to the paging message for PS domain by sending the SERVICE REQUEST message.

CR-Form-v7	
CHANGE REQUEST	
# 34.123-1 CR 538 # rev - #	Current version: 5.4.0 #

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] Package 1 RRC Testcases in clause 8.1 : 8.1.1.5 Paging for notification of BCCH modification in connected mode (CELL_PCH) 8.1.1.6 Paging for notification of BCCH modification in connected mode (URA_PCH)	
Source:	#	T1	
Work item code:	#	TEI	Date: # 16/07/2003
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:	#	8.1.1.5 and 8.1.1.6 Step 3 of these test cases specifies that System Information Type 6 is should be modified. However, TS 34.108 V3.12.0 specifies that the default contents of System Information Type 6 are set to OMIT.	
Summary of change:	#	At Step 3 in these test cases the reference to System Information Type 6 is modified to refer to System Information Type 5, in order to be consistent with the default contents specified in 34.108	
Consequences if not approved:	#	The UE will not behave in the expected manner.	

Clauses affected:	#	8.1.1.5, 8.1.1.6					
Other specs	#	<table border="1" style="display: inline-table; border-collapse: collapse;"> <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;"><input type="checkbox"/></td> <td style="width: 20px; text-align: center;"><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"/>						

Affected:	<input checked="" type="checkbox"/>	Test specifications	
	<input checked="" 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.

8.1.1.5 Paging for notification of BCCH modification in connected mode (CELL_PCH)

8.1.1.5.1 Definition

8.1.1.5.2 Conformance requirement

A UE in CELL_PCH state shall receive the paging information for all its monitored paging occasions. For a UE in CELL_PCH state, the paging occasions depend also on the IE "UTRAN DRX cycle length coefficient" and the IE "RRC State Indicator", as specified in TS 25.331 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 IE "BCCH modification info" is included, any UE in CELL_PCH state shall perform the actions as specified in TS 25.331 subclause 8.1.1 in addition to any actions caused by the IE "Paging record" occurrences in the message.

The UE shall:

- 1> compare the value of IE "MIB value tag" in the IE "BCCH modification info" with the value tag stored for the master information block in variable VALUE_TAG.
- 1> if the value tags differ:
 - 2> read the master information block on BCH;
 - 2> if the value tag of the master information block in the system information is the same as the value in IE "MIB value tag" in "BCCH modification info" but different from the value tag stored in the variable VALUE_TAG:
 - 3> perform actions as specified in TS 25.331 subclause 8.1.1.5.

...

Upon reception of the master information block, the UE shall:

- 1> compare the value tag in the master information block with the value tag stored for this cell and this PLMN in the variable VALUE_TAG;
- 1> if the value tags differ:
 - 2> store the value tag into the variable VALUE_TAG for the master information block;
 - 2> read and store scheduling information included in the master information block.

....

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:

- 1> for all system information blocks with area scope "PLMN" or "Equivalent PLMN" that use value tags:
 - 2> compare the value tag read in scheduling information for that system information block with the value stored within the variable VALUE_TAG for that system information block;
 - 2> if the value tags differ:
 - 3> store the value tag read in scheduling information for that system information block into the variable VALUE_TAG;
 - 3> read and store the IEs of that system information block.

...

Reference

3GPP TS 25.331 clause 8.1.1, 8.1.2.

8.1.1.5.3 Test purpose

To confirm that the UE, in addition to any actions caused by the IE "Paging record" occurrences in the PAGING TYPE 1 message, checks the new value tag of the master information block, and read the SYSTEM INFORMATION messages after it receives a PAGING TYPE 1 message which includes the IE "BCCH Modification Information".

8.1.1.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_PCH state (state 6-12) as specified in clause 7.4 of TS 34.108 with valid a U-RNTI assigned to it.

Test Procedure

The SS transmits a PAGING TYPE 1 message on the paging occasions assigned to the UE. The paging identity is equal to the U-RNTI assigned earlier. The UE shall respond with a CELL UPDATE message and set IE "cell update cause" to "paging response". The PAGING TYPE 1 message shall also include the IE "BCCH Modification Information" indicating the time when the first modified master information block is available. Before the starting time, SS continuously broadcast the original MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on the BCCH mapped to BCH transport channel. SS maintains this status until the SFN, which corresponds to the modification time, is reached. Then it transmits the new master information block followed by the new SYSTEM INFORMATION BLOCK TYPE 65 message. In the new SIB TYPE 65 message, the IE "Available Signature" is different when compared to the original SIB TYPE 65 message. At the paging occasion, SS transmits a new PAGING TYPE 1 message. This message addresses the UE using its U-RNTI. The UE shall respond with a CELL UPDATE message and set IE "cell update cause" to "paging response". The SS shall transmit a CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2		←	PAGING TYPE 1	SS transmits the paging message which comprises IE "BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 2048 radio frame from the current SFN. SS continuously broadcast the same MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on BCCH.
2a		→	CELL UPDATE	
2b		←	CELL UPDATE CONFIRM	
3		←	MASTER INFORMATION BLOCK	At the SFN indicated by the BCCH modification time, SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting. At the same time, SS starts to transmit the affected SIB TYPE 65 continuously. The value of IE "Available Signature" is changed from "0000 0000 1111 1111(B)" to "1111 1111 0000 0000(B)".
		←	SYSTEM INFORMATION BLOCK TYPE 65	
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH at the correct paging occasion.
5		→	CELL UPDATE	
6		←	CELL UPDATE CONFIRM	See message content.

Specific Message Contents

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	
- MIB Value Tag	2
- BCCH Modification time	Set to (current SFN + 2048)

CELL UPDATE (Step 2a)

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

Information Element	Value/remark
U-RNTI - SRNC identity - S-RNTI Cell update cause	Checked to see if it is set to the same values as in step 2 Paging response

CELL UPDATE CONFIRM (Step 2b)

Use the same message type found in clause Annex A[9] (TS 34.108) Clause 9., with the following exception:

Information Element	Value/remark
RRC State indicator UTRAN DRX cycle length coefficient	CELL_PCH 3

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 65 (Step 3)

Use the same message type found in clause 6.1 of TS 34.108, with the following exception.

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 Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI - CN originated page to connected mode UE BCCH modification info	Only 1 entry UTRAN identity Equal to the U-RNTI assigned earlier. Not Present 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 - SRNC identity - S-RNTI Cell update cause	Checked to see if it is set to the same values as in step 4 Paging response

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in Annex A[9] (TS 34.108) Clause 9., with the following exception:

Information Element	Value/remark
RRC State indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.1.1.5.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response", using an allowed signature according to original IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 65.

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 65.

8.1.1.6 Paging for notification of BCCH modification in connected mode (URA_PCH)

8.1.1.6.1 Definition

8.1.1.6.2 Conformance requirement

A UE in URA_PCH state shall receive the paging information for all its monitored paging occasions. For a UE in 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 TS 25.331 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 IE "BCCH modification info" is included, any UE in URA_PCH state shall perform the actions as specified in TS 25.331 subclause 8.1.1 in addition to any actions caused by the IE "Paging record" occurrences in the message as specified above.

The UE shall:

- 1> compare the value of IE "MIB value tag" in the IE "BCCH modification info" with the value tag stored for the master information block in variable VALUE_TAG.
- 1> if the value tags differ:
 - 2> read the master information block on BCH;
 - 2> if the value tag of the master information block in the system information is the same as the value in IE "MIB value tag" in "BCCH modification info" but different from the value tag stored in the variable VALUE_TAG:
 - 3> perform actions as specified in subclause 8.1.1.5.

...

Upon reception of the master information block, the UE shall:

- 1> compare the value tag in the master information block with the value tag stored for this cell and this PLMN in the variable VALUE_TAG;
- 1> if the value tags differ:
 - 2> store the value tag into the variable VALUE_TAG for the master information block;
 - 2> read and store scheduling information included in the master information block.

....

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:

- 1> for all system information blocks with area scope "PLMN" or "Equivalent PLMN" that use value tags:
 - 2> compare the value tag read in scheduling information for that system information block with the value stored within the variable VALUE_TAG for that system information block;
 - 2> if the value tags differ:
 - 3> store the value tag read in scheduling information for that system information block into the variable VALUE_TAG;
 - 3> read and store the IEs of that system information block.

...

Reference

3GPP TS 25.331 clause 8.1.1, 8.1.2.

8.1.1.6.3 Test purpose

To confirm that the UE checks the included new value tag of the master information block and reads the relevant SYSTEM INFORMATION block(s) after it receives a PAGING TYPE 1 message which includes the IE "BCCH Modification Information".

8.1.1.6.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH state (state 6-13) as specified in clause 7.4 of TS 34.108 with a valid U-RNTI assigned.

Test Procedure

The SS transmits a PAGING TYPE 1 message on the paging occasions assigned to the UE. The message shall include the IE "BCCH Modification Information" indicating the time when the first modified master information block is available. Before the starting time, SS continuously broadcast the original MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on the BCCH mapped to BCH transport channel. SS maintains this status until the SFN which corresponds to the modification time is reached. Then it transmits the new master information block followed by the new SYSTEM INFORMATION BLOCK TYPE 65 message. In the new SIB TYPE 55 message, the IE "Available Signature" is different when compared to the original SIB TYPE 65 message. At the next paging occasion, SS transmits a new PAGING TYPE 1 message. This message addresses the UE using its U-RNTI and the "paging cause" IE set to a terminating call type that is supported by the UE. The UE shall respond with a CELL UPDATE message and set IE "cell update cause" to "paging response". The SS shall transmit a CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2		←	PAGING TYPE 1	SS transmits the paging message which comprises IE "BCCH Modification Information", with the "Value Tag" changed from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 2048 radio frame from the current SFN. SS continuously broadcast the same MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on BCCH.
3		←	MASTER INFORMATION BLOCK	At the SFN indicated by the BCCH modification time, SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting.
		←	SYSTEM INFORMATION BLOCK TYPE 65	At the same time, SS starts to transmit the affected SIB TYPE 65 message continuously. The value of IE "Available Signature" is changed from "0000 0000 1111 1111(B)" to "1111 1111 0000 0000(B)".
4		←	PAGING TYPE 1	SS transmits this message continuously on the PCCH at the correct occasion.
5		→	CELL UPDATE	
6		←	CELL UPDATE CONFIRM	See message content.

Specific Message Contents

PAGING TYPE 1 (Step 2)

Information Element	Value/remark
Message Type	
Paging record list	Not Present
BCCH modification info	
- MIB Value Tag	2
- BCCH Modification time	Set to (current SFN + 2048)

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 65 (Step 3)

Use the same message type found in clause 6.1 of TS 34.108, with the following exception.

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	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- 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 65.

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 539 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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] Low priority PDCP test case 7.3.3.1 Data transmission if lossless SRNS Relocation is supported.		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 09/07/03
Category:	⌘ F	Release:	⌘ REL-5

Reason for change:	⌘ The test case specifies that a Cell Update procedure with cause “cell reselection” will occur. For this to occur the UE must be in CELL_FACH. The only reference combinations of RABS and SRBs permitted on PRACH by TS 34.108 use the 32kbps PS RAB + SRBs. However, the RADIO BEARER SETUP message specified refers to two different RABs (32 kbps PS RAB and the default PDCP 64 kbps PS RAB). Only one of these is required and permitted on PRACH by the reference combinations in TS 34.108
Summary of change:	⌘ The description of the specific message contents for the RRC CONNECTION SETUP message are modified to reference the “UM (Transition to CELL_FACH)” variant in TS 34.108. The reference to RAB 23 (the default PDCP RAB) in the RADIO BEARER SETUP message contents is deleted as it is redundant and not relevant to this test case as a CELL UPDATE procedure following cell reselection in CELL_FACH state occurs.
Consequences if not approved:	⌘ The UE will not behave in the expected manner.

Clauses affected:	⌘ 7.3.3.1										
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;"><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>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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"/>										
Other comments:	⌘ Affects R99, Rel-4 and Rel-5 test cases.										

How to create CRs using this form:

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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.
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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

7.3.3 PDCP sequence numbering when lossless SRNS Relocation

7.3.3.1 Data transmission if lossless SRNS Relocation is supported

7.3.3.1.1 Definition and applicability

Applicable for all UEs supporting RLC AM, RLC in-sequence delivery, a Radio Bearer as described in the Common Test Sequences and lossless SRNS relocation.

The UE shall be capable to deal with uncompressed TCP/IP data packets and furthermore to establish a PDCP entity which applies PDCP Sequence Numbering

7.3.3.1.2 Conformance requirement

1. PDCP sequence numbering shall be applied when lossless SRNS Relocation is supported. PDCP Sequence Numbers serve to acknowledge previously transmitted PDCP SDUs prior to relocation.
2. In case of a lossless SRNS Relocation procedure:
 - the UTRAN should send to the UE the next expected UL_Receive PDCP SN; and
 - the UE shall send to the UTRAN the next expected DL_Receive PDCP SN.

This information exchange synchronises the Sequence Numbers at the UE and UTRAN PDCP entities.

Reference(s)

TS 25.323 clause 5.4.1.1

TS 25.323 clause 5.4.1.3.

7.3.3.1.3 Test purpose

1. To verify, that a UE supporting lossless SRNS relocation is able to receive and to send IP data packets by using PDCP Sequence Numbering as configured by higher layers.

7.3.3.1.4 Method of test

Initial conditions

SS: 2 cells - Cell A belonging to the valid SRNS (Source SRNS), Cell B belonging to the DRNS (Target SRNS). Both cells are neighbour cells. Cell A has a higher RF power level than Cell B such that an UE shall find Cell A more suitable for service.

UE: It is in Idle mode and has selected cell A with valid SRNS (Source SRNS). Usage of "PDCP Data" PDU, PDCP SeqNum PDU and no IP header compression is configured.

Related ICS/IXIT Statement(s)

Support of lossless SRNS Relocation - YES/NO

Support of PS – Yes/No

IXIT: Test_PDCP_TCP/IP_Packet1

IXIT: Test_PDCP_TCP/IP_Packet2

Test procedure

- a) The SS setups a packet switched session including Radio Bearer and UE test loop mode 1 in RLC AM and in-sequence delivery using Common test procedures for mobile terminated PS switched sessions in Cell A. The RLC buffer discharge mode shall be set to "no discard". Usage of "PDCP Data" PDU, support of lossless SRNS relocation and no IP header compression has been configured by higher layers. The PDCP SN window size has been negotiated by RRC.
- b) The SS sends a TCP/IP data packet (no compression packet type), PID=0.
- c) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- d) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- e) The SS starts to broadcast BCCH messages on the primary CPICH in cell B with a power level higher than in cell A. The UE shall chose cell B to be more suitable for service and hence perform a cell reselection.
- f) After completion of cell reselection, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH of cell B with the Cell update cause "Cell Reselection".
- g) The SS sends a TCP/IP data packet (no compression packet type), PID=0. The PDCP Data PDU is used during lossless SRNS relocation procedure.
- h) After having received the TCP/IP data packet, the PDCP entity of the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The UE shall increase its internal Sequence Number counter by 1. The received data shall be returned by the UE via its PDCP configuration using PDCP SeqNum PDU.
- i) The SS receives and decodes the TCP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.
- j) After having performed SRNS relocation (target RNC allocated with new S-RNTI for the UE), the Target SRNS is the valid SRNS and the SS sends a "CELL UPDATE CONFIRM" message with new RNC_ID to indicate the completion of the cell update.
- k) The UE shall confirm the reallocation.
- l) The SS sends the next TCP/IP data packet (no compression packet type), PID=0 using the PDCP SeqNum PDU to the UE.
- m) After having received the TCP/IP data packet, the UE shall recognize the PID value and shall handle the received data packet correctly. Afterwards it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.
- n) The SS receives and decodes TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.
- o) The SS deactivates the UE test loop mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE terminated PS session using IP Header compression in AM RLC (using UE test loop mode 1) in Cell A				
1		←	PDCP Data	<p>The SS creates a TCP/IP packet without IP header compression. The DL_Send PDCP SN is set to "0".</p> <p>The SS sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet</p> <p>Afterwards the SS increments its counter value DL_Send PDCP SN by "1".</p> <p>After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression)</p> <p>Therefore, no IP header decompression shall be applied for this packet.</p> <p>The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity.</p> <p>The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.</p>
2		→	PDCP Data	<p>The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: previously received TCP/IP packet</p> <p>After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.</p>
3				The SS increases the RF power level of cell B and decreases the power level of Cell A such that the UE finds cell B more suitable for service.
4				The UE cell reselection is performed and Cell B are selected for service.
5		→	RRC CELL UPDATE	Then, the UE shall inform the SS about the new cell selection by sending cell update with new parameters (parameter values as used in RRC testing).

Step	Direction		Message	Comments
	UE	SS		
6		←	PDCP Data	<p>The SS sends a PDCP Data PDU with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet</p> <p>Afterwards the SS increments its counter value DL_Send PDCP SN by "1".</p> <p>The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.</p>
7	→		PDCP Data	<p>The UE sends a PDCP Data PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 data: previously received TCP/IP packet After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.</p>
8		←	RRC CELL UPDATE CONFIRM	<p>After having performed SRNS relocation, the Target SRNS is the valid SRNS and the SS sends a "CELL UPDATE CONFIRM" message See message content.</p>
9	→		UTRAN MOBILITY INFORMATION CONFIRM	<p>The UE confirms the newly received information.</p>
10		←	PDCP SeqNum	<p>The SS sends the next PDCP SeqNum PDU using the RLC-AM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) SeqNum = current PDCP Sequence Number data: below described TCP/IP packet Afterwards the SS increments its counter value DL_Send PDCP SN by "1". After having received the PDCP SeqNum PDU, the UE shall set the received PDCP Sequence Number as its own valid value. It decodes the PDU, recognizes PID value = 0 applied for this TCP/IP data packet and shall decompress it with the appropriate method.</p> <p>The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The SN synchronisation shall be considered as successfully performed after acknowledgement of SeqNum PDU transmission by lower layer in the SS. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.</p>
11	→		PDCP SeqNum	<p>The UE sends a PDCP SeqNum PDU using the RLC-AM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 SeqNum = current PDCP Sequence Number data: previously received TCP/IP packet</p> <p>After reception of this TCP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.</p>
Deactivate a UE terminated PS session using IP Header compression (using UE test loop mode 1)				

Specific Message Contents

RRC CONNECTION SETUP message

The contents of the RRC CONNECTION SETUP message applied in the preamble "Setup a UE terminated PS session using IP Header compression in AM RLC" of this test case ~~is~~ are identical to those of the [Default Message Contents for Signalling in TS 34.108 clause 9.1](#) ~~default contents of layer 3 messages for RRC tests [TS 34.123-1] PS connection for AM~~ "UM (Transition to CELL FACH)" with the following exceptions:

Information Element	Value/remark
Capability update requirement - UE radio access capability update requirement	TRUE NOTE: Value will be checked. Stated capability must be compatible with 34.123-2 (c.f. PICS/PIXIT statements in GSM) and the user settings

RADIO BEARER SETUP message

The contents of the RADIO BEARER SETUP message applied in the preamble "Setup a UE terminated PS session using IP Header compression in AM RLC" of this test case ~~is~~ are identical to those of the ~~default contents of layer 3 messages for RRC tests~~ Default Message Contents for Signalling in TS 34.108 clause 9.1 [TS 34.123-1] (PS connection for AM"AM (Packet to CELL_FACH from CELL_FACH in PS") ~~which fit to the here described parameters~~ with the following exceptions:

Information Element	Value/remark
Downlink counter synchronisation info	
RB with PDCP information list	
RB identity	20
PDCP SN info	1 (Note: next expected Sequence Number)
RAB information for setup	
RAB info	UL: Interactive/Background 32kbps PS RAB + SRB for CCCH + SRB for DCCH (TS34.108 v4.2.0 clause6.10.2.4.4.1)
RAB identity	DL: Interactive/Background 32kbps PS RAB + SRB for CCCH + SRB for DCCH + SRB for BCCH (TS34.108 v4.2.0 clause6.10.2.4.3.2)
	No. # 23 as described in TS 34.108, Table 6.10.2.1.4 Prioritised RABs.
	QoS parameter: Traffic Class: Interactive or Background, max. UL: 64 kbps and max. DL: 64 kbps as described in TS 34.108, including described physical channel parameters, configuration for AM RLC
CN domain identity	
RB information to setup	
RB identity	
PDCP info	
Max PDCP SN window size	Residual BER as described in TS 34.108, clause: 6.10
Support of lossless SRNS relocation	Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps
PDCP PDU header	DCCH, No. #2 (as described in TS 34.108)
RLC info	
Downlink RLC mode	PS domain
In sequence delivery	
Uplink RLC mode	
Transmission RLC Discard	20
Uplink RLC mode	
Transmission RLC Discard	65535
	TRUE
	present
	(AM RLC)
	True
	(AM RLC)
	No discard (Note: Default value as defined in TS 34.108, Annex B)

Information Element	Value/remark
<u>RAB information for setup</u>	
- RAB info	
- RB information to setup	
- RB identity	<u>20</u>
- PDCP info	
- Support of lossless SRNS relocation	<u>True</u>
- Max PDCP SN window size	<u>65535</u>
- PDCP PDU header	<u>Present</u>
- CHOICE RLC info type	<u>RLC info</u>
- CHOICE Uplink RLC mode	<u>AM RLC</u>
- Transmission RLC Discard	<u>No discard</u>
- CHOICE SDU Discard Mode	<u>Note: Default value as defined in TS 34.108, Clause 9.1</u>
- CHOICE Downlink RLC mode	<u>AM RLC</u>
- In-sequence delivery	<u>True</u>
	<u>Note: Default value as defined in TS 34.108, Clause 9.1</u>
<u>Downlink counter synchronisation info</u>	
- RB with PDCP information	
- RB identity	<u>20</u>
- PDCP SN info	<u>1</u> (Note: next expected Sequence Number)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 1500 bytes.

Content of PDCP SeqNum PDU (Step 6)

Information Element	Value/remark
PDU type	001
PID	00000 (No header compression, PID = 0)
Sequence number	(16 Bit value) valid Sequence Number of the SS
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 1500 bytes.

CELL UPDATE CONFIRM (Step 8)

Use the message sub-type in default message content defined in Annex A, with the following exceptions.

Information Element	Value/Remarks
New U-RNTI	New value of U-RNTI different from the previous U-RNTI
Receive PDCP sequence number	IE is set to the value to be counted inside SS as next expected reception Sequence Number

UTRAN MOBILITY INFORMATION CONFIRM (Step 9)

Only the message type is checked.

Content of PDCP Data PDU (Step 10)

Information Element	Value/remark
PDU type	000
PID	00000 (No header compression, PID = 0)
Data	PDCP test data type #1: TCP/IP data packet without IP header compression with any data content. The data shall be limited to 1500 bytes.

7.3.3.1.5 Test requirements

After having completed lossless SRNS relocation, the UE shall return the received TCP/IP data packet by using PDCP SeqNum PDUs as indication, that it supports lossless SRNS relocation. This verifies, that Sequence Numbering is used for lossless SRNS relocation. An invalid PDU type as well as unconfigured PID values shall not be received by SS.

CR-Form-v7
CHANGE REQUEST
34.123-1 CR 540 # rev - # Current version: 5.4.0

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 34.123-1 Rel-5: Mobile identity field removed in TC 12.4.2.2		
Source:	# T1		
Work item code:	# TEI Date: # 14/07/2003		
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) </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:	# Mobile identity is not used with normal routing area update. The field is used with combined Routing area update.
Summary of change:	# Mobile identity moved from step 10
Consequences if not approved:	# TC 12.4.2.2 is against 24.008

Clauses affected:	# 12.4.2.2											
Other specs Affected:	<table style="border: none;"> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;"> <table border="1" style="font-size: x-small;"> <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> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> </td> <td style="border: none; padding-left: 10px;"> Other core specifications # Test specifications # O&M Specifications # </td> </tr> </table>		<table border="1" style="font-size: x-small;"> <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> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications # Test specifications # O&M Specifications #
	<table border="1" style="font-size: x-small;"> <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> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications # Test specifications # O&M Specifications #		
Y	N											
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<input type="checkbox"/>	<input checked="" type="checkbox"/>											
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
Other comments:	#											

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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.

- respond to the paging message for CS domain by sending the PAGING RESPONSE message.

At step20, when the RF level of the attached cell is lower than the RF level of the new cell, UE shall:

- initiate the combined routing area update procedure(Update type = 'Combined RA/LA updating') with the information elements specified above Expected Sequence.

At step22, UE shall:

- acknowledge the new TMSI by sending the ROUTING AREA UPDATE COMPLETE message.

At step24, when the UE receives the paging message for PS domain, UE shall:

- respond to the paging message for PS domain by sending the SERVICE REQUEST message.

At step29, when the UE receives the paging message for CS domain, UE shall;

- respond to the paging message for CS domain by sending the PAGING RESPONSE message.

<START OF MODIFIED SECTION>

12.4.2.2 Combined routing area updating / UE in CS operation at change of RA

12.4.2.2.1 Definition

12.4.2.2.2 Conformance requirement

PS UE in UE operation mode A that is in an ongoing CS transaction at change of routing area shall initiate the normal routing area updating procedure.

Reference

3GPP TS 24.008 clause 4.7.5.2.

12.4.2.2.3 Test purpose

To test the behaviour of the UE if the routing area is changed during an ongoing circuit switched transmission.

12.4.2.2.4 Method of test

Initial condition

System Simulator:

One cell, cell A in MCC1/MNC1/LAC1/RAC1 (RAI-1) is operating in network operation mode I.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service	Yes/No
UE operation mode A	Yes/No
Switch off on button	Yes/No
Automatic PS attach procedure at switch on or power on	Yes/No

Test procedure

A combined PS attach procedure is performed. The UE in UE operation mode A initiates a CS call. The routing area change. The UE will perform the normal routing area updating procedure during the ongoing circuit-switched transaction.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1				Set the cell type of cell A to the "Serving cell". (see note)
1a	UE			The UE is set in UE operation mode A (see ICS).
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
2a	SS			SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = IMSI TMSI status = no valid TMSI available
3a	<-		AUTHENTICATION AND CIPHERING REQUEST	
3b	->		AUTHENTICATION AND CIPHERING RESPONSE	
3c	SS			The SS starts integrity protection.
4	<-		ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-1
5	->		ATTACH COMPLETE	
5a	SS			The SS releases the RRC connection.
6	UE			A CS call is initiated.
7			Void	
8			Void	
8a	<-		UTRAN MOBILITY INFORMATION	The SS conveys updated CN system information for the PS domain to the UE in connected mode, including a new routing area code.
8b	->		UTRAN MOBILITY INFORMATION CONFIRM	
9	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
9a	SS			The SS starts integrity protection.
10	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Mobile identity = IMSI Routing area identity = RAI-4
11	->		ROUTING AREA UPDATE COMPLETE	
11a	SS			The SS releases the PS signalling connection, but keeps the RRC connection.
12	<-		PAGING TYPE2	Mobile identity = P-TMSI-1
13	->		SERVICE REQUEST	Paging order is for PS services. service type = "paging response"
13a	SS			The SS starts integrity protection.
13b	SS			The SS releases the CS call.
14	SS			The SS initiates the RRC connection release.
14a	->		ROUTING AREA UPDATE REQUEST	Update type = "combined RA/LA updating", P-TMSI-1 signature, Routing area identity = RAI-4, TMSI status = no valid TMSI available
14b	SS			The SS starts integrity protection.
14c	<-		ROUTING AREA UPDATE ACCEPT	Update result = "combined RA/LA updated", No P-TMSI, P-TMSI-3 signature, Routing area identity = RAI-4
15	UE			The UE is switched off or power is removed (see ICS).

15a	SS		SS checks that the IE "Establishment cause" in any received RRC CONNECTION REQUEST message is set to "Detach".
16	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, combined PS / IMSI detach'
17	SS		If the power was not removed, the SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off .
NOTE: The definitions for "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

UTRAN MOBILITY INFORMATION (step 8a)

The contents of the UTRAN MOBILITY INFORMATION message in this test case is identical to the default message in TS 34.108, 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	Not Present
CN information info	
- PLMN identity	Not Present
- CN common GSM-MAP NAS system information	Not Present
- CN domain related information	
- CN domain identity	CS domain
- CN domain specific GSM-MAP NAS system info	
- T3212	30
- ATT	1
- CN domain specific DRX cycle length coefficient	7
- CN domain related information	
- CN domain identity	PS domain
- CN domain specific GSM-MAP NAS system info	
- RAC	RAC-2
- NMO	0 (Network Mode of Operation I)
- CN domain specific DRX cycle length coefficient	7

12.4.2.2.5 Test requirements

At step3, when the UE is powered up or switched on, UE shall:

- initiate the combined PS attach procedure with information elements specified in the above Expected Sequence.

At step9, when the UE has received the new RAI from the SS in the UTRAN MOBILITY INFORMATION message, the UE shall:

- initiate the normal routing area updating procedure.

<END OF MODIFIED SECTION>

CHANGE REQUEST

34.123-1 CR 541 # rev **-** # Current version: **5.4.0**

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 package 2 MAC test case 7.1.2.2.1		
Source:	# T1		
Work item code:	# TEI	Date:	# 17/07/2003
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:	# The randomness for dynamic persistence is not specified in core specifications. Thus can only functional part for dynamic persistence be tested. Redesign of current test case would cause the test purpose to be duplicated with existent RRM test cases in 34.121.
Summary of change:	# TC 7.1.2.2.1: <ul style="list-style-type: none"> Test case details removed and replaced by comment that transport format restriction is implicitly tested by RRM test cases.
Consequences if not approved:	# Current test case not justified by core requirements. Redesign of test case to only cover functional part would make the test case redundant to already existing RRM test cases.

Clauses affected:	# 7.1.2.2.1										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <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> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	#
	Y	N									
	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Test specifications	#										
O&M Specifications	#										
Other comments:	# Affects R99, REL-4 and REL-5 test cases.										

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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.

7.1.2.2 Correct application of Dynamic Persistence

7.1.2.2.1 ~~Correct application of Dynamic Persistence (FDD)~~

NOTE Test case "Correct application of Dynamic Persistence (FDD)" has been removed as the test purpose is implicitly tested by radio resource management test cases in TS 34.121.

~~7.1.2.2.1.1 Definition and applicability~~~~All FDD UE:~~~~7.1.2.2.1.2 Conformance requirement~~~~The UE implements the dynamic persistence algorithm by:~~

- ~~1. reading the current dynamic persistence value from the BCH;~~
- ~~2. perform a random draw against the current dynamic persistence value. The random function is TBD;~~
- ~~3. defer transmission for one frame and repeat the process if the result of the random draw is negative, otherwise proceed with a RRC CONNECTION REQUEST.~~

~~Reference(s)~~~~TS 25.321, clause 11.2.2 (figure 11.2.2.1).~~~~7.1.2.2.1.3 Test purpose~~~~To verify that if the UE correctly operates the dynamic persistence algorithm outlined in fig 11.2.2.1 of TS25.321.~~~~7.1.2.2.1.4 Method of test~~~~Initial conditions~~~~System Simulator:~~~~1 cell, default parameters, Ciphering Off.~~~~User Equipment:~~~~The UE shall operate under normal test conditions, Ciphering Off.~~~~The Test USIM shall be inserted.~~~~Related ICS/EXIT Statement(s)~~~~TBD~~~~Foreseen Final State of the UE~~~~The same as the initial conditions.~~~~Test procedure~~~~Iteration 1~~

- a) ~~The SS changes the default system information messages such that the dynamic persistence level is set to 8, and scaling factors are not transmitted. This results in a dynamic persistence value (P_i) of 0.0078125 for all access service classes. Note: ASC#0 is not used because NumASC=7 and the lowest MLP value =1. See 25.321, clause 11.2.1.~~
- b) ~~The SS waits until the UE has enough time to take account of the changes.~~
- c) ~~The SS repeatedly pages the UE 100 times, waiting for the reception of a RRC CONNECTION REQUEST from the UE before each subsequent page.~~

~~Iteration 2~~

~~The SS performs step a to c) once more, but changes the default system information messages such that the dynamic persistence level is set to 1, and no scaling factors are transmitted. This results in a dynamic persistence value (P_i) of 1 for all access service classes.~~

~~Expected sequence~~

Step	Direction		Message	Comments
	UE	SS		
1	←		PAGE	
2		→	RRC CONNECTION REQUEST	

~~The above sequence is repeated 100 times.~~

~~7.1.2.2.5 Test requirements~~

~~Iteration 1~~

~~The SS shall receive a RRC CONNECTION REQUEST from the UE on average every 1.28 seconds ±0.15s after each paging request.~~

~~Iteration 2~~

~~The SS shall receive a RRC CONNECTION REQUEST from the UE within 150ms after each paging request.~~

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 542 ⌘ rev ⌘	⌘ Current version: 5.4.0 ⌘

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:	⌘ Corrections to Package 1 RRC test case 8.1.2.2		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 21/07/03
Category:	⌘ F	Release:	⌘ R99
	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:	⌘ As per clause 10.2.40, of 25.331, Integrity check info is not part of RRC Connection Setup Message.
Summary of change:	⌘ Removed inclusion of Integrity Check info in specific message contents of RRC Connection Setup Message at step 6.
Consequences if not approved:	⌘ Test as specified is not conformant to the core specification

Clauses affected:	⌘ 8.1.2.2						
Other specs Affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	⌘	X	Other core specifications	⌘
	Y	N					
	⌘	X					
⌘	Test specifications						
⌘	O&M Specifications						
Other comments:	⌘ Affects R99, REL-4, REL-5.						

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8.1.2.2 RRC Connection Establishment: Success after T300 timeout

8.1.2.2.1 Definition

8.1.2.2.2 Conformance requirement

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

if 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:
 - ...

Reference

3GPP TS 25.331 clause 8.1.3.5.

8.1.2.2.3 Test purpose

To confirm that the UE retries to establish the RRC connection until V300 is greater than N300 after the expiry of timer T300 when the SS transmits no response for an RRC CONNECTION REQUEST message.

8.1.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell. SCCPCH configuration as specified in 6.1.1 of TS 34.108.
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.

NOTE: This test requires that N300 is bigger than 0, which is the case (see default contents of SIB 1, specified in TS 34.108). Expiry of timer T300 is verified only for N300 values exceeding 1.

Test Procedure

Before the test starts, SYSTEM INFORMATION BLOCK TYPE 5 message is modified and this modification is notified to the UE. An internal counter K in SS is initialized to a value = 0. Following this, the UE shall transmit an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by use of selected PRACH from the available PRACH No.1 and PRACH No.2, after the operator attempts to make an outgoing call. SS ignores this message, increments K every time such a message is received and waits for T300 timer to expire. This cycle is repeated until K reaches N300. When K is equal to N300, the SS transmits an RRC CONNECTION SETUP message containing an unexpected critical message extension as specified in step 6 to the UE. The UE shall send another RRC CONNECTION REQUEST message on the uplink CCCH. SS replies with a valid RRC CONNECTION SETUP message. The UE shall then acknowledge the establishment of RRC connection by sending the RRC CONNECTION SETUP COMPLETE message on uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE 1	SS transmits the paging message which comprises IE "BCCH Modification Information", with the "Value Tag" different from the "MIB Value Tag" of the current Master Information Block. Also the modification time is set to 2048 radio frames from the current SFN. SS continuously broadcast the same MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on BCCH. See specific message contents.
1a		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 5	SS starts to transmit the MIB with the "MIB Value Tag" IE different from the original setting. At the same time, SS starts to transmit the affected SIB TYPE 5 messages. See specific message contents.
2				SS initializes counter K to 0. Operator is asked to make an outgoing call and SS starts to wait for RRC CONNECTION REQUEST on uplink CCCH.
3		→	RRC CONNECTION REQUEST	See the clause 9 in TS 34.108 on default message content
4				SS increments K.
5				SS checks to see if K is equal to N300. If so, goes to step 6. Else, continues to execute step 3.
6		←	RRC CONNECTION SETUP	Use an invalid message in ASN.1. See specific message contents for this message.
7		→	RRC CONNECTION REQUEST	See specific message contents.
8		←	RRC CONNECTION SETUP	This is a legal message. See the clause 9 in TS 34.108 on default message content for RRC.
9				The UE configures the layer 1 and layer 2.
10		→	RRC CONNECTION SETUP COMPLETE	See clause 9 in TS 34.108 on default message content

Specific Message Contents

PAGING TYPE 1 (Step 1)

Information Element	Value/remark
Message Type Paging record list BCCH modification info - MIB Value Tag - BCCH Modification time	Not present 2 Set to (current SFN + 2048)

SYSTEM INFORMATION TYPE 5 (Step 1a) - (FDD)

Use the default parameter values for the system information block with the same type specified in clause 6.1.1 of TS 34.108, with the following exceptions:

- PRACH system information	2PRACHs
- PRACH info (PRACH No.1)	FDD
- CHOICE mode	'0000 0000 1111 1111'B
- Available Signature	64
- Available SF	0
- Preamble scrambling code number	1.00
- Puncturing Limit	'1111 1111 1111'B
- Available Sub Channel number	15
- Transport Channel Identity	Common transport channels
- RACH TFS	168
- CHOICE Transport channel type	1
- Dynamic Transport format information	FDD
- RLC size	Configured
- Number of TB and TTI List	360
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	Configured
- RLC size	1
- Number of TB and TTI List	FDD
- Number of Transport blocks	Configured
- CHOICE Mode	20 ms
- CHOICE Logical Channel List	Convolutional
- Semi-static Transport Format information	1/2
- Transmission time interval	150
- Type of channel coding	16
- Coding Rate	
- Rate matching attribute	
- CRC size	
- RACH TFCS	
- Normal	
- TFCI Field 1 information	Complete reconfiguration
- CHOICE TFCS representation	2 bit
- TFCS addition information	0
- CHOICE CTFC Size	Computed Gain Factor
- CTFC information	0
- Power offset information	FDD
- CHOICE Gain Factors	0dB
- Reference TFC ID	1
- CHOICE Mode	
- Power offset Pp-m	Signalled Gain Factor
- CTFC information	11
- Power offset information	15
- CHOICE Gain Factors	0
- Gain factor β_c	FDD
- Gain factor β_d	0dB
- Reference TFC ID	
- CHOICE Mode	
- Power offset Pp-m	
- PRACH partitioning	
- Access Service Class	Not Present
- ASC Setting	FDD
- ASC Setting	0 (ASC#1)
- CHOICE mode	7 (ASC#1)
- Available signature Start Index	'1111'B
- Available signature End Index	The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- Assigned Sub-Channel Number	Not Present
- ASC Setting	FDD
- ASC Setting	0 (ASC#3)
- CHOICE mode	7 (ASC#3)
- Available signature Start Index	'1111'B
- Available signature End Index	The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- Assigned Sub-Channel Number	Not Present
- ASC Setting	

- ASC Setting	FDD
- CHOICE mode	0 (ASC#5)
- Available signature Start Index	7 (ASC#5)
- Available signature End Index	'1111'B
- Assigned Sub-Channel Number	The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
	Not Present
- ASC Setting	FDD
- ASC Setting	0 (ASC#7)
- CHOICE mode	7 (ASC#7)
- Available signature Start Index	'1111'B
- Available signature End Index	The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- Assigned Sub-Channel Number	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
CHOICE mode	FDD
- Primary CPICH DL TX power	31
- Constant value	-10
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	4
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	3
- STTD indicator	FALSE
- AICH transmission timing	0
- PRACH info (PRACH No.2)	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	64
- Preamble scrambling code number	1
- Puncturing Limit	1.00
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	Configured
- RLC size	360
- Number of TB and TTI List	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	Configured
- Semi-static Transport Format information	
- Transmission time interval	20 ms

- Type of channel coding	Convolutional
- Coding Rate	1/2
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS addition information	
- CHOICE CTFC Size	2 bit
- CTFC information	0
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factor
- Reference TFC ID	0
- CHOICE Mode	FDD
- Power offset Pp-m	0 dB
- CTFC information	1
- Reference TFC ID	0
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor βc	11
- Gain factor βd	15
- Reference TFC ID	0
- CHOICE Mode	FDD
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-Channel Number	'1111'B The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-Channel Number	'1111'B The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-Channel Number	'1111'B The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-Channel Number	'1111'B The first/ leftmost bit of the bit string contains the most significant bit of the Assigned Sub-Channel Number.
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	

- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
CHOICE mode	FDD
- Primary CPICH DL TX power	31
- Constant value	-10
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	4
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	4
- STTD indicator	FALSE
- AICH transmission timing	0

SYSTEM INFORMATION TYPE 5 (Step 1a) – 3.84 Mcps TDD

- PRACH system information	2PRACHs
- PRACH info (PRACH No.1)	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Timeslot Number	14
- PRACH Channelisation Code	
- CHOICE SF	8
- Channelisation Code List	
- Channelisation Code	8/1
- Channelisation Code	8/2
- Channelisation Code	8/3
- Channelisation Code	8/4
- PRACH Midamble	Direct
-PNBSCH allocation	Not Present
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Transport Time Interval	Not Present
- Number of Transport Blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	10 ms
- Type of channel coding	Convolutional
- Coding Rate	1/2
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	Not Present
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#0)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#1)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#2)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#3)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#4)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#5)
- CHOICE subchannel size	Size1

- ASC Setting	TDD
- CHOICE mode	3.84 Mcps TDD
- CHOICE TDD option	'11110000'B (ASC#6)
- Available SYNC_UL codes indices	Size1
- CHOICE subchannel size	
- ASC Setting	TDD
- CHOICE mode	3.84 Mcps TDD
- CHOICE TDD option	'11110000'B (ASC#7)
- Available SYNC_UL codes indices	Size1
- CHOICE subchannel size	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- CHOICE mode	TDD
- PRACH info (PRACH No.2)	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Timeslot Number	14
- PRACH Channelisation Code	
- CHOICE SF	8
- Channelisation Code List	
- Channelisation Code	8/5 where i denotes an unassigned code
- Channelisation Code	8/6 where i denotes an unassigned code
- Channelisation Code	8/7 where i denotes an unassigned code
- Channelisation Code	8/8 where i denotes an unassigned code
- PRACH Midamble	Direct
-PNBSCH allocation	Not Present
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Transport Time Interval	Not Present
- Number of Transport Blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	10 ms
- Type of channel coding	Convolutional
- Coding Rate	1/2
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	Not Present
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#0)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#1)

- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#2)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#3)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#4)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#5)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#6)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#7)
- CHOICE subchannel size	Size1
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- CHOICE mode	TDD

SYSTEM INFORMATION TYPE 5 (Step 1a) – 1.28 Mcps TDD

- PRACH system information	2PRACHs
- PRACH info (PRACH No.1)	TDD
- CHOICE mode	1.28 Mcps TDD
- CHOICE TDD option	
- SYNC_UL info	'11110000'B
- SYNC_UL codes bitmap	10
- PRX _{UpPCHdes}	3
- Power Ramping Step	8
- Max SYNC_UL Transmissions	32
- Mmax	
- PRACH Definition	
- Timeslot Number	1.28 Mcps TDD
- CHOICE TDD option	1
- Timeslot number	
- PRACH Channelisation Code	
- Channelisation Code List	8/1
- Channelisation Code	
- Midamble shift and burst type	1.28 Mcps TDD
- CHOICE TDD option	Default
- Midamble Allocation Mode	8
- Midamble Configuration	Not Present
- Midamble Shift	
- FPACH info	
- Timeslot number	6
- Channelisation code	16/16
- Midamble Shift and burst type	
- CHOICE TDD option	1.28 Mcps TDD
- Midamble Allocation Mode	Default
- Midamble Configuration	16
- Midamble Shift	Not Present
- WT	4
- PNBSCH allocation	Not Present
- Transport Channel Identity	15
- RACH TFS	Common transport channels
- CHOICE Transport channel type	
- Dynamic Transport format information	168
- RLC size	
- Number of TB and TTI List	Not Present
- Transport Time Interval	1
- Number of Transport Blocks	ALL
- CHOICE Logical Channel List	
- Semi-static Transport Format information	10 ms
- Transmission time interval	Convolutional
- Type of channel coding	1/2
- Coding Rate	150
- Rate matching attribute	16
- CRC size	Not Present
- RACH TFCS	
- PRACH partitioning	
- Access Service Class	
- ASC Setting	TDD
- CHOICE mode	1.28 Mcps TDD
- CHOICE TDD option	
- Available SYNC_UL codes indices	'11110000'B (ASC#0)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#1)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD

- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#2)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#3)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#4)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#5)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#6)
- CHOICE subchannel size	Size1
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- CHOICE mode	TDD
- PRACH info (PRACH No.2)	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- SYNC_UL info	
- SYNC_UL codes bitmap	'11110000'B
- PRX _{UpPCHdes}	10
- Power Ramping Step	1
- Max SYNC_UL Transmissions	8
- Mmax	32
- PRACH Definition	
- Timeslot Number	
- CHOICE TDD option	1.28 Mcps TDD
- Timeslot number	1
- PRACH Channelisation Code	
- Channelisation Code List	
- Channelisation Code	8/2
- Midamble shift and burst type	
- CHOICE TDD option	1.28 Mcps TDD
- Midamble Allocation Mode	Default
- Midamble Configuration	8
- Midamble Shift	Not Present

- FPACH info	An available down-link timeslot
- Timeslot number	16/15
- Channelisation code	1.28 Mcps TDD
- Midamble Shift and burst type	Default
- CHOICE TDD option	16
- Midamble Allocation Mode	Not Present
- Midamble Configuration	4
- Midamble Shift	Not Present
- WT	
- PNBSCH allocation	
- RACH TFS	Common transport channels
- CHOICE Transport channel type	
- Dynamic Transport format information	168
- RLC size	
- Number of TB and TTI List	Not Present
- Transport Time Interval	1
- Number of Transport Blocks	ALL
- CHOICE Logical Channel List	
- Semi-static Transport Format information	10 ms
- Transmission time interval	Convolutional
- Type of channel coding	½
- Coding Rate	150
- Rate matching attribute	16
- CRC size	Not Present
- RACH TFCS	
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#0)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#1)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#2)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#3)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#4)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#5)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#6)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#7)

- CHOICE subchannel size	Size1
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- CHOICE mode	TDD

RRC CONNECTION SETUP (Step 6)

SS sends a message containing a critical extension not defined for the protocol release supported by the UE, as indicated in the IE "Access stratum release indicator":

Information Element	Value/remark
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
— Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
— RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Critical extensions	'01'H

RRC CONNECTION REQUEST (Step 7)

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
Protocol Error Indicator	Check to see if set to TRUE

8.1.2.2.5 Test requirement

After step 2 the UE shall select either PRACH No.1 or PRACH No.2 and transmit an RRC CONNECTION REQUEST message.

After step 6 the UE shall re-send another RRC CONNECTION REQUEST message.

After step 9 the UE shall transmit an RRC CONNECTION SETUP COMPLETE message and establish an RRC connection on the DCCH logical channel.

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 543 ⌘ rev ⌘ Current version: 5.4.0 ⌘

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:	⌘ Corrections to P2 MM test case 9.4.2.2/test 2		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 21/07/03
Category:	⌘ F	Release:	⌘ R99
	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:	⌘ In step 24 of 9.4.2.2/test 2, UE cannot send "LAI" = deleted LAI (the MCC and MNC hold the values of PLMN1, the LAC is coded FFFE) " in Location Update Message as it has successfully registered in Cell B belonging to PLMN2
Summary of change:	⌘ In test 2 step 15b, Location Update Accept replaced by Location Update Reject
Consequences if not approved:	⌘ Good UE will fail the test.

Clauses affected:	⌘ 9.4.2.2						
Other specs Affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	
	Y	N					
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>	Test specifications						
<input checked="" type="checkbox"/>	O&M Specifications						
Other comments:	⌘ Affects R99, REL-4, 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.

9.4.2.2 Location updating / rejected / PLMN not allowed

9.4.2.2.1 Definition

9.4.2.2.2 Conformance requirement

- 1) If the network reject a location updating from the UE with the cause "PLMN not allowed" the UE shall:
 - 1.1 not perform periodic updating;
 - 1.2 not perform IMSI detach when switched off;
 - 1.3 not perform IMSI attach when switched on in the same location area;
 - 1.4 not perform normal location updating when in the same PLMN and when that PLMN is not selected manually;
 - 1.5 reject any request from CM entity for MM connection other than for emergency call.
- 2) If the network rejects a location updating from the UE with the cause "PLMN not allowed" the UE shall:
 - 2.1 perform normal location updating when a new PLMN is entered;
 - 2.2 accept a request for an emergency call, if it supports speech, by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call".
- 3) If the network rejects a location updating from the UE with the cause "PLMN not allowed" and if after that the PLMN from which this rejection was received, is manually selected, the UE shall perform a normal location updating procedure.
- 4) If the network rejects a location updating from the UE with the cause "PLMN not allowed" the UE shall delete the stored LAI, CKSN and TMSI.

Reference(s)

TS 24.008 clause 4.4.4.7.

9.4.2.2.3 Test purpose

To test the behaviour of the UE if the network rejects the location updating of the UE with the cause "PLMN not allowed".

9.4.2.2.4 Method of test

9.4.2.2.4.1 Location updating / rejected / PLMN not allowed / test 1

Initial conditions

- System Simulator:
 - one cell: C, belonging to PLMN1;
 - two cells: A and B, belonging to different location areas a and b and belonging to PLMN2. PLMN2 is different from HPLMN and from PLMN1;
 - IMSI attach/detach is allowed in cells A and B but not in cell C;
 - the T3212 time-out value is 1/10 hour in cells A and B.
- User Equipment:

- the UE has a valid TMSI(= TMSI1) and CKSN(= CKSN1). It is "idle updated" on cell C;
- the UE is in manual mode for PLMN selection.

Related ICS/IXIT statement(s)

USIM removal possible while the UE is powered Yes/No.

Switch off on button Yes/No.

The UE is automatically in automatic mode after switch on Yes/No.

Support for speech Yes/No.

Test Procedure

The SS rejects a normal location updating with the cause value "PLMN not allowed". The RRC CONNECTION is released. The SS checks that the UE does not perform periodic updating, does not perform IMSI detach, does not perform IMSI attach if activated in the same location area, rejects any request for CM connection establishment other than emergency call, accepts a request for an emergency call, performs normal location updating only when a new PLMN is entered and deletes the stored LAI, CKSN and TMSI.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			<p>The following messages are sent and shall be received on cell B.</p> <p>The UE is switched off (or power is removed). Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell C to the "non-suitable cell". (see note)</p> <p>The UE is switched on. (or power is reapplied) If necessary the UE is put in manual selection mode. The UE shall offer the new PLMN as available to the user. The PLMN is manually selected.</p> <p>The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".</p> <p>"location updating type" = normal, "CKSN" = CKSN1, "LAI" = c, "Mobile Identity" = TMSI1 "Reject cause" = PLMN not allowed. The SS releases the RRC connection.</p>
2	SS			
3	UE			
4	SS			
5			Void	
6			Void	
7	→		LOCATION UPDATING REQUEST	
8	←		LOCATION UPDATING REJECT	
9	SS			
10			Void	
11	SS			The SS waits for a possible periodic updating for 7 minutes.
12	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B.
13	UE			If possible (see ICS) USIM detachment is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed.
14	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B. This is checked during 3 s.
15	UE			Depending on what has been performed in step 13 the UE is brought back to operation. The UE is not made to select PLMN 2.
16	UE			The UE shall not initiate an RRC connection establishment. This is checked during 3 s.

Step	Direction		Message	Comments
	UE	SS		
17		SS		The following message are sent and shall be received on cell A. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
18	UE			No access to the network shall be registered by the SS within one minute.
19	UE			If the UE supports speech (see ICS) it is made to perform an emergency.
20		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Emergency Call".
21			Void	
22			Void	
23	→		CM SERVICE REQUEST	"CM service type" = Emergency call establishment.
24	←		CM SERVICE ACCEPT	
25	→		EMERGENCY SETUP	
26	←		RELEASE COMPLETE	Cause IE: "unassigned number".
27		SS		The SS releases the RRC connection.
28			Void	
29	UE			A MO CM connection is attempted.
30	UE			The UE shall not initiate an RRC connection establishment. This is checked during 3 s.
31	UE			The following messages are sent and shall be received on cell C. The UE is switched off.
32		SS		Set the cell type of cell C to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". Set the cell type of cell B to the "non-suitable cell". (see note)
33	UE			The UE is switched on. If necessary the UE is placed into the automatic mode.
34		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST is set to "Registration".
35			Void	
36			Void	
37	→		LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = no key available, "LAI" = deleted LAI (the MCC and MNC hold the values of PLMN1, the LAC is coded FFFE) "mobile identity" = IMSI.
37a		SS		The SS starts integrity protection.
38	←		LOCATION UPDATING ACCEPT	"Mobile identity" = TMSI.
39	→		TMSI REALLOCATION COMPLETE	
40		SS		The SS releases the RRC connection.
41			Void	
NOTE: The definitions for "Serving cell", "Suitable neighbour cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Specific message contents:

None.

9.4.2.2.4.2 Location updating / rejected / PLMN not allowed / test 2

Initial conditions

- System Simulator:
- one cell C, belonging to PLMN1;

- two cells A and B, belonging to different location areas a and b and belonging to PLMN2. PLMN2 is different from HPLMN;
- IMSI attach/detach is allowed in cells A and B but not in cell C;
- the T3212 time-out value is 1/10 hour in cells A and B.
- User Equipment:
 - the UE has a valid TMSI. It is "idle updated" on cell C.

Related ICS/IXIT statement(s)

USIM removal possible while UE is powered Yes/No.

Switch off on button Yes/No.

The UE is automatically in automatic mode after switch on Yes/No.

Test Procedure

The SS rejects a normal location updating with the cause value "PLMN not allowed". The RRC CONNECTION is released. Then the PLMN from which this rejection was received is manually selected and the SS checks that a normal location updating is performed.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			<p>The following messages are sent and shall be received on cell B.</p> <p>The UE is switched off (or power is removed). Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell C to the "non-suitable cell". (see note)</p> <p>The UE is switched on (or power is reapplied). If the UE is in manual mode, it shall offer the new PLMN as available to the user. In this case the PLMN is manually selected.</p> <p>The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".</p> <p>"Reject cause" = PLMN not allowed. The SS releases the RRC connection.</p> <p>The UE is made to search for PLMNs and the PLMN indicated by the SS is manually selected. The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".</p> <p>"location updating type" = normal, "CKSN" = no key available, "LAI" = deleted LAI (the MCC and MNC hold the values of PLMN1, the LAC is coded FFFE) "mobile identity" = IMSI. The SS starts integrity protection. "Reject cause" = PLMN not allowed.</p> <p>The SS releases the RRC connection.</p> <p>The following messages are sent and shall be received on cell C.</p> <p>The UE is switched off. Set the cell type of cell C to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". Set the cell type of cell B to the "non-suitable cell". (see note)</p> <p>The UE is switched on. If necessary, the UE is put into the automatic mode.</p> <p>The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".</p> <p>"location updating type" = normal, "CKSN" = no key available, "LAI" = deleted LAI (the MCC and MNC hold the values of PLMN1, the LAC is coded FFFE) "mobile identity" = IMSI. The SS starts integrity protection. "Mobile identity" = TMSI.</p> <p>The SS releases the RRC connection.</p>
2	SS			
3	UE			
3a	UE			
4	SS			
5			Void	
6			Void	
7	→		LOCATION UPDATING REQUEST	
8	←		LOCATION UPDATING REJECT	
9	SS		Void	
10			Void	
11	UE			
12	SS			
13			Void	
14			Void	
15	→		LOCATION UPDATING REQUEST	
15a	Void SS		LOCATION UPDATING	
15b	←		REJECT LOCATION UPDATING ACCEPT	
16	SS			
17			Void	
18	UE			
19	SS			
20	UE			
21	SS			
22			Void	
23			Void	
24	→		LOCATION UPDATING REQUEST	
24a	SS			
25	←		LOCATION UPDATING ACCEPT	
26	→		TMSI REALLOCATION COMPLETE	
27	SS			
28			Void	

Step	Direction		Message	Comments
	UE	SS		
NOTE: The definitions for "Serving cell", "Suitable neighbour cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Specific message contents

None.

9.4.2.2.5 Test requirement

- 1) 1.1 At step 12 in test 1 the UE shall not perform periodic updating.
 - 1.2 At step 14 in test 1 the UE shall not initiate an RRC connection establishment (IMSI detach).
 - 1.3 At step 16 in test 1 the UE shall not initiate an RRC connection establishment (IMSI attach).
 - 1.4 At step 16 in test 1 the UE shall not perform normal location updating.
 - 1.5 At step 30 in test 1 the UE shall reject a MO CM connection.
- 2) 2.1 At step 37 in test 1 the UE shall perform normal location updating.
 - 2.2 At step 20 in test 1 the UE shall accept a request for an emergency call with the establishment cause set to "Emergency call".
- 3) At step 11 in test 2 the UE is made to search for PLMNs and the PLMN indicated by the SS is manually selected, and at step 15 the UE shall perform a normal location updating procedure.
- 4) At step 37 in test 1 the UE shall send a LOCATION UPDATING REQUEST message with Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and LAI IE set to "deleted LAI" on cell C.

CHANGE REQUEST

34.123-1 CR 544 # rev **-** # Current version: **5.4.0**

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 and low priority RRC test cases on Unsupported configuration		
Source:	# T1		
Work item code:	# TEI	Date:	# July 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: # On T1#17 it was concluded, based on the reply LS T1-020620 from RAN2, that the test cases where an unsupported UE configuration is applied should be kept, but modified in order to allow the UE to use also other failure cause values. This CR updates the remaining reconfiguration test cases on Unsupported configuration according to this conclusion.

NOTE: The package 2 test case 8.2.2.11 was already corrected at T1#17 in this respect.

Summary of change: # 8.2.1.3 (low):

- Conformance requirements corrected
- The cause value in the RADIO BEARER SETUP FAILURE message is not checked.
- Reference to Annex A corrected to [9] TS 34.108 Clause 9

8.2.1.11 (low):

- Conformance requirements corrected
- The cause value in the RADIO BEARER SETUP FAILURE message is not checked.
- Reference to Annex A corrected to [9] TS 34.108 Clause 9

8.2.2.2 (low):

- Conformance requirements corrected
- The cause value in the RADIO BEARER RECONFIGURATION FAILURE message is not checked.

8.2.6.2 (P4):

- Conformance requirements corrected
- The cause value in the PHYSICAL CHANNEL RECONFIGURATION FAILURE message is not checked.
- Reference to Annex A corrected to [9] TS 34.108 Clause 9

Consequences if not approved: ⌘ A good UE would fail the test.

Clauses affected: ⌘ 8.2.1.3, 8.2.1.11, 8.2.2.2, 8.2.6.2, 8.2.6.2

	Y	N		⌘
Other specs affected:		X	Other core specifications	
		X	Test specifications	
		X	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.

8.2.1.3 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.1.3.1 Definition

8.2.1.3.2 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 SETUP message:
 - ...
 - 2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

...

[The UE should set the variable UNSUPPORTED_CONFIGURATION to TRUE if the received message is not according to the UE capabilities.](#)

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9, [8.5.20](#).

8.2.1.3.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of receiving a RADIO BEARER SETUP message which includes parameters of its unsupported configuration.

8.2.1.3.4 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 in which the frequency cannot be supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP 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 SETUP	Including the unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the 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	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 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 indicated as "Non-speech in CS" 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 (FDD)

Information Element	Value/remark
Frequency info	
CHOICE mode	FDD
- UARFCN uplink (Nu)	0
- UARFCN downlink (Nd)	950

RADIO BEARER SETUP (TDD)

Information Element	Value/remark
Frequency info	
CHOICE mode	TDD
- UARFCN (Nt)	0

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 ~~Annex A~~ [9] TS 34.108 Clause 9, with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Configuration unsupported <u>Not checked</u>

8.2.1.3.5 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 1 the UE transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC ~~which is set to "configuration unsupported" 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.

8.2.1.11 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.1.11.1 Definition

8.2.1.11.2 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 SETUP message:
 - ...
 - 2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

...

[The UE should set the variable UNSUPPORTED_CONFIGURATION to TRUE if the received message is not according to the UE capabilities.](#)

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9, [8.5.20](#).

8.2.1.11.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER SETUP FAILURE message in case of it receiving a RADIO BEARER SETUP message, which includes parameters of an unsupported configuration.

8.2.1.11.4 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 with a stated frequency that cannot be supported by the UE. After the UE receives this message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC ~~setting value "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 SETUP	This message includes an unsupported configuration for the UE.
2		→	RADIO BEARER SETUP FAILURE	The UE shall transmit this message using RLC-AM mode and do not change the current 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	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 indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in [\[9\] TS 34.108 Clause 9 Annex A](#) with the following exceptions:

RADIO BEARER SETUP (FDD)

Information Element	Value/remark
Frequency info	
- UARFCN uplink (Nu)	0
- UARFCN downlink (Nd)	950

RADIO BEARER SETUP (TDD)

Information Element	Value/remark
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	0

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 [\[9\] TS 34.108 Clause 9 Annex A](#), with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Configuration unsupported Not checked

8.2.1.11.5 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 1 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM ~~RLC which is set to "configuration unsupported" 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.

8.2.2.2 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.

...

[The UE should set the variable UNSUPPORTED_CONFIGURATION to TRUE if the received message is not according to the UE capabilities.](#)

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9, [8.5.20](#).

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. 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
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
- 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 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 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, [with the following exceptions:-](#)

Information Element	Value/remark
Message Type	
Failure cause	Not checked

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.

8.2.6.2 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Unsupported configuration)

8.2.6.2.1 Definition

8.2.6.2.2 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 PHYSICAL CHANNEL RECONFIGURATION message:
 - ...
 - 2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

...

[The UE should set the variable UNSUPPORTED_CONFIGURATION to TRUE if the received message is not according to the UE capabilities.](#)

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9, [8.5.20](#).

8.2.6.2.3 Test purpose

To confirm that the UE keeps its configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received PHYSICAL CHANNEL RECONFIGURATION message includes unsupported configuration parameters for the UE.

8.2.6.2.4 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 PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes configuration parameters unsupported by the UE. The UE transmits a PHYSICAL CHANNEL 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		←	PHYSICAL CHANNEL RECONFIGURATION	Includes configuration unsupported by the UE
2		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not reconfigure and continue to communicate using 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	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 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

PHYSICAL CHANNEL RECONFIGURATION (FDD) (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title 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 Annex A](#) with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN uplink (Nu)	0
- UARFCN downlink (Nd)	950

PHYSICAL CHANNEL RECONFIGURATION (TDD) (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" found in [\[9\] TS 34.108 Clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
Frequency info	
- UARFCN (Nt)	0

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 [\[9\] TS 34.108 Clause 9 Annex A](#), with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported Not checked

8.2.6.2.5 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 PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC ~~and set "configuration unsupported" 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.

CR-Form-v7	
CHANGE REQUEST	
№ 34.123-1 CR 545 № rev - №	Current version: 5.4.0 №

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] Package 2 MM test case 9.4.5.3 Location updating/ periodic normal/ test 2		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 01/07/03
Category:	№ F	Release:	№ REL-5

Reason for change:	№ The test sequence expects the UE to perform a location update when it moves from cell A to cell B. This will not happen as the LAC of each cell is the same (34.108 default SIBs).
Summary of change:	№ The LAC of cell B is modified from the default value so that it is different from that of cell A.
Consequences if not approved:	№ The UE will not behave in the expected manner.

Clauses affected:	№ 9.4.5.3										
Other specs Affected:	<table border="1" style="font-size: x-small;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"> </td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	№
	Y	N									
	X										
	X										
	X										
		Test specifications	№								
		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

9.4.5.3 Location updating / periodic normal / test 2

9.4.5.3.1 Definition

9.4.5.3.2 Conformance requirement

When a LOCATION UPDATING ACCEPT or a LOCATION UPDATING REJECT message is received, the timer T3212 is stopped and reset and the UE shall perform a periodic location updating after T3212 expiry.

References

TS 24.008 clause 4.4.2.

9.4.5.3.3 Test purpose

To verify that the UE stops and resets the timer T3212 of the periodic location updating procedure when a LOCATION UPDATING ACCEPT message is received.

NOTE: T3212 is stopped when the MM-idle state is left and restarted when the MM sublayer returns to that state, substate NORMAL SERVICE or ATTEMPTING TO UPDATE. As a consequence, the exact time when T3212 is reset between those two events cannot be tested.

9.4.5.3.4 Method of test

Initial conditions

- System Simulator:
 - 2 cells, IMSI attach/detach is allowed in both cells;
 - ~~T3212 is set to 6 minutes;~~
 - two cells: A and B of the same PLMN, belonging to different location areas with LAI a and b.
- User Equipment:
 - the UE has a valid TMSI. It is "idle updated" on cell A.

Related ICS/IXIT statements

USIM removal possible while UE is powered Yes/No.

Switch off on button yes/No.

Test procedure

A normal location updating is performed. The RRC CONNECTION is released. One minute later, the UE is deactivated, then reactivated in the same cell. It is checked that the UE performs an IMSI attach and a periodic location updating 6 minutes after the IMSI attach.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". (see note)
2		SS		The SS verifies that the IE "establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3			Void	
4			Void	
5	→		LOCATION UPDATING REQUEST	"location updating type" = normal.
5a		SS		The SS starts integrity protection.
6	←		LOCATION UPDATING ACCEPT	
7		SS		The SS releases the RRC connection.
8			Void	
9		SS		The SS waits until the periodic location updating.
10		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration". This message shall arrive between 5 minutes 45s and 6 minutes 15 s after the last release of the RRC connection by the SS.
11			Void	
12			Void	
13	→		LOCATION UPDATING REQUEST	"Location updating type" = periodic.
14	←		LOCATION UPDATING ACCEPT	
15		SS		The SS releases the RRC connection.
16			Void	
17		UE		If possible (see ICS) USIM removal is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed. steps 18 to 23 may be performed or not depending on the action made in step 17.
18		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Detach".
19			Void	
20			Void	
21	→		IMSI DETACH INDICATION	
22		SS		The SS releases the RRC connection.
23			Void	
24		UE		Depending on what has been performed in step 17 the UE is brought back to operation.
25		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
26			Void	
27			Void	
28	→		LOCATION UPDATING REQUEST	"Location updating type" = IMSI attach.
28a		SS		The SS starts integrity protection.
29	←		LOCATION UPDATING ACCEPT	
30		SS		The SS releases the RRC connection.
31			Void	
32		SS		The SS waits until the periodic location updating.
33		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration". This message shall arrive between 5 minutes 45 s and 6 minutes 15s after the last release of the RRC connection by the SS.
34			Void	

Step	Direction		Message	Comments
	UE	SS		
35			Void	
36		→	LOCATION UPDATING REQUEST	"Location updating type" = periodic.
37		←	LOCATION UPDATING ACCEPT	
38		SS		The SS releases the RRC connection.
39			Void	
NOTE:	The definitions for "Serving cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

None.

9.4.5.3.5 Test requirement

After step 28 the UE shall performs an IMSI attach.

After step 33 the UE shall performs periodic location updating 6 minutes after step 28.

CHANGE REQUEST

№ **TS 34.123-1 CR 546** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 Package 4 test case (8.2.3.11)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 16/07/2003
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:	№ In this test case UE is in PS_DCCH_DTCH_FACH (6_11) state, and traffic volume measurement is ordered on RACH or CPCH channels. However, in the measurement report, the report on DTCH RB20 mapped to RACH in uplink is not included.
Summary of change:	№ Traffic volume measurement result for RB20 has been included.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.2.3.11						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; 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> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	№	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<input checked="" type="checkbox"/>	Test specifications					
	<input checked="" type="checkbox"/>	O&M Specifications					
Other comments:	№ Affects R'99, Rel-4 and Rel-5 UEs.						

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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.

8.2.3.11 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	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	RACHorCPCH
- UL Target Transport Channel ID	Not Present
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- 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
- RB identity	20
- 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.

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, 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.

CHANGE REQUEST

№ **TS 34.123-1 CR 547** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 Package 4 test case (8.2.6.11)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 15/07/2003
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:	№ In this test case UE is in PS_DCCH_DTCH_FACH (6_11) state, and traffic volume measurement is ordered on RACH or CPCH channels. However, in the measurement report, the report on DTCH RB20 mapped to RACH in uplink is not included.
Summary of change:	№ Traffic volume measurement result for RB20 has been included.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.2.6.11						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; 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> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	№	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<input checked="" type="checkbox"/>	Test specifications					
	<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.

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 clause 9 of TS 34.108 for FDD or 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
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 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
- <u>RB identity</u>	<u>20</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>
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 clause 9 of TS 34.108 for FDD or 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, 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.

CHANGE REQUEST

№ **TS 34.123-1 CR 548** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 Package 4 test case (8.2.6.12)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 16/07/2003
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:	№ <ol style="list-style-type: none"> 1. In step 8, if new C-RNTI is not allocated, UE will re-perform the cell update procedure, to get a valid CRNTI. 2. UE may transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE message at different instant of the sequence.
Summary of change:	№ <ol style="list-style-type: none"> 1. Add new-CRNTI allocation in step 8, and in step 9 UTRAN Mobility Information confirm message will be transmitted by UE. 2. It is added in step 5 and 8a, that UE may transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE message.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.2.6.12										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications	№
	Y	N									
		X									
		X									
	X										
Test specifications	№										
O&M Specifications	№										
Other comments:	№ Affects R'99, Rel-4 and Rel-5 UEs.										

How to create CRs using this form:

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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.

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. Then 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. UE may send a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure" to cell 1, and UE reselects to 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 DCCH after receiving a CELL UPDATE message. If not already done so, the UE may transmit a PHYSICAL RADIO BEARER CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure" in cell 2. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 2 to acknowledge the reception of new C-RNTI value. If not already done so, The the UE shall 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	<u>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.</u>
5		→	<u>PHYSICAL CHANNEL RECONGURATION FAILURE (option 1)</u>	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. UE shall transmit this message in the cell 1.
6			Void	
7		→	CELL UPDATE	This message includes the value "cell reselection" set in IE "Cell update cause".
8		←	CELL UPDATE CONFIRM	
8a		→	<u>PHYSICAL CHANNEL RECONGURATION FAILURE (option 2)</u>	<u>UE shall transmit this message in the cell 2.</u>
9		→	Void UTRAN MOBILITY INFORMATION CONFIRM	
10		→	PHYSICAL CHANNEL RECONGURATION FAILURE <u>(option 3)</u>	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 for FDD or 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 for FDD or 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 for FDD or 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, [with the following exception](#).

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

[UTRAN MOBILITY INFORMATION CONFIRM \(Step 9\)](#)

[The contents of UTRAN MOBILITY INFORMATION CONFIRM message is identical as "Contents of UTRAN MOBILITY INFORMATION CONFIRM message" as found in Clause 9 of TS 34.108 for FDD or for TDD.](#)

PHYSICAL CHANNEL RECONGURATION FAILURE (Step [5. 8a and 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, 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 8, UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message.](#)

~~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" ~~;~~ [after step 4, 8 or 9.](#)

CR-Form-v7

CHANGE REQUEST

TS 34.123-1 CR 549 # rev **-** # Current version: **5.4.0**

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:	# Corrections to 34.123-1 v5.4.0 low priority test case (8.2.6.14)		
Source:	# T1		
Work item code:	# TEI	Date:	# 16/07/2003
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:	# In this test case UE is in CELL_FACH state, and traffic volume measurement is ordered on RACH or CPCH channels. However, in the measurement report, the report on DTCH RB20 mapped to RACH in uplink is not included.
Summary of change:	# Traffic volume measurement result for RB20 has been included.
Consequences if not approved:	# This test case could fail good UE.

Clauses affected:	# 8.2.6.14						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	#
	Y	N					
	<input type="checkbox"/>	<input checked="" type="checkbox"/>					
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	#				
<input 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.

8.2.6.14 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.6.14.1 Definition

8.2.6.14.2 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.

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 8.2.2.13, 8.2.2.11, 8.2.2.9

8.2.6.14.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received message does not include any IEs except IE "Message Type".

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives a PHYSICAL CHANNEL RECONFIGURATION message including some IEs which are set to give an invalid configuration.

8.2.6.14.4 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 an invalid PHYSICAL CHANNEL RECONFIGURATION message to the UE which contains an unexpected critical message extension. The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE "failure cause" and also setting "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. SS transmits PHYSICAL CHANNEL RECONFIGURATION message including some IEs which are set to give an invalid configuration. The UE keeps current configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration". 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	The UE enters CELL_FACH state.
3a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
3b		→	MEASUREMENT REPORT	
4		←	PHYSICAL CHANNEL RECONFIGURATION	See specific message content.
5		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.
5a		→	MEASUREMENT REPORT	
6		←	PHYSICAL CHANNEL RECONFIGURATION	This message includes IEs which are set to give an invalid configuration.
7				The UE does not change the configuration
8		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "invalid configuration"
9		→	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 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
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 3b, 5a 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
- <u>RB identity</u>	<u>20</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>
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 PHYSICAL CHANNEL RECONFIGURATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 5)

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	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Message extension not comprehended

PHYSICAL CHANNEL RECONFIGURATION (Step 6) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
- Default DPCH Offset Value	512
- DPCH frame offset	1024

PHYSICAL CHANNEL RECONFIGURATION (Step 6) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
-PRACH TFCS	Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 7)

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	Invalid configuration

8.2.6.14.5 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 4 the UE shall keep its old configuration, transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with "protocol error" in IE "failure cause" and also "Message extension not comprehended" in IE "Protocol error cause".

After step 5, 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 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

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.

CHANGE REQUEST

№ **TS 34.123-1 CR 550** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 low priority test case (8.3.1.23)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 10/07/03
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:	№ The initial conditions for cell selection test cases 8.3.1.23 are said to be CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4). But the UE (in general NAS state) is not in a stable state. It might have transmitted Service Request/Paging Response and waiting for response/further signaling. As this test case do take considerable time, UE NAS timers may expire, and result in undesired signaling (like retransmission of Service request or Signaling connection release).		
Summary of change:	№ The initial condition of this test case is changed to: PS-DCCH+DTCH_FACH.		
Consequences if not approved:	№ This test case could fail good UE.		

Clauses affected:	№ 8.3.1.23										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </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	№ TS 34.123-2	
Y	N										
X											
X											
	X										
Other comments:	№ Affects R'99, Rel-4 and Rel-5 UEs.										

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.

8.3.1.23 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:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS_PRIO_n <> HCS_PRIO_s$$

$$W(x) = 0 \quad \text{for } x < 0$$

$$W(x) = 1 \quad \text{for } x >= 0$$

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:	$S_{rxlev} > 0$ 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 >= 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 >= 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_{resel}.

- 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: PS-DCCH+DTCH_FACH ~~CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-411)~~ 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 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	
- 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
- RAT List	This parameter is configurable
- Qrxlevmin	-103 dBm
- 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	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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- 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 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.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- 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	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- 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	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- 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
- Maximum allowed UL TX power	30 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	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	30 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	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 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	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	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	TDD
- CHOICE mode	0 dB
- Sintersearch	47 dB
- SsearchHCS	This parameter is configurable
- RAT List	-103 dBm
- Qrxlevmin	5 (gives actual value of 10 dB)
- Qhyst1s	
- 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	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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- 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.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- 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 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.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- 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	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for cell No.1 (TDD)
- 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
- Maximum allowed UL TX power	30 dBm
- 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	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	30 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	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	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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- 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.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- 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
- 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	
- 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 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	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for cell No.1 (TDD)
- 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
- Maximum allowed UL TX power	30 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	TDD
- Qrxlevmin	-103 dBm
- 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	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS 34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	30 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	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.

CR-Form-v7

CHANGE REQUEST

№ **TS 34.123-1 CR 551** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 low priority test case (8.3.4.5)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 16/07/2003
Category:	№ F	Release:	№ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	R96 (Release 1996)	2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R97 (Release 1997)	R96 (Release 1996)
	B (addition of feature),	R98 (Release 1998)	R97 (Release 1997)
	C (functional modification of feature)	R99 (Release 1999)	R98 (Release 1998)
	D (editorial modification)	Rel-4 (Release 4)	R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-5 (Release 5)	Rel-4 (Release 4)
		Rel-6 (Release 6)	Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change: № In this test case UE is in CELL_FACH state, and traffic volume measurement is ordered on RACH or CPCH channels. However, in the measurement report, the report on DTCH RB20 mapped to RACH in uplink is not included.

Summary of change: № Traffic volume measurement result for RB20 has been included.

Consequences if not approved: № This test case could fail good UE.

Clauses affected: № 8.3.4.5

Other specs affected:		Y	N		
	№	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	№
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	
		<input 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.

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 then 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	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	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
- <u>RB identity</u>	<u>20</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>
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	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.

CHANGE REQUEST

TS 34.123-1 CR 552 # rev **-** # Current version: **5.4.0**

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:	# Corrections to 34.123-1 v5.4.0 low priority test case 8.4.1.22		
Source:	# T1		
Work item code:	# TEI	Date:	# 03/07/2003
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:	#	<ol style="list-style-type: none"> 1. IEs in MEASUREMENT CONTROL message are misaligned and misspelt. 2. In MEASUREMENT CONTROL message, IE "DL Transport channel identity" is set to "Not present", therefore all downlink transport channel shall be reported.
Summary of change:	#	<ol style="list-style-type: none"> 1. <u>TC 8.4.1.22</u> <ul style="list-style-type: none"> • IEs in MEASUREMENT CONTROL message in step 1 have been realigned and the name of the IEs have been corrected. • MEASUREMENT REPORT message in step 2 and 3 have been corrected so that all DL transport channel will be report because IE "DL Transport channel identity" is set to "Not present" in MEASUREMENT CONTROL message in step 1. Separate message was create for speech service.
Consequences if not approved:	#	This test case could fail good UE.

Clauses affected:	#	8.4.1.22								
Other specs affected:	#	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> </table> Other core specifications # 	Y	N		X		X		X
Y	N									
	X									
	X									
	X									
		Test specifications								
		O&M Specifications								
Other comments:	#	Affects R'99, Rel-4 and Rel-5 UEs.								

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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.

8.4.1.22 Measurement Control and Report: Quality measurements

8.4.1.22.1 Definition

8.4.1.22.2 Conformance requirement

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.

Reference

3GPP TS 25.331 clause 8.4.1.3

8.4.1.22.3 Test Purpose

1. To confirm that the UE performs quality measurement as specified in MEASUREMENT CONTROL message received. In CELL_DCH state, the UE shall send MEASUREMENT REPORT message when the reporting criteria is fulfilled for any ongoing quality measurement.

8.4.1.22.4 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. MEASUREMENT CONTROL message is sent to UE to assign quality measurement and reporting. As assigned in MEASUREMENT CONTROL message, the UE shall periodically send MEASUREMENT REPORT message reporting BLER of downlink transport channel(s). 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		←	MEASUREMENT CONTROL	The UE is requested to perform "Quality measurements"
2		→	MEASUREMENT REPORT	
3		→	MEASUREMENT REPORT	UE shall send second MEASUREMENT REPORT message after 64 seconds.
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 Content

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement identity	16
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	Quality measurement
- Quality reporting quantity	
- DL transport channel BLER	True
- Transport channels for BLER reporting	Not present
- Transport channel ID list	Not present
- CHOICE mode Mode specific Info	fdd : Null FDD
- CHOICE report criteria Reporting criteria	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	64 sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2,3)

[In case of CS speech call,](#)

Information Element	Value/remark
Measurement identity	16
Measured Results	Quality measurement
- CHOICE measurement	
- BLER measurement results list	
- Transport channel identity	6
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	7
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	8
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	10
- DL transport channel BLER	Check to see if this IE is present
- CHOICE mode <i>Mode-specific info</i>	fd: Null FDD
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

[In any cases except CS speech call.](#)

Information Element	Value/remark
Measurement identity	16
Measured Results	
- CHOICE measurement	Quality measurement
- BLER measurement results list	
- Transport channel identity	6
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	10
- DL transport channel BLER	Check to see if this IE is present
- CHOICE mode	FDD
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

8.4.1.22.5 Test Requirement

In step 2 and 3, the UE shall send MEASUREMENT REPORT message to report BLER for downlink DCH transport channel.

CHANGE REQUEST

№ **TS 34.123-1 CR 553** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 low priority test case (8.4.1.39)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 14/07/2003
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:	№ In specific message contents for Measurement Control in step 2, IE UE internal reporting quantity is not included. But as per 25.331 clause 8.6.7.18, this shall result in invalid configuration
Summary of change:	№ In Measurement Control message, UE internal report quantities is included and in turn, the Measurement Report message shall include the IE UE transmitted power in the IE Measured results.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.4.1.39										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	X	X	X	X	X	X	Other core specifications Test specifications O&M Specifications	№
Y	N										
X	X										
X	X										
X	X										
Other comments:	№ Affects R'99, Rel-4 and Rel-5 UEs.										

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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.

8.4.1.39 Measurement Control and Report: UE internal measurement, event 6e

8.4.1.39.1 Definition

8.4.1.39.2 Conformance requirement

When this event is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE RSSI reaches the UE's dynamic receiver range.

Reference

3GPP TS 25.331 clause 14.6.2.5

8.4.1.39.3 Test Purpose

1. To confirm that the UE sends a measurement report for event 6e when the UE RSSI reaches the UE's dynamic receiver range when event 6e has been configured in the UE through a MEASUREMENT CONTROL message.

8.4.1.39.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell .

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

Test procedure

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

The SS increases its output power by 0.5 dB step until the UE RSSI reaches the UE's receiver dynamic range. 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		←	MEASUREMENT CONTROL	SS configures event 6e in the UE.
3		←		The SS increases its output power by 0.5 dB steps until the UE RSSI reaches the UE's receiver dynamic range.
4		→	MEASUREMENT REPORT	The UE sends a MEASUREMENT REPORT to SS triggered by event 6e.
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.

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement Identity	6
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	
- UE internal measurement	UTRA Carrier RSSI
- UE internal measurement quantity	0
- Filter coefficient	Not included
- UE internal reporting quantity	TRUE
- UE Transmitted Power	FDD
- CHOICE mode	FALSE
- UE Rx-Tx time difference	
CHOICE report criteria	
- UE internal measurement reporting criteria	
- Parameters sent for each UE internal measurement event	1 event
- UE internal event identity	event 6e
- Time to trigger	0

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	Check that this IE is not included
- CHOICE measurement	UE internal measured results
- CHOICE mode	FDD
- UE transmitted power	Check that this value is within reasonable range of value.
- UE Rx-TX report entries	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE <i>event result</i>	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6e
CHOICE <i>mode</i>	
Primary CPICH info	This IE should not be included

8.4.1.39.5 Test requirement

The UE shall then begin transmitting a MEASUREMENT REPORT message to SS triggered by event 6e when the UE RSSI reaches the UE's receiver dynamic range.

CHANGE REQUEST

34.123-1 CR 554 # rev - # Current version: 5.4.0

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; Correction of Package 4 RRC test case 8.2.6.37.		
Source:	# T1		
Work item code:	# TEI	Date:	# 18/07/2003
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:	#	1. Conformance requirement out of date. 2. It appeared that it is currently unclear how ciphering of TM RB should be done when the ciphering activation time is not at the TTI boundary common to all UL and DL transport channel using RLC-TM.
Summary of change:	#	1. Conformance requirement updated. 2. Specific message contents in Steps 11 and 18 for the CS case corrected in order to test that the IE "COUNT-C activation time" includes a correct setting of the CFN value.
Consequences if not approved:	#	Test case not aligned to latest core specifications and potential risk of ciphering failure.

Clauses affected:	#	8.2.6.37												
Other specs affected:	#	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> <td></td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> <td>Other core specifications</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> <td>Test specifications</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> <td>O&M Specifications</td> </tr> </table>	Y	N		#	X	Other core specifications	#	X	Test specifications	#	X	O&M Specifications
Y	N													
#	X	Other core specifications												
#	X	Test specifications												
#	X	O&M Specifications												
Other comments:	#	Affects R99, REL-4 and REL-5 test cases.												

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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.

8.2.6.37 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 [\(FDD only\)](#);
- 1> apply the hard handover procedure as specified [in clause 8.3.5 in TS 25.331](#) [\(below\)](#);
- 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 DCCCH using AM RLC.

...

When performing hard handover with change of frequency, the UE shall:

- 1> stop all intra-frequency and inter-frequency measurements [reporting](#) on the cells listed in the variable CELL_INFO_LIST. 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" ([see subclause 8.6.3.1 in TS 25.331](#)) 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> [if any ciphering configuration for a radio bearer using RLC-TM has not been applied, due to that the activation time from a previous procedure has not elapsed:](#)

2> [apply the ciphering configuration immediately and consider the activation time from the previous procedure to be elapsed.](#)

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"-, [that is a multiple of 8 frames \(CFN mod 8 =0\) and lies at least 200 frames ahead of the CFN in which the response message is first transmitted;](#)~~for this IE;~~

1> calculate the START value according to subclause 8.5.9 [in TS 25.331](#);

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 [common for all transparent mode radio bearers of this CN domain](#) 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 [even if the "COUNT-C activation time" is set to zero](#);

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/3.84 MHz	-60	-60	-75	-95	-	75	-	-	60	-60	-60	70	-50	-	-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, the SS sends 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, the SS then continues by sending 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 (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 8.2.6.37-1.

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	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- 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
- 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	Scrambling code 1 (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 present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Scrambling code 2 (or scrambling code 1 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
Event results	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	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 - SSTD 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 FALSE 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	undefined
- 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	Not present
- 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, 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	
- 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	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remark
<p>Message Type</p> <p>Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code <p>- RRC Message sequence number</p> <p>Measurement identity</p> <p>Measured Results</p> <ul style="list-style-type: none"> - Inter-frequency measured results list - Frequency info <ul style="list-style-type: none"> -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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</p> <p>Additional measured results</p> <p>Event results</p> <ul style="list-style-type: none"> - Inter-frequency measurement event results <ul style="list-style-type: none"> - Inter-frequency event identity - Inter-frequency cells - Frequency info <ul style="list-style-type: none"> -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	<p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.</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 2 cells 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 (or scrambling code 2)</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>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)</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>

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 <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	
- 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	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- 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	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 3
- 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	
- 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. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- 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 is shall be present <u>and that the CFN value is a multiple of 8 frames (CFN mod 8 =0) and lies at least 200 frames ahead of the CFN in which the response message is first transmitted.</u>
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	
- 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. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- 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 <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number 	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. 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 <ul style="list-style-type: none"> - Intra-frequency measured results - Cell measured results <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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 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 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 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
Measured results on RACH	Checked that this IE is absent
Additional measured results	Checked that this IE is absent
Event results <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 	1a Check that this IE is set to Scrambling code 2

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	TRUE
- CHOICE Mode	FDD
- Primary CPICH Info	
- 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	On with no reporting
- UE autonomous update	Not present
- Non autonomous update mode	Inter-frequency measurement reporting criteria
- CHOICE report 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
- 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	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not Present
- 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	
- 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.

CR-Form-v7
CHANGE REQUEST
⌘ TS 34.123-1 CR 555 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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:	⌘ Removal of test case 8.2.2.20		
Source:	⌘ T1		
Work item code:	⌘ MISTST1	Date:	⌘ 18/07/2003
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 purpose of 8.2.2.20 is to test that a Radio Bearer Reconfiguration message is ignored if it is received during the transient condition between reception of a Radio Bearer Reconfiguration message for a CELL_FACH to CELL_DCH transition and the reconfiguration taking place. This transient condition would exist for a very short time, the exact time depending of the speed of the UE. For a very fast UE it would be possible that the duration of this condition is less than the time taken to transmit the second RB reconfiguration. It is therefore not possible to ensure that the second RB reconfiguration is received before the reconfiguration has taken place and so it is not possible to implement the test. Thus the test purpose should be considered untestable.
Summary of change:	⌘ Remove 8.2.2.20
Consequences if not approved:	⌘ A test will be specified that is impossible to implement.

Clauses affected:	⌘ 8.2.2.20										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:	⌘										

How to create CRs using this form:

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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.

8.2.2.20 ~~Void~~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_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 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	
1a (TDD)			A code combination is assigned for the SS.	
2		←	RADIO BEARER RECONFIGURATION	For FDD, the IE "Scrambling code number" in IE "Uplink DPCH info" is set to 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 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 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	4
- 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	4
- 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

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 with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
–Uplink DPCH timeslots and codes	Assigned by SS
–First timeslot code list	

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 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	4
- 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	4
- 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	4
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	4
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	Algorithm4
— TPC step size	4dB
— 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

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 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.

8.2.2.21 Void

CHANGE REQUEST

34.123-1 CR 556 # rev **-** # Current version: **5.4.0**

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; Correction to idle mode section according to RP-030289		
Source:	# T1		
Work item code:	# TEI	Date:	# 28/07/2003
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:	# RP-030289 (CR105 to 25.304) was approved at RAN#20 plenary. Part of the CR clarifies the term "PLMN reselection" which was changed to "PLMN selection".		
Summary of change:	<ul style="list-style-type: none"> The term "PLMN reselection" is changed to "PLMN selection" Alignment of terminology. Where term "reselection" is used it is clarified that it concerns cell reselection. 		
Consequences if not approved:	# Idle mode section not aligned with core specifications.		

Clauses affected:	# 6						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><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"/>						
	<input checked="" type="checkbox"/>	Test specifications					
	<input checked="" type="checkbox"/>	O&M Specifications					
Other comments:	# Affects R99, REL-4 and REL-5 test cases.						

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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.

6 Idle mode operations

In the following paragraphs some explanatory text is given concerning the nature of the tests in this clause and the general behaviour of the SS is described.

Since the conformance requirements of most of the tests in this clause cannot be tested explicitly, testing is done implicitly by testing the UE behaviour from its responses to the SS.

In some cases, a test is performed in multiple stages in order that the requirements can be tested within the above constraints.

For any UE all the carriers are in its supported band(s) of operation.

Unless otherwise stated in the method of test, in all of the tests of this clause:

- the default values of the system information data fields given in TS 34.108 are used;
- the UE is equipped with a USIM containing default values. The USIM is in the idle updated state in the default location area with a TMSI assigned at the beginning of each test;
- default cell numbering as defined in TS 34.108 clause 6.1 have been used in the cell selection and re-selection test cases;
- the cells shall be configured such that $S_{qual} > 0$ (FDD only) and $S_{rxlev} > 0$ while applying $Q_{qualmin}$ (FDD only) and $Q_{rxlevmin}$ in table 6.1. In addition, for an FDD cell, the measured primary CPICH RSCP value shall be greater than or equal to -95 dBm (definition of High Quality cell, see TS 25.304, clause 5.1.2.2). In addition, for a TDD cell, the measured P-CCPCH RSCP shall be greater than or equal to -84 dBm (definition of High Quality cell, see TS 25.304, clause 5.1.2.2).

Three different methods A, B and C are applied in the tests:

Method A:

- the SS is continuously paging the UE on all cells at the start of the test and does not respond to RACH requests from the UE (which causes a cell reselection). Where a test specifies that the UE is not paged on a particular cell, only idle paging is transmitted. This method is similar to the one used in TS 51.010-1, clause 20.

Method B:

- the SS is continuously paging the UE on all cells at the start of the test and responds to RACH requests from the UE with an IMMEDIATE ASSIGNMENT REJECT (GERAN cell) or RRC CONNECTION REJECT (UTRAN cell) message which causes the UE to return to Idle mode. Where a test specifies that the UE is not paged in a particular cell, only idle paging is transmitted.

Method C:

- no continuously paging as in method A or B. Normal response to RACH requests so Location Updating and Calls can be done.

In case a test specifies that UE shall read System Information on BCCH while camped on a UTRAN cell, SS shall notify UE on the BCCH modification by sending a PAGING TYPE 1 message to UE. This message shall contain IE BCCH Modification Info with the following settings:

Information Element	Value/remark
BCCH modification info	
MIB Value Tag	Set to the same value as the value tag of the MIB after the BCCH modification
BCCH Modification time	Not present

Table 6.1: Default values of the system information fields

Parameter	Setting
IMSI attach/detach	Method A, B: Not allowed Method C: Allowed
Intra-frequency cell re-selection indicator	Allowed
Cell_selection_and_reselection_quality_measure	CPICH RSCP (FDD)
Qqualmin (FDD only)	-24 dB
Qrxlevmin (FDD)	-115 dBm
Qrxlevmin (TDD)	-103 dBm
DRX cycle length	1,28 s

For a UE camping in a FDD cell, CPICH_Ec/Io and SCH_Ec/Io shall fulfill requirements in TS 25.133, clause 8.1.2.2.1: The UE is able to identify a new detectable cell belonging to the monitored set within $T_{\text{identify intra}}$ when CPICH Ec/Io \geq -20 dB and SCH_Ec/Io \geq -20 dB.

For a UE camping in a TDD cell, the UE shall be able to identify a new detectable cell belonging to the monitored set within $T_{\text{identify intra}}$ when fulfill requirements in TS 25.123, clause 8.1.2.2. for TDD 3.84 Mcps option and 8.1A.2.2 for TDD 1.28 Mcps option.

It is a UE option whether to indicate access technologies to the user (TS 23.122, clause 4.4.3.1.2). Therefore, for combined UTRAN/GSM tests, it is indicated in parentheses which access technology shall be indicated to the user if the UE has this capability.

If a parameter is indicated with a *, it means that the parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The PLMN numbers indicated in table 6.2 are used in test cases to associate a cell with an MCC and MNC for that cell. If no PLMN is explicitly specified, the default value is PLMN 1.

Table 6.2: Location Area Information (LAI) in System Information type 3 messages broadcast on the BCCH (GSM) or System Information Block Type 1 broadcast on the BCH (UMTS)

PLMN	MCC1	MCC2	MCC3	MNC1	MNC2	MNC3	LAC
1	0	0	1	0	1	Not present	x
2	0	0	2	1	1	Not present	x
3	0	0	4	2	1	Not present	x
4	0	0	5	3	1	Not present	x
5	0	0	6	4	1	Not present	x
6	0	0	7	5	1	Not present	x
7	0	0	8	6	1	Not present	x
8	0	0	9	7	1	Not present	x
9	0	1	0	0	2	Not present	x
10	0	1	1	1	2	Not present	x
11	0	1	2	2	2	Not present	x
12	0	1	3	3	2	Not present	x

NOTE: 'x' denotes any value.

References: TS 23.122, annex A and TS 23.003, clause 2.

The test channel numbers indicated in tables 6.3, 6.4, 6.4a and 6.5 are used in test cases to associate a cell with a frequency for that cell. The frequencies for GSM and DCS cells in table 6.5 are identical to those used in TS 51.010-1, clause 26.3.1. The RF signal levels are given in table 6.5 for GSM cells, in table 6.3 for UTRAN FDD cells, in table 6.4 for UTRAN TDD cells 3.84 Mcps option and in table 6.4a for UTRAN TDD cells 1.28 Mcps option. If no channel is explicitly specified, the default value is Test Channel 1.

Table 6.3: UTRA (FDD) test frequencies

Test Channel	Band I		Band II		Band III	
	CPICH_Ec dBm / 3.84 MHz	Uplink UARFCN	CPICH_Ec dBm / 3.84 MHz	Uplink UARFCN	CPICH_Ec dBm / 3.84 MHz	Uplink UARFCN
1	-60	9 613	-60	9 263	-60	8 563
2	-65	9 663	-65	9 313	-65	8 613
3	-70	9 713	-70	9 363	-70	8 663
4	-75	9 763	-75	9 413	-75	8 713
5	-80	9 813	-80	9 463	-80	8 763
6	-85	9 863	-85	9 513	-85	8 813

References: TS 34.108, clause 5.1.1 and TS 34.121, clause 4.

Table 6.4: UTRA TDD test frequencies (3.84 Mcps option)

Test Channel	Band a		Band b		Band c	
	P-CCPCH_ RSCP [dBm]	UARFCN	P-CCPCH_ RSCP [dBm]	UARFCN	P-CCPCH_ RSCP [dBm]	UARFCN
1	-54	9 513	-54	9 263	-54	9563
2	-59	9 550	-59	9 400	-59	9577
3	-64	9 587	-64	9 537	-64	9591
4	-69	10 063	-69	9 663	-69	9605
5	-74	10 087	-74	9 800	-74	9619
6	-79	10 112	-79	9 937	-79	9637

Table 6.4a: UTRA TDD test frequencies (1.28 Mcps option)

Test Channel	Band a		Band b		Band c	
	P-CCPCH_ RSCP [dBm]	UARFCN	P-CCPCH_ RSCP [dBm]	UARFCN	P-CCPCH_ RSCP [dBm]	UARFCN
1	-54	9 505	-54	9 255	-54	9555
2	-59	9 550	-59	9 400	-59	9573
3	-64	9 595	-64	9 545	-64	9591
4	-69	10 055	-69	9 655	-69	9608
5	-74	10 088	-74	9 800	-74	9626
6	-79	10 120	-79	9 945	-79	9645

References: TS 34.108, clause 5.1.2 and TS 34.122, clause 4.

Table 6.5: GSM/DCS test frequencies and levels

Test Channel	GSM 900		DCS 1 800	
	level dB μ Vemf() / dBm	BCCH ARFCN	level dB μ Vemf() / dBm	BCCH ARFCN
1	+65 / -48	1	+65 / -48	520
2	+63 / -50	7	+63 / -50	580
3	+61 / -52	39	+61 / -52	610
4	+55 / -58	65	+55 / -58	702
5	+59 / -54	66	+59 / -54	703
6	+57 / -56	85	+57 / -56	830
7	+55 / -58	97	+55 / -58	885
8	+53 / -60	124		

Test Channel	GSM 450		DCS 480	
	level dB μ Vemf() / dBm	BCCH ARFCN	level dB μ Vemf() / dBm	BCCH ARFCN
1	+65 / -48	259	+65 / -48	306
2	+63 / -50	261	+63 / -50	308
3	+61 / -52	267	+61 / -52	314
4	+55 / -58	268	+55 / -58	315
5	+59 / -54	281	+59 / -54	328
6	+57 / -56	288	+57 / -56	335
7	+55 / -58	291	+55 / -58	338
8	+53 / -60	293	+53 / -60	340

Test Channel	Multiband 900/1800		PCS 1900	
	level dB μ Vemf() / dBm	BCCH ARFCN	level dB μ Vemf() / dBm	BCCH ARFCN
1	+65 / -48	520	+65 / -48	512
2	+63 / -50	7	+63 / -50	520
3	+61 / -52	39	+61 / -52	580
4	+55 / -58	702	+55 / -58	610
5	+59 / -54	66	+59 / -54	702
6	+57 / -56	85	+57 / -56	703
7	+55 / -58	885	+55 / -58	800
8	+53 / -60	124		

Test Channel	Multiband 450/900		Multiband 480/900	
	level dB μ Vemf() / dBm	BCCH ARFCN	level dB μ Vemf() / dBm	BCCH ARFCN
1	+65 / -48	1	+65 / -48	1
2	+63 / -50	261	+63 / -50	308
3	+61 / -52	267	+61 / -52	314
4	+55 / -58	65	+55 / -58	65
5	+59 / -54	281	+59 / -54	328
6	+57 / -56	288	+57 / -56	335
7	+55 / -58	124	+55 / -58	124
8	+53 / -60	293	+53 / -60	340

Test Channel	Multiband 450/1800		Multiband 480/1800	
	level dB μ Vemf() / dBm	BCCH ARFCN	level dB μ Vemf() / dBm	BCCH ARFCN
1	+65 / -48	520	+65 / -48	520
2	+63 / -50	261	+63 / -50	308
3	+61 / -52	267	+61 / -52	314
4	+55 / -58	702	+55 / -58	702
5	+59 / -54	281	+59 / -54	328
6	+57 / -56	288	+57 / -56	335
7	+55 / -58	885	+55 / -58	885
8	+53 / -60	293	+53 / -60	340

For testing an E-GSM Mobile station, the BCCH ARFCN of GSM Test Channel 7 at GSM 900 column shall be 985 (instead of 97). For testing an R-GSM Mobile station, the BCCH ARFCN of GSM Test Channel 7 at GSM 900 column shall be 965 (instead of 97).

6.1 In a pure 3GPP environment

6.1.1 PLMN selection ~~and reselection~~

6.1.1.1 PLMN selection of RPLMN, HPLMN, UPLMN and OPLMN; Manual mode

6.1.1.1.1 Definition

Test to verify that the UE can present the available PLMNs in priority order to the user when asked to do so in manual mode and that the displayed PLMNs can be selected / reselected by the user. Forbidden PLMNs shall also be displayed in the list. If available, the RPLMN shall be selected at switch-on, otherwise the displayed list shall include in priority order HPLMN, User-PLMN and Operator-PLMN. The last priority in the list is "Other PLMN/access technology combinations" which is not included in this test.

Only UTRAN cells and a UE equipped with a USIM with Radio Access Technology fields set to UTRAN are considered.

6.1.1.1.2 Conformance requirement

1. At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see TS 23.122, clause 4.5.2) attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

- 2.1 HPLMN;
- 2.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 2.5 Other PLMN/access technology combinations in order of decreasing signal quality.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

3. If a "PLMN not allowed" message is received by an MS in response to an LR request from a VPLMN, that VPLMN is added to a list of "forbidden PLMNs" in the SIM and thereafter that VPLMN will not be accessed by the MS when in automatic mode. A PLMN is removed from the "forbidden PLMNs" list if, after a subsequent

manual selection of that PLMN, there is a successful LR. This list is retained when the MS is switched off or the SIM is removed. The HPLMN shall not be stored on the list of "forbidden PLMNs".

References

1. TS 23.122, clause 4.4.3.1;
2. TS 23.122, clause 4.4.3.1.2;
3. TS 23.122, clause 3.1.

NOTE: TS 31.102 defines the USIM fields.

6.1.1.1.3 Test purpose

1. To verify that if available, the RPLMN is selected at switch-on.
2. To verify that in Manual Network Selection Mode Procedure, the UE presents the HPLMN, UPLMN and OPLMN in a prioritized order.
3. To verify that forbidden PLMNs are also displayed in the list.

6.1.1.1.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

Cell levels are from table 6.3. (FDD).

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_ Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_ RSCP [dBm] (TDD)	Test Channel	PLMN
Cell 1	-60	-54	1	PLMN 1
Cell 2	-65	-59	2	PLMN 2
Cell 3	-70	-64	3	PLMN 3
Cell 4	-75	-69	4	PLMN 4
Cell 5	-80	-74	5	PLMN 5
Cell 6	-85	-79	6	PLMN 6

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LOCI}		PLMN 1
EF _{HPLMNwAcT}	1 st	PLMN 2
EF _{PLMNwAcT}	1 st	PLMN 3
	2 nd	PLMN 4
EF _{OPLMNwAcT}	1 st	PLMN 5
	2 nd	PLMN 6
EF _{FPLMN}		PLMN 3

Test procedure

Method C is applied.

- a) The SS activates cells 1-6 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) Cell 1 is switched off.

- e) PLMN 4 shall be selected when the PLMN list is presented.
- f) The SS waits for random access requests from the UE.
- g) Cell 4 is switched off.
- h) PLMN 3 shall be selected when the PLMN list is presented. The SS shall reject the Registration Request from the UE.
- i) PLMN 5 shall be selected (the list is already available).
- j) The SS waits for random access requests from the UE.
- k) Cell 5 is switched off.
- l) PLMN 2 shall be selected when the PLMN list is presented.
- m) The SS waits for random access requests from the UE.
- n) Cell 2 is switched off.
- o) PLMN 6 shall be selected when the PLMN list is presented.
- p) The SS waits for random access requests from the UE.
- q) Cell 6 is switched off.

6.1.1.1.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 1.
- 2) In step e), the list shall be presented. The priority shall be as follows: PLMN 2, PLMN 3, PLMN 4, PLMN 5, PLMN 6.
- 3) In step f), the response from the UE shall be on Cell 4. The displayed PLMN shall be PLMN 4.
- 4) In step h), the list shall be presented. The priority shall be as follows: PLMN 2, PLMN 3, PLMN 5, PLMN 6. After PLMN 3 has been selected, the list shall appear again as the UE cannot perform registration.
- 6) In step j), the response from the UE shall be on Cell 5. The displayed PLMN shall be PLMN 5.
- 7) In step l), the list shall be presented. The priority shall be as follows: PLMN 2, PLMN 3, PLMN 6.
- 8) In step m), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN 2.
- 9) In step o), the list shall be presented. The priority shall be as follows: PLMN 3, PLMN 6.
- 10) In step p), the response from the UE shall be on Cell 6. The displayed PLMN shall be PLMN 6.
- 11) After step q), the UE shall inform that only limited service is possible.

6.1.1.2 PLMN selection of "Other PLMN / access technology combinations"; Manual mode

6.1.1.2.1 Definition

Test to verify that the UE can present the available high quality signal PLMNs in random order to the user when asked to do so in manual mode and that the displayed PLMNs can be selected / reselected by the user. Forbidden PLMNs shall also be displayed in the list.

Only UTRAN cells and a UE equipped with a USIM with Radio Access Technology fields set to UTRAN are considered.

6.1.1.2.2 Conformance requirement

1. At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see TS 23.122, clause 4.5.2) attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

- 2.1 HPLMN;
- 2.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 2.5 Other PLMN/access technology combinations in order of decreasing signal quality.

In 2.5, the MS shall order the PLMN/access technology combinations in order of decreasing signal quality within each access technology. The order between PLMN/access technology combinations with different access technologies is an MS implementation issue.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

3. If a "PLMN not allowed" message is received by an MS in response to an LR request from a VPLMN, that VPLMN is added to a list of "forbidden PLMNs" in the SIM and thereafter that VPLMN will not be accessed by the MS when in automatic mode. A PLMN is removed from the "forbidden PLMNs" list if, after a subsequent manual selection of that PLMN, there is a successful LR. This list is retained when the MS is switched off or the SIM is removed. The HPLMN shall not be stored on the list of "forbidden PLMNs".
4. The UE shall scan all RF channels in the UTRA band according to its capabilities to find available PLMNs. On each carrier, the UE shall search for the strongest cell according to the cell search procedures (for FDD, see TS 25.214, and TDD, see TS 25.224) and read its system information, in order to find out which PLMN the cell belongs to. If the UE can read the PLMN identity, the found PLMN shall be reported to the NAS as a high quality PLMN (but without the RSCP value), provided that the following high quality criterion is fulfilled:
 - For an FDD cell, the measured primary CPICH RSCP value shall be greater than or equal to -95 dBm.
 - For a TDD cell, the measured P-CCPCH RSCP shall be greater than or equal to -84 dBm.

Found PLMNs that do not satisfy the high quality criterion, but for which the UE has been able to read the PLMN identities are reported to the NAS together with the CPICH RSCP value for UTRA FDD cells and P-CCPCH RSCP for UTRA TDD cells.

References

1. TS 23.122, clause 4.4.3.1.
2. TS 23.122, clause 4.4.3.1.2.
3. TS 23.122, clause 3.1.
4. TS 25.304, clause 5.1.2.2.

NOTE: TS 31.102 defines the USIM fields.

6.1.1.2.3 Test purpose

1. To verify that in Manual Network Selection Mode Procedure, the UE presents "Other PLMN/access technology combinations" in a random order according to conformance requirement 2.4. UE requirement on measurement accuracy for PLMN selection is not specified in core specifications. Therefore, the ordering of PLMNs according to conformance requirement 2.5 is not tested.
2. To verify that forbidden PLMNs are also displayed in the list.

6.1.1.2.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_ RSCP [dBm] (TDD)	High Quality signal	Test Channel	PLMN
Cell 1	-85	-74	Yes	1	PLMN 6
Cell 2	-80	-69	Yes	2	PLMN 7
Cell 3	-80	-69	Yes	3	PLMN 8
Cell 4	-80	-69	Yes	4	PLMN 10

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LOCI}		PLMN 6
EF _{FPLMN}		PLMN 10

Test procedure

Method C is applied.

- a) The SS activates cells 1-4 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) PLMN 6 shall be selected when the PLMN list is presented.
- d) The SS waits for random access requests from the UE.
- e) Cell 1 is switched off.
- f) PLMN 7 shall be selected when the PLMN list is presented.
- g) The SS waits for random access requests from the UE.
- h) Cell 2 is switched off.

- i) PLMN 8 shall be selected when the PLMN list is presented.
- j) The SS waits for random access requests from the UE.
- k) Cell 3 is switched off.
- l) PLMN 10 shall be selected when the PLMN list is presented. The SS shall accept the Registration Request from the UE.
- m) Cell 4 is switched off.

6.1.1.2.5 Test Requirements

- 1) In step c), the list shall be presented. The priority shall be as follows: PLMN 6 followed by PLMN 7, PLMN 8 and PLMN 10 in random order.
- 2) In step d), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 6.
- 3) In step f), the list shall be presented. The priority shall be as follows: PLMN 7, PLMN 8 and PLMN 10 in random order.
- 4) In step g), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN 7.
- 5) In step i), the list shall be presented. The priority shall be as follows: PLMN 8 and PLMN 10 in random order.
- 6) In step j), the response from the UE shall be on Cell 3. The displayed PLMN shall be PLMN 8.
- 7) In step l), the list shall be presented containing only PLMN 10. The UE shall perform successful registration on Cell 4.
- 8) After step m), the UE shall inform that no network is available.

6.1.1.3 PLMN selection; independence of RF level and preferred PLMN; Manual mode

6.1.1.3.1 Definition

Test to verify that in Manual Network Selection Mode, the UE is able to obtain normal service on a PLMN which is neither the better nor a preferred PLMN and that it tries to obtain service on a VPLMN if and only if the user selects it manually.

6.1.1.3.2 Conformance requirement

1. At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see TS 23.122, clause 4.5.2) attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

2.1 HPLMN;

2.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

2.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

2.4 Other PLMN/access technology combinations with received high quality signal in random order;

2.5 Other PLMN/access technology combinations in order of decreasing signal quality.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

References

1. TS 23.122, clause 4.4.3.1.
2. TS 23.122, clause 4.4.3.1.2

NOTE: TS 31.102 defines the USIM fields.

6.1.1.3.3 Test purpose

1. To verify that the selected PLMN at switch-on is the HPLMN.
2. To verify that in Manual Network Selection Mode Procedure the UE tries to obtain service on a VPLMN if and only if the user selects it manually.
3. To verify that the UE is able to obtain normal service on a PLMN which is neither the better nor a preferred PLMN.

6.1.1.3.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

"IMSI attach" flag in the BCCH is set to allowed.

For FDD only:

Step a-d:

Parameter	Unit	Cell 1	Cell 2	Cell 3
Test Channel		1	2	3
CPICH_Ec	dBm/3.84 MHz	-60	-70	OFF
PLMN		1	2	3

Step e-f:

CPICH_Ec	dBm/3.84 MHz	-60 -> OFF	-70	OFF
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Step g-h:

CPICH_Ec	dBm/3.84 MHz	OFF	-70	OFF -> -60
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Step i-l:

CPICH_Ec	dBm/3.84 MHz	OFF	-70 -> OFF	-60
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For TDD only:

Step a-d:

Parameter	Unit	Cell 1	Cell 2	Cell 3
Test Channel		1	2	3
P-CCPCH RSCP	dBm	-69	-74	OFF
PLMN		1	2	3

Step e-f:

P-CCPCH RSCP		-69 -> OFF	-74	OFF
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Step g-h:

P-CCPCH RSCP		OFF	-74	OFF -> -69
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Step k-l:

P-CCPCH RSCP		OFF	-74 -> OFF	-69
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The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LOCI}		
EF _{HPLMNwAcT}	1 st	PLMN 1
EF _{PLMNwAcT}	1 st	PLMN 3

Test procedure

Method C is applied.

- a) The SS activates cells 1 and 2.
- b) The UE is switched on.
- c) PLMN 1 is selected manually.
- d) The SS waits for random access requests from the UE. A complete Location Update is done.
- e) Cell 1 is switched off.
- f) The SS waits to see if there is any random access request from the UE.
- g) Cell 3 is switched on.
- h) The SS waits to see if there is any random access request from the UE.
- i) PLMN 2 is selected manually.
- j) The SS waits for random access requests from the UE. A complete Location Update is done.
- k) Cell 2 is switched off.
- l) The SS waits to see if there is any random access request from the UE.

6.1.1.3.5 Test Requirements

- 1) In step d), there shall be a response on Cell 1. The selected PLMN shall be PLMN 1.
- 2) In step f), there shall be no response from the UE within 2 min.
- 3) In step h), there shall be no response from the UE within 2 min.
- 4) In step j), there shall be a response on Cell 2. The selected PLMN shall be PLMN 2.

- 5) In step 1), there shall be no response from the UE within 2 min.

6.1.1.4 PLMN selection of RPLMN, HPLMN, UPLMN and OPLMN; Automatic mode

6.1.1.4.1 Definition

Test to verify that in Automatic Network Selection Mode, the UE selects PLMNs in a prioritized order. Forbidden PLMNs shall not be selected. If available, the RPLMN shall be selected at switch-on, otherwise the list shall include in priority order HPLMN, User-PLMN and Operator-PLMN. The last priority in the list is "Other PLMN/access technology combinations" which is not included in this test.

Only UTRAN cells and a UE equipped with a USIM with Radio Access Technology fields set to UTRAN are considered.

6.1.1.4.2 Conformance requirement

1. At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see TS 23.122, clause 4.5.2) attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 2.1 HPLMN (if not previously selected);
- 2.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 2.5 Other PLMN/access technology combinations in order of decreasing signal quality.

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in the "forbidden LAs for regional provision of service" list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

3. If a "PLMN not allowed" message is received by an MS in response to an LR request from a VPLMN, that VPLMN is added to a list of "forbidden PLMNs" in the SIM and thereafter that VPLMN will not be accessed by the MS when in automatic mode. A PLMN is removed from the "forbidden PLMNs" list if, after a subsequent manual selection of that PLMN, there is a successful LR. This list is retained when the MS is switched off or the SIM is removed. The HPLMN shall not be stored on the list of "forbidden PLMNs".

References

1. TS 23.122, clause 4.4.3.1.
2. TS 23.122, clause 4.4.3.1.1.
3. TS 23.122, clause 3.1.

NOTE: TS 31.102 defines the USIM fields.

6.1.1.4.3 Test purpose

1. To verify that if available, the RPLMN is selected at switch-on.
2. To verify that in Automatic Network Selection Mode Procedure, the UE selects the RPLMN, HPLMN, UPLMN and OPLMN in a prioritized order.
3. To verify that forbidden PLMNs are not selected.

6.1.1.4.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

"IMSI attach" flag in the BCCH is set to allowed.

Cell levels are from table 6.3 (FDD).

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_ Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_ RSCP [dBm] (TDD)	Test Channel	PLMN
Cell 1	-60	-54	1	PLMN 1
Cell 2	-65	-59	2	PLMN 2
Cell 3	-70	-64	3	PLMN 3
Cell 4	-75	-69	4	PLMN 4
Cell 5	-80	-74	5	PLMN 5
Cell 6	-85	-79	6	PLMN 6

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LOCI}		PLMN 1
EF _{HPLMNwAcT}	1 st	PLMN 2
EF _{PLMNwAcT}	1 st	PLMN 3
	2 nd	PLMN 4
EF _{OPLMNwAcT}	1 st	PLMN 5
	2 nd	PLMN 6
EF _{FPLMN}		PLMN 3

Test procedure

Method C is applied.

- a) The SS activates cells 1-6 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) Cell 1 is switched off.
- e) The SS waits for random access requests from the UE.
- f) Cell 2 is switched off.
- g) The SS waits for random access requests from the UE.
- i) Cell 4 is switched off.

- j) The SS waits for random access requests from the UE.
- k) Cell 5 is switched off.
- l) The SS waits for random access requests from the UE.
- m) Cell 6 is switched off.

6.1.1.4.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 1.
- 2) In step e), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN 2.
- 3) In step g), the response from the UE shall be on Cell 4. The displayed PLMN shall be PLMN 4.
- 4) In step j), the response from the UE shall be on Cell 5. The displayed PLMN shall be PLMN 5.
- 5) In step l), the response from the UE shall be on Cell 6. The displayed PLMN shall be PLMN 6.
- 6) After step m), the UE shall inform that only limited service is possible

6.1.1.5 PLMN selection of "Other PLMN / access technology combinations"; Automatic mode

6.1.1.5.1 Definition

Test to verify that in Automatic Network Selection Mode, the UE selects high quality signal PLMNs in a random order.

Only UTRAN cells and a UE equipped with a USIM with Radio Access Technology fields set to UTRAN are considered.

6.1.1.5.2 Conformance requirement

1. At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see TS 23.122, clause 4.5.2) attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

2. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 2.1 HPLMN (if not previously selected);
- 2.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 2.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 2.5 Other PLMN/access technology combinations in order of decreasing signal quality.

In 2.5, the MS shall order the PLMN/access technology combinations in order of decreasing signal quality within each access technology. The order between PLMN/access technology combinations with different access technologies is an MS implementation issue.

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in the "forbidden LAs for regional provision of service" list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

3. If a "PLMN not allowed" message is received by an MS in response to an LR request from a VPLMN, that VPLMN is added to a list of "forbidden PLMNs" in the SIM and thereafter that VPLMN will not be accessed by the MS when in automatic mode. A PLMN is removed from the "forbidden PLMNs" list if, after a subsequent manual selection of that PLMN, there is a successful LR. This list is retained when the MS is switched off or the SIM is removed. The HPLMN shall not be stored on the list of "forbidden PLMNs".
4. The UE shall scan all RF channels in the UTRA band according to its capabilities to find available PLMNs. On each carrier, the UE shall search for the strongest cell according to the cell search procedures (for FDD, see TS 25.214, and TDD, see TS 25.224) and read its system information, in order to find out which PLMN the cell belongs to. If the UE can read the PLMN identity, the found PLMN shall be reported to the NAS as a high quality PLMN (but without the RSCP value), provided that the following high quality criterion is fulfilled:
 - For an FDD cell, the measured primary CPICH RSCP value shall be greater than or equal to -95 dBm.
 - For a TDD cell, the measured P-CCPCH RSCP shall be greater than or equal to -84 dBm.

Found PLMNs that do not satisfy the high quality criterion, but for which the UE has been able to read the PLMN identities are reported to the NAS together with the CPICH RSCP value for UTRA FDD cells and P-CCPCH RSCP for UTRA TDD cells.

References

1. TS 23.122, clause 4.4.3.1.
2. TS 23.122, clause 4.4.3.1.1.
3. TS 23.122, clause 3.1.
4. TS 25.304, clause 5.1.2.2.

NOTE: TS 31.102 defines the USIM fields.

6.1.1.5.3 Test purpose

1. To verify that in Automatic Network Selection Mode Procedure, the UE selects "Other PLMN/access technology combinations" in a random order according to conformance requirement 2.4. UE requirement on measurement accuracy for PLMN selection is not specified in core specifications. Therefore, the ordering of PLMNs according to conformance requirement 2.5 is not tested.

6.1.1.5.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP [dBm] (TDD)	High Quality signal	Test Channel	PLMN
Cell 1	-85	-74	Yes	1	PLMN 6
Cell 2	-80	-69	Yes	2	PLMN 7
Cell 3	-80	-69	Yes	3	PLMN 8

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LocI}		PLMN 6

Test procedure

Method C is applied.

- a) The SS activates cells 1-3 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) Cell 1 is switched off.
- e) The SS waits for random access requests from the UE.
- f) The cell associated to the currently shown PLMN shall be switched off.
- g) The SS waits for random access requests from the UE.

6.1.1.5.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 6.
- 2) In step e), the response from the UE shall be on either Cell 2 or 3. The displayed PLMN shall be the one associated with the cell on which the response was received.
- 3) In step g), the response from the UE shall be on either Cell 2 or 3 (excluding the cell in step 2). The displayed PLMN shall be the one associated with the cell on which the response was received.

6.1.1.6 Void

6.1.1.7 Cell reselection of ePLMN in manual mode

6.1.1.7.1 Definition

Test to verify that the UE shall be able to reselect to a cell of another PLMN declared as equivalent PLMN to the registered PLMN in the manual mode.

6.1.1.7.2 Conformance requirement

B) Manual network selection mode

Once the UE has registered on a PLMN selected by the user, the UE shall not automatically register on a different PLMN unless:

- i) The new PLMN is declared as an equivalent PLMN by the registered PLMN;

or,

- ii) The user selects automatic mode.

References:

TS 22.011 clause 3.2.2.2B

6.1.1.7.3 Test purpose

To verify that in Manual Network Selection Mode Procedure, the UE can perform [cell](#) reselection to an equivalent PLMN.

6.1.1.7.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

Cell_selection_and_reselection_quality_measure is CPICH_RSCP (FDD).

All Radio Access Technology USIM fields and cells are UTRAN.

Each cell shall include the other cells as neighbouring cells in System Information Block Type 11.

Cell	CPICH_Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_ RSCP [dBm] (TDD)	Test Channel	PLMN
Cell 1	-78	-69	1	PLMN 1
Cell 4	-62	-54	2	PLMN 2
Cell 5	-68	-64	3	PLMN 3

PLMN1 is the HPLMN.

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LocI}		PLMN 1

Test procedure

- a) The SS activates cells 1.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) A Location Update Accept message shall be sent on reception of a Location Update message from the UE. The Location Update Accept message shall include PLMN3 in the equivalent PLMN list.
- e) Cell 4 and 5 are activated.

6.1.1.7.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 1.
- 2) In step e), the UE shall perform a cell reselection and Location Update to PLMN 3, which is equivalent to PLMN1.

6.1.2 Cell selection and reselection

6.1.2.1 Cell reselection

6.1.2.1.1 Definition

Test to verify that the UE performs the cell reselection correctly for intra/inter-frequency cells if the serving cell becomes barred or $S < 0$.

6.1.2.1.2 Conformance requirement

1. When camped on a cell, the UE shall regularly search for a better cell according to the cell reselection criteria. If a better cell is found, that cell is selected. The change of cell may imply a change of RAT.
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.
 - 2.1 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.
 - 2.2 The cell is not barred.
 - 2.3 The cell is not part of the list of "forbidden LAs for roaming".
 - 2.4 The cell selection criteria are fulfilled.
3. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 3.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
 - 3.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
4. Cell Reselection Criteria:
 - 4.1 The UE shall perform ranking of all cells that fulfil the S criterion.
 - 4.2 The cells shall be ranked according to the R criteria, deriving $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values using CPICH RSCP, P-CCPCH RSCP and the averaged received signal level as specified in TS 25.133 and TS 25.123 for FDD, TDD and GSM cells, respectively.

The offset $Q_{offset1_{s,n}}$ is used for $Q_{offset_{s,n}}$ to calculate R_n , the hysteresis Q_{hyst1_s} is used for Q_{hyst_s} to calculate R_s .

If the usage of HCS is indicated in system information, $TEMP_OFFSET1_n$ is used for $TEMP_OFFSET_n$ to calculate TO_n . If it is indicated in system information that HCS is not used, $TEMP_OFFSET_n$ is not applied when calculating R_n . The best ranked cell is the cell with the highest R value.

If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.

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.
 - 4.3 In all cases, the UE shall reselect the new cell, only if the 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.
5. When cell status "barred" is indicated, the UE shall select another cell according to the following rule:
- 5.1 If the "Intra-frequency cell re-selection indicator" IE in Cell Access Restriction IE is set to value "allowed", the UE may select another cell on the same frequency if selection/re-selection criteria are fulfilled.
- If the UE is camping on another cell, the UE shall exclude the barred cell from the neighbouring cell list until the expiry of a time interval T_{barred} . The time interval T_{barred} is sent via system information in a barred cell together with Cell status information in the Cell Access Restriction IE.
 - If the UE does not select another cell, and the barred cell remains to be the "best" one, the UE shall after expiry of the time interval T_{barred} again check whether the status of the barred cell has changed.
- 5.2 If the "Intra-frequency cell re-selection indicator" IE is set to "not allowed" the UE shall not re-select a cell on the same frequency as the barred cell. For emergency call, the Intra-frequency cell re-selection indicator IE" shall be ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

References

1. TS 25.304, clause 5.2.1.
2. TS 25.304, clause 4.3.
3. TS 25.304, clause 5.2.5.1.
4. TS 25.304, clause 5.2.6.1.4.
5. TS 25.304, clause 5.3.1.1.

6.1.2.1.3 Test purpose

1. To verify that the UE performs cell reselection on the following occasions:
 - 1.1 Serving cell becomes barred;
 - 1.2 $S < 0$ for serving cell.
2. To verify conformance requirement 5.

NOTE: Reselection triggered by the cell becoming a part of a forbidden registration area is tested in clause 9.4.2.3 and clause 9.4.2.4.

6.1.2.1.4 Method of test

Initial conditions

Treselection, Qhyst, Qoffset, TEMP_OFFSET and PENALTY_TIME are not used, so the cell-ranking criterion R equals CPICH_RSCP for FDD cells, and P-CCPCH RSCP for TDD cells.

Step a-c (FDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
Test Channel		1	1	2
CPICH_Ec	dBm/3.84 MHz	-60	-70	-80
Qrxlevmin	dBm	-115	-115	-115
Srxlev*	dBm	55	45	35
CellBarred		Not barred	Not barred	Not barred

Step a-c (TDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
P-CCPCH RSCP	dBm	-69	-74	-79
Qrxlevmin	dBm	-103	-103	-103
Srxlev*	dB	34	29	24

Step d-f:

CellBarred		Not barred -> Barred	Not barred	Not barred
Intra-frequency cell re-selection indicator		Not allowed		
Tbarred		10s		

Step g-h:

Intra-frequency cell re-selection indicator		Not Allowed - > Allowed		
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Step i-k:

Parameter	Unit	Cell 1	Cell 2	Cell 4
CellBarred		Barred -> Not barred	Not barred	Not barred

Step l-m (FDD):

Qrxlevmin	dBm	-115 -> -51	-115	-115
Srxlev*	dBm	55 -> -9	45	35

Step l-m (TDD):

Qrxlevmin		-103 -> -59	-103	-103
Srxlev*		34 -> -10	29	24

Test procedure

Method B is applied.

- The SS activates Cell 2 and 4 and monitors them for random access requests from the UE.
- The UE is switched on.
- The SS waits for random access requests from the UE.
- The SS sets Cell 1 to be barred. The SS notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.
- The SS sets "Intra-frequency cell re-selection indicator" to "Allowed". The SS notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.
- The UE is switched off.
- The SS sets Cell 1 to be not barred.
- The UE is switched on.

- k) The SS waits for random access requests from the UE.
- l) For FDD cell, $Q_{rxlevmin}$ is increased to -51 dBm, so S will become negative.
For TDD cell, $Q_{rxlevmin}$ is increased to -59 dBm, so S will become negative.
The SS notifies UE of the BCCH modification
- m) The SS waits for random access requests from the UE.

6.1.2.1.5 Test requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step e), the UE shall respond on Cell 4.
- 3) In step g), the UE shall respond on Cell 2.
- 4) In step k), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 5) In step m), the UE shall respond on Cell 2.

6.1.2.2 Cell reselection using Q_{hyst} , Q_{offset} and Treselection

6.1.2.2.1 Definition

Test to verify that the UE performs the cell reselection correctly if system information parameters Q_{offset} , Q_{hyst} and Treselection are applied for non-hierarchical cell structures. TEMP_OFFSET and PENALTY_TIME are only applicable when HCS is applied and are tested in clauses 6.1.2.4 and 6.1.2.5.

6.1.2.2.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
 - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria:
 - 2.1 The UE shall perform ranking of all cells that fulfil the S criterion.
 - 2.2 The cells shall be ranked according to the R criteria, deriving $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values using CPICH RSCP, P-CCPCH RSCP and the averaged received signal level as specified in TS 25.133 and TS 25.123 for FDD, TDD and GSM cells, respectively.

The offset $Q_{offset1_{s,n}}$ is used for $Q_{offset_{s,n}}$ to calculate R_n , the hysteresis Q_{hyst1_s} is used for Q_{hyst_s} to calculate R_s .

If the usage of HCS is indicated in system information, $TEMP_OFFSET1_n$ is used for $TEMP_OFFSET_n$ to calculate TO_n . If it is indicated in system information that HCS is not used, $TEMP_OFFSET_n$ is not applied when calculating R_n . The best ranked cell is the cell with the highest R value.

If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.

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.

- 2.3 In all cases, the UE shall reselect the new cell, only if the the following conditions are met:
 - the new cell is better ranked than the serving cell during a time interval Treselection.
 - more than 1 second has elapsed since the UE camped on the current serving cell.

References

1. TS 25.304, clause 5.2.5.1.
2. TS 25.304, clause 5.2.6.1.4.

6.1.2.2.3 Test purpose

1. To verify that the UE calculates R from Qhyst and Qoffset and that the modification of these parameters on the BCCH triggers the cell reselection evaluation process. TEMP_OFFSET and PENALTY_TIME are not applied.
2. To verify that the UE reselects the new cell, if the cell reselection criteria are fulfilled during a time interval Treselection.

6.1.2.2.4 Method of test

Initial conditions

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2
Test channel		1	1
CPICH_Ec	dBm/3.84 MHz	-60	-70
Qhyst1 _s	dB	20	0
R _s *	dB	-40	-70
R _n *	dB	-70	-60

Step d-e:

CPICH_Ec	dBm/3.84 MHz	-60 -> -70	-70 -> -60
R _s *	dB	-40 -> -50	-70 -> -60
R _n *	dB	-70 -> -60	-60 -> -70

Step f-g:

Qhyst1 _s	dB	20 -> 0	0
R _s *	dB	-50 -> -70	-60
R _n *	dB	-60	-70

Step h-j:

CPICH_Ec	dBm/3.84 MHz	-70 -> -60	-60 -> -70
Qoffset1 _{s,n}	dBm	0 -> 20	0
R _s *	dBm	-70 -> -60	-60 -> -70
R _n *	dBm	-60 -> -90	-70 -> -60

Step k-l:

CPICH_Ec	dBm/3.84 MHz	-60 -> -70	-70 -> -60
R _s *	dB	-60 -> -70	-70 -> -60
R _n *	dB	-90 -> -80	-60 -> -70

Step m-n:

Qoffset1 _{s,n}	dB	20 -> 0	0
R _s *	dB	-70	-60
R _n *	dB	-80 -> -60	-70

Step o-p:

Treselection _s	s	30	0
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For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2
P-CCPCH RSCP	dBm	-69	-79
Qhyst1 _s	dB	10	0
R _s [*]	dB	-59	-79
R _n [*]	dB	-79	-69

Step d-e:

P-CCPCH RSCP	dBm	-69 -> -79	-79 -> -69
R _s [*]	dB	-59 -> -69	-79 -> -69
R _n [*]	dB	-79 -> -69	-69 -> -79

Step f-g:

Qhyst1 _s	dB	10 -> 0	0
R _s [*]	dB	-69 -> -79	-69
R _n [*]	dB	-69	-79

Step h-j:

P-CCPCH RSCP	dBm	-79 -> -69	-69 -> -79
Qoffset1 _{s,n}	dB	0 -> 10	0
R _s [*]	dB	-79 -> -69	-69 -> -79
R _n [*]	dB	-69 -> -79	-79 -> -69

Step k-l:

P-CCPCH RSCP	dBm	-69 -> -79	-79 -> -69
R _s [*]	dB	-69 -> -79	-79 -> -69
R _n [*]	dB	-79 -> -89	-69 -> -79

Step m-n:

Qoffset1 _{s,n}	dB	10 -> 0	0
R _s [*]	dB	-79	-69
R _n [*]	dB	-89 -> -79	-79

Step o-p:

Treselection _s	s	0 -> 30	0
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Test procedure

Method B is applied.

- The SS activates Cell 1 and 2 and monitors them for random access requests from the UE.
- The UE is switched on.
- The SS waits to see if there is any random access requests from the UE.
- The SS changes the level of Cell 1 and 2 and waits for 10 s (TS 25.133, A.4.2.1.2 for FDD mode and TS 25.123, A.4.2.1.2 for TDD mode).
- The SS waits for random access requests from the UE.
- The SS resets Qhyst for Cell 1 and notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.
- The UE is switched off. The SS changes the level of Cell 1 and Cell 2. The SS changes Qoffset in Cell 1.
- The UE is switched on.

- j) The SS waits to see if there is any random access requests from the UE.
- k) The SS changes the level of Cell 1 and 2 and waits for 10 s (TS 25.133, clause A.4.2.1.2 for FDD mode and TS 25.123, clause A.4.2.1.2 for TDD mode).
- l) The SS waits for random access requests from the UE.
- m) The SS resets Qoffset for Cell 1, and notifies UE of the BCCH modification.
- n) The SS waits for random access requests from the UE.
- o) Step h-n) is repeated except that Treselection is 30 s

6.1.2.2.5 Test Requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step e), the UE shall keep responding on Cell 1.
- 3) In step g), the UE shall respond on Cell 2.
- 4) In step j), the UE shall select a cell to camp on and eventually make a reselection to Cell 1.
- 5) In step l), the UE shall keep responding on Cell 1.
- 6) In step n), the UE shall respond on Cell 2.
- 7) In step o), the UE shall respond as in previous steps except that when reselecting to Cell 2, there shall be no response from the UE on Cell 2 within 28 s of notifying UE on the BCCH modification, but the UE shall respond on Cell 2 within 35 s.

NOTE: Minimum time set by Treselection – 2 s tolerance. Maximum time set by Treselection + 1 280 msec. for DRX cycle + 1280 ms for system information block type scheduling + 2 s tolerance.

6.1.2.3 HCS Cell reselection

6.1.2.3.1 Definition

Test to verify that the UE performs the cell reselection correctly for hierarchical cell structures. This shall be done according to the HCS priority, the received signal quality value Q and the quality level threshold criterion H.

6.1.2.3.2 Conformance requirement

- 1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
 - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
- 2. Cell Reselection Criteria for hierarchical cells:
 - 2.1 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 calculated from the Q, Qhcs, TEMP_OFFSET and PENALTY_TIME parameters.
 - 2.2 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 $H \geq 0$.
 - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If an FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.

2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval $T_{reselection}$.

2.5 The cell-ranking criterion R is derived from Q, Q_{hyst} , Q_{offset} , $TEMP_OFFSET$, $PENALTY_TIME$.

References

1. TS 25.304, clause 5.2.2.
2. TS 25.304, clause 5.2.6.1.4.

6.1.2.3.3 Test purpose

1. Verify that the UE ignores cells with $H < 0$ for reselection and that H is calculated from Q_{hcs} . The modification of this parameter on the BCCH shall trigger the cell reselection evaluation process.
2. Verify that the UE ranks cells based on both HCS priority and R. Q_{hyst} , Q_{offset} , $TEMP_OFFSET$, $PENALTY_TIME$ and $T_{reselection}$ are not applied so R equals CPICH_RSCP for FDD cells, and P-CCPCH RSCP for TDD cells.

6.1.2.3.4 Method of test

Initial conditions

SS shall indicate in System Information that HCS is in use.

Each cell shall include the other cells as neighbouring cells in System Information Block Type 11.

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-70	-65	-70
HCS priority		6	7	7
Q_{hcs_s}	dBm	-80	-50	-50
$Q_{hcs_{n=1}}$	dBm	n/a	-80	-80
$Q_{hcs_{n=2}}$	dBm	-50	n/a	-50
$Q_{hcs_{n=3}}$	dBm	-50	-50	n/a
H_s^*	dB	10	-15	-20
$H_{n=1}^*$	dB	n/a	10	10
$H_{n=2}^*$	dB	-15	n/a	-15
$H_{n=3}^*$	dB	-20	-20	n/a

Step d-e:

Q_{hcs_s}	dBm	-80	-50	-50 -> -80
$Q_{hcs_{n=3}}$	dBm	-50 -> -80	-50 -> -80	n/a
H_s^*	dB	10	-15	-20 -> 10
$H_{n=3}^*$	dB	-20 -> 10	-20 -> 10	n/a

Step f-g:

Q_{hcs_s}	dBm	-80	-50 -> -80	-80
$Q_{hcs_{n=2}}$	dBm	-50 -> -80	n/a	-50 -> -80
H_s^*	dB	10	-15 -> 15	10
$H_{n=2}^*$	dB	-15 -> 15	n/a	-15 -> 15

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	-74	-79
HCS priority		6	7	7
Qhcs _s	dBm	-89	-59	-59
Qhcs _{n=1}	dBm	n/a	-89	-89
Qhcs _{n=2}	dBm	-59	n/a	-59
Qhcs _{n=3}	dBm	-59	-59	n/a
H _s *	dB	20	-15	-20
H _{n=1} *	dB	n/a	20	20
H _{n=2} *	dB	-15	n/a	-15
H _{n=3} *	dB	-20	-20	n/a

Step d-e:

Qhcs _s	dBm	-89	-59	-59 -> -89
Qhcs _{n=3}	dBm	-59 -> -89	-59 -> -89	n/a
H _s *	dB	20	-15	-20 -> 10
H _{n=3} *	dB	-20 -> 10	-20 -> 10	n/a

Step f-g:

Qhcs _s	dBm	-89	-59 -> -89	-89
Qhcs _{n=2}	dBm	-59 -> -89	n/a	-59 -> -89
H _s *	dB	20	-15 -> 15	10
H _{n=2} *	dB	-15 -> 15	n/a	-15 -> 15

Test procedure

Method B is applied.

- The SS activates the cells 1-3 and monitors them for random access requests from the UE.
- The UE is switched on.
- The SS waits for random access requests from the UE.
- The SS changes Qhcs for Cell 3, and notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.
- The SS changes Qhcs for Cell 2, and notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.

6.1.2.3.5 Test requirements

- In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- In step e), the UE shall respond on Cell 3.
- In step g), the UE shall respond on Cell 2.

6.1.2.4 HCS Cell reselection using reselection timing parameters for the H criterion

6.1.2.4.1 Definition

Test to verify that the UE performs the cell reselection correctly for hierarchical cell structures using TEMP_OFFSET and PENALTY_TIME applied to the H criterion.

6.1.2.4.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
 - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria for hierarchical cells:
 - 2.1 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 calculated from the Q, Q_{hcs}, TEMP_OFFSET and PENALTY_TIME parameters.
 - 2.2 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 $H \geq 0$.
 - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If an FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.
 - 2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval T_{reselection}.
 - 2.5 The cell-ranking criterion R is derived from Q, Q_{hyst}, Q_{offset}, TEMP_OFFSET and PENALTY_TIME.
3. TEMP_OFFSET_n applies an offset to the H criteria for the duration of PENALTY_TIME_n after the timer T_n has started for that cell. T_n shall be started from zero when $Q_{meas,n} > Q_{hcs,n}$. TEMP_OFFSET is only applied to the H criteria if the cells have different HCS priorities.
4. 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.

References

1. TS 25.304, clause 5.2.2.
- 2,3,4. TS 25.304, clause 5.2.6.1.4.

6.1.2.4.3 Test purpose

1. Verify that TEMP_OFFSET is applied to the H criterion for a period of PENALTY_TIME and that the timer is started when $Q_{meas,n} > Q_{hcs,n}$ if serving and neighbour cell have different HCS priorities.

6.1.2.4.4 Method of test

Initial conditions

Cell_selection_and_reselection_quality_measure is CPICH_RSCP (FDD).

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-60	-70	-70
HCS priority		2	4	7
Qhcs _s	dBm	-80	-50	-50
Qhcs _{n=1}	dBm	n/a	-80	-80
Qhcs _{n=2}	dBm	-50	n/a	-50
Qhcs _{n=3}	dBm	-50	-50	n/a
TEMP_OFFSET1 _{n=1}	dB	n/a	n/a	n/a
TEMP_OFFSET1 _{n=2}	dB	inf	n/a	n/a
TEMP_OFFSET1 _{n=3}	dB	inf	inf	n/a
H _s *	dB	20	-20	-20
H _{n=1} *	dB	n/a	20	20
H _{n=2} *	dBm	-20	n/a	-20
H _{n=3} *	dBm	-20	-20	n/a
PENALTY_TIME _{n=1}	sec	n/a	0	0
PENALTY_TIME _{n=2}	sec	40	n/a	0
PENALTY_TIME _{n=3}	sec	60	60	n/a

Step d-e:

Qhcs _s	dBm	-80	-50 -> -80	-50 -> -80
Qhcs _{n=2}	dBm	-50 -> -80	n/a	-50 -> -80
Qhcs _{n=3}	dBm	-50 -> -80	-50 -> -80	n/a
H _s *	dB	20	-20 -> 10	-20 -> 10
H _{n=2} *	dB	-inf -> 10 (after 40 sec)	n/a	-20 -> 10
H _{n=3} *	dB	-inf -> 10 (after 60 sec)	-inf -> 10 (after 60 sec)	n/a

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	-74	-74
HCS priority		2	4	7
Qhcs _s	dBm	-89	-54	-54
Qhcs _{n=1}	dBm	n/a	-89	-89
Qhcs _{n=2}	dBm	-54	n/a	-54
Qhcs _{n=3}	dBm	-54	-54	n/a
TEMP_OFFSET1 _{n=1}	dB	n/a	n/a	n/a
TEMP_OFFSET1 _{n=2}	dB	inf	n/a	n/a
TEMP_OFFSET1 _{n=3}	dB	inf	inf	n/a
H _s *	dB	20	-20	-20
H _{n=1} *	dB	n/a	20	20
H _{n=2} *	dB	-20	n/a	-20
H _{n=3} *	dB	-20	-20	n/a
PENALTY_TIME _{n=1}	sec	n/a	0	0
PENALTY_TIME _{n=2}	sec	40	n/a	0
PENALTY_TIME _{n=3}	sec	60	60	n/a

Step d-e:

Qhcs _s	dBm	-89	-54 -> -94	-54 -> -94
Qhcs _{n=2}	dBm	-54 -> -94	n/a	-54 -> -94
Qhcs _{n=3}	dBm	-54 -> -94	-54 -> -94	n/a
H _s *	dB	20	-20 -> 10	-20 -> 10
H _{n=2} *	dB	-inf -> 10 (after 40 sec)	n/a	-20 -> 10
H _{n=3} *	dB	-inf -> 10 (after 60 sec)	-inf -> 10 (after 60 sec)	n/a

Test procedure

Method B is applied.

- The SS activates the cells 1-3 and monitors them for random access requests from the UE.
- The UE is switched on.
- The SS waits for random access requests from the UE.
- The SS changes Qhcs for Cell 2 and 3, and notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.

6.1.2.4.5 Test requirements

- In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- In step e), there shall be no response from the UE on Cell 2 within 38 s after changing the parameters in step d), but the UE shall respond on Cell 2 within 49 s. There shall be no response from the UE on Cell 3 within 58 s after changing the parameters in step d), but the UE shall respond on Cell 3 within 69 s.

NOTE: Minimum time set by PENALTY_TIME (cell 2) - 2 s tolerance. Maximum time set by PENALTY_TIME (cell 2) + 1 280 msec. for DRX cycle + 2 s tolerance + 5 s tolerance (for UE to read System Information). Same calculation for Cell 3.

6.1.2.5 HCS Cell reselection using reselection timing parameters for the R criterion

6.1.2.5.1 Definition

Test to verify that the UE performs the cell reselection correctly for hierarchical cell structures using TEMP_OFFSET and PENALTY_TIME applied to the R criterion.

6.1.2.5.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
 - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria for hierarchical cells:
 - 2.1 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 calculated from the Q, Q_{hcs}, TEMP_OFFSET and PENALTY_TIME parameters.
 - 2.2 The UE shall perform ranking of all cells that fulfil the S criterion among all cells, not considering HCS priority levels, if no cell fulfil the criterion $H \geq 0$.
 - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If a FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.
 - 2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval T_{reselection}.
 - 2.5 The cell-ranking criterion R is derived from Q, Q_{hyst}, Q_{offset}, TEMP_OFFSET, PENALTY_TIME.
3. TEMP_OFFSET_n applies an offset to the R criteria for the duration of PENALTY_TIME_n after the timer T_n has started for that cell. T_n shall be started from zero when $Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$. TEMP_OFFSET is only applied to the R criteria if the cells have identical priorities.
4. 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.

References

1. TS 25.304, clause 5.2.2.
- 2,3,4. TS 25.304, clause 5.2.6.1.4.

6.1.2.5.3 Test purpose

1. Verify that TEMP_OFFSET is applied to the R criterion for a period of PENALTY_TIME if serving and neighbour cell have identical HCS priorities and that the timer is started when $Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$.

6.1.2.5.4 Method of test

Initial conditions

Cell_selection_and_reselection_quality_measure is CPICH_RSCP (FDD).

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-60	-70	-70
HCS priority		1	1	1
Qhcs _s	dBm	-80	-80	-80
TEMP_OFFSET1 _{n=1}	dB	n/a	n/a	n/a
TEMP_OFFSET1 _{n=2}	dBm	inf	n/a	n/a
TEMP_OFFSET1 _{n=3}	dBm	inf	inf	n/a
PENALTY_TIME _{n=1}	sec	n/a	0	0
PENALTY_TIME _{n=2}	sec	40	n/a	0
PENALTY_TIME _{n=3}	sec	60	60	n/a
H _s *	dBm	20	10	10
H _{n=1} *	dB	n/a	20	20
H _{n=2} *	dBm	10	n/a	10
H _{n=3} *	dBm	10	10	n/a
R _s *	dBm	-60	-70	-70
R _{n=1} *	dBm	n/a	-60	-60
R _{n=2} *	dBm	-70	n/a	-70
R _{n=3} *	dBm	-70	-70	n/a

Step d-e:

CPICH_Ec	dBm/3.84 MHz	-60 -> -70	-70 -> -65	-70 -> -60
R _s *	dBm	-60 -> -70	-70 -> -65	-70 -> -60
R _{n=1} *	dBm	n/a	-60 -> -70	-60 -> -70
R _{n=2} *	dBm	-inf -> -65 (after 40 sec)	n/a	-70 -> -65
R _{n=3} *	dBm	-inf -> -60 (after 60 sec)	-inf -> -60 (after 60 sec)	n/a

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	-79	-79
HCS priority		1	1	1
Qhcs _s	dBm	-89	-89	-89
TEMP_OFFSET1 _{n=1}	dB	n/a	n/a	n/a
TEMP_OFFSET1 _{n=2}	dB	inf	n/a	n/a
TEMP_OFFSET1 _{n=3}	dB	inf	inf	n/a
PENALTY_TIME _{n=2}	sec	n/a	0	0
PENALTY_TIME _{n=2}	sec	40	n/a	0
PENALTY_TIME _{n=3}	sec	60	60	n/a
H _s *	dB	20	10	10
H _{n=1} *	dB	n/a	20	20
H _{n=2} *	dB	10	n/a	10
H _{n=3} *	dB	10	10	n/a
R _s *	dBm	-69	-79	-79
R _{n=1} *	dBm	n/a	-69	-69
R _{n=2} *	dBm	-79	n/a	-79
R _{n=3} *	dBm	-79	-79	n/a

Step d-e:

P-CCPCH RSCP	dBm	-69 -> -79	-79 -> -74	-79 -> -69
R_s^*	dBm	-69 -> -79	-79 -> -74	-79 -> -69
$R_{n=1}^*$	dBm	n/a	-69 -> -79	-69 -> -79
$R_{n=2}^*$	dBm	-inf -> -74 (after 40 sec)	n/a	-79 -> -74
$R_{n=3}^*$	dBm	-inf -> -69 (after 60 sec)	-inf -> -69 (after 60 sec)	n/a

Test procedure

Method B is applied.

- The SS activates the cells 1-3 and monitors them for random access requests from the UE.
- The UE is switched on.
- The SS waits for random access requests from the UE.
- The SS changes the level of Cell 1-3, and notifies UE of the BCCH modification.
- The SS waits for random access requests from the UE.

6.1.2.5.5 Test requirements

- In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- In step e), there shall be no response from the UE on Cell 2 within 38 s after changing the parameters in step d), but the UE shall respond on Cell 2 within 55 s. There shall be no response from the UE on Cell 3 within 58 s after changing the parameters in step d), but the UE shall respond on Cell 3 within 75 s.

NOTE: Minimum time set by PENALTY_TIME (cell 2) – 2 s tolerance. Maximum time set by PENALTY_TIME (cell 2) + 6.4 s ($T_{\text{evaluateFDD}}$ from TS 25.133, table 4.1 for FDD mode and $T_{\text{evaluateTDD}}$ from TS 25.123, table 4.1 for TDD mode) + 1 280 msec + 5 s tolerance (for UE to read System Information). for system info scheduling + 2 s tolerance. Same calculation for Cell 3.

6.1.2.6 Emergency calls

6.1.2.6.1 Definition

Test to verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.

6.1.2.6.2 Conformance requirement

1. Acceptable cell:

An "acceptable cell" is a cell on which the UE may camp to obtain limited service (originate emergency calls). Such a cell shall fulfil the following requirements, which is the minimum set of requirements to initiate an emergency call in a UTRAN network:

- The cell is not barred;
- The cell selection criteria are fulfilled.

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".

- 2.4 The cell selection criteria are fulfilled.
3. If the UE is unable to find any suitable cell of selected PLMN the UE shall enter the *Any cell selection* state.
 4. Any Cell Selection State: In this state, the UE shall attempt to find an acceptable cell of an any PLMN to camp on, trying all RATs that are supported by the UE and searching first for a high quality cell. The UE, which is not camped on any cell, shall stay in this state until an acceptable cell is found.
 5. Camped on Any Cell State: In this state the UE obtains limited service. The UE shall regularly attempt to find a suitable cell of the selected PLMN, trying RATs that are supported by the UE. If a suitable cell is found, this causes an exit to the Camped normally State.
 6. In the Camped on Any Cell State, the UE shall perform the cell reselection evaluation process on the following occasions/triggers:
 - 6.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and TS 25.123 for TDD mode.
 - 6.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.

References

1. TS 25.304, clause 4.3.
2. TS 25.304, clause 4.3.
3. TS 25.304, clause 5.2.2.1.
4. TS 25.304, clause 5.2.8.
5. TS 25.304, clause 5.2.2.5.
6. TS 25.304, clause 5.2.9.1.

6.1.2.6.3 Test purpose

1. To verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.
2. To verify that the UE selects a cell with $S > 0$ and CellBarred = Not Barred (i.e. an "acceptable cell") when no suitable cells of the selected PLMN are available.
3. To verify that the UE ranks the acceptable cells according to the cell-ranking criterion R which in this test case equals Q as Qhyst, Qoffset, TEMP_OFFSET and PENALTY_TIME parameters are not used. Treselection is not used either.

6.1.2.6.4 Method of test

Initial conditions

In step a-d, Cell 1 and 2 are neither suitable nor acceptable cells. Cell 3 is an acceptable cell but not suitable.

In step e-f, both Cell 1 and 3 are acceptable cells.

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF _{LOCI}		PLMN 1
EF _{HPLMNwACT}	1 st	PLMN 2
EF _{FPLMN}		PLMN 3

All cells in this test case belong to PLMN 3.

Step a-d:

For FDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
Test Channel		1	1	1
CPICH_Ec	dBm/3.84 MHz	-65	-60	-70
Qrxlevmin	dBm	-81	-51	-81
Srxlev*	dB	16	-9	11
CellBarred		Barred	Not barred	Not barred
Intra-frequency cell re-selection indicator		Allowed		
Tbarred		10s		

For TDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
Test Channel		1	1	1
P-CCPCH RSCP	dBm	-69	-64	-74
CellBarred		Barred	Not barred	Not barred
Intra-frequency cell re-selection indicator		Allowed		
Tbarred		10s		

Step e-f:

CellBarred		Barred -> Not barred	0	0
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Test procedure

Method C is applied.

- a) The SS activates the cells and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) 50 s after switch on, an emergency call is initiated on the UE.
- d) The SS waits for random access request from the UE.
- e) The SS changes the CellBarred of Cell 1 to 'Not barred'.
- f) After 30 s an emergency call is initiated on the UE.
- g) The SS waits for random access request from the UE.

6.1.2.6.5 Test requirements

- 1) In step d), the first access from the UE shall be on Cell 3.
- 2) In step g), the first access from the UE shall be on Cell 1.

6.1.2.7 Emergency calls; Intra-frequency cell "Not allowed"

6.1.2.7.1 Definition

Test to verify that for emergency call and cell status "barred", the Intra-frequency cell re-selection indicator IE is ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

6.1.2.7.2 Conformance requirement

1. When cell status "barred" is indicated:
 - The UE is not permitted to select/re-select this cell, not even for emergency calls.
 - The UE shall select another cell according to the following rule:
 - If the "Intra-frequency cell re-selection indicator" IE is set to "not allowed" the UE shall not re-select a cell on the same frequency as the barred cell. For emergency call, the Intra-frequency cell re-selection indicator IE" shall be ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

References

1. TS 25.304, clause 5.3.1.1.

6.1.2.7.3 Test purpose

To verify that for an emergency call and cell status "barred", the IE Intra-frequency cell re-selection indicator is ignored, i.e. even if this IE is set to "not allowed" the UE may select another intra-frequency cell for the emergency call.

6.1.2.7.4 Method of test

Initial conditions

Step a-c:

For FDD only:

Parameter	Unit	Cell 1	Cell 2
Test Channel		1	1
CPICH_Ec	dBm/3.84 MHz	-60	-70
CellBarred		Not barred	Not barred

For TDD only:

Parameter	Unit	Cell 1	Cell 2
P-CCPCH RSCP	dBm	-69	-79
CellBarred		Not barred	Not barred

Step d-i:

CellBarred		Not barred -> Barred	Not barred
Intra-frequency cell re-selection indicator		Not allowed	
Tbarred		10s	

Test procedure

Method C is applied.

- a) The SS activates the cells and monitors them for any random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access request from the UE.
- d) The SS sets Cell 1 to be barred, and notifies UE of the BCCH modification.

- e) The SS waits to see if there is any random access request from the UE.
- f) By MMI, an attempt to originate a call is made.
- g) The SS waits to see if there is any random access request from the UE.
- h) By MMI, an emergency call is initiated on the UE.
- i) The SS waits for random access request from the UE.

6.1.2.7.5 Test requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step e), there shall be no response from the UE within 2 min.
- 3) In step g), there shall be no response from the UE within 2 min. It shall not be possible to originate the call.
- 4) In step i), the UE shall respond on Cell 2. It shall be possible to originate the emergency call.

6.1.2.8 Cell reselection: Equivalent PLMN

6.1.2.8.1 Definition

Test to verify that the UE performs the cell reselection correctly to a cell belonging to a PLMN Equivalent to the registered PLMN, if the serving cell of registered PLMN becomes barred or $S < 0$.

6.1.2.8.2 Conformance requirement

1. When camped on a cell, the UE shall regularly search for a better cell according to the cell reselection criteria. If a better cell is found, that cell is selected. The change of cell may imply a change of RAT.
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.
 - 2.1 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
 - 2.2 The cell is not barred
 - 2.3 The cell is not part of the list of "forbidden LAs for roaming"
 - 2.4 The cell selection criteria are fulfilled
3. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 3.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
 - 3.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified
4. Cell Reselection Criteria:
 - 4.1 The UE shall perform ranking of all cells that fulfil the S criterion
 - 4.2 The cells shall be ranked according to the R criteria, deriving $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values using CPICH RSCP, P-CCPCH RSCP and the averaged received signal level as specified in TS 25.133 and TS 25.123 for FDD, TDD and GSM cells, respectively.

The offset $Q_{offset1_{s,n}}$ is used for $Q_{offset_{s,n}}$ to calculate R_n , the hysteresis Q_{hyst1_s} is used for Q_{hyst_s} to calculate R_s .

If the usage of HCS is indicated in system information, $TEMP_OFFSET1_n$ is used for $TEMP_OFFSET_n$ to

calculate TO_n . If it is indicated in system information that HCS is not used, $TEMP_OFFSET_n$ is not applied when calculating R_n . The best ranked cell is the cell with the highest R value.

If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.

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.

4.3 In all cases, the UE shall reselect the new cell, only if the 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.

5. When cell status "barred" is indicated, the UE shall select another cell according to the following rule:

5.1 If the "Intra-frequency cell re-selection indicator" IE in Cell Access Restriction IE is set to value "allowed", the UE may select another cell on the same frequency if selection/re-selection criteria are fulfilled.

- If the UE is camping on another cell, the UE shall exclude the barred cell from the neighbouring cell list until the expiry of a time interval T_{barred} . The time interval T_{barred} is sent via system information in a barred cell together with Cell status information in the Cell Access Restriction IE.
- If the UE does not select another cell, and the barred cell remains to be the "best" one, the UE shall after expiry of the time interval T_{barred} again check whether the status of the barred cell has changed.

5.2 If the "Intra-frequency cell re-selection indicator" IE is set to "not allowed" the UE shall not re-select a cell on the same frequency as the barred cell. For emergency call, the Intra-frequency cell re-selection indicator IE" shall be ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

References

1. TS 25.304, 5.2.1
2. TS 25.304, 4.3
3. TS 25.304, 5.2.5.1
4. TS 25.304, 5.2.6.1.4
5. TS 25.304, 5.3.1.1

6.1.2.8.3 Test purpose

1. To confirm that the UE treats the cell of the equivalent PLMN as a cell of the current PLMN.
2. To verify that the UE performs cell reselection on the following occasions:
 - 2.1 Serving cell becomes barred.
 - 2.2 $S < 0$ for serving cell.
3. To verify conformance requirement 5.

NOTE: Reselection triggered by the cell becoming a part of a forbidden registration area is tested in clause 9.4.2.3 "Location updating / rejected / location area not allowed" and 9.4.2.4 "Location updating / rejected / roaming not allowed in this LA".

6.1.2.8.4 Method of test

Initial conditions

$T_{reselection}$, Q_{hyst} , Q_{offset} , $TEMP_OFFSET$ and $PENALTY_TIME$ are not used, so the cell-ranking criterion R equals CPICH_RSCP for FDD cells, and P-CCPCH RSCP for TDD cells.

The UE is Idle Updated on PLMN1 in cell 1, and The SS includes PLMN 2 and PLMN 3 under IE 'Equivalent PLMN' during Idle Update Procedure.

Cell 1 indicates in System Information Block Type 11 that Cell 2 and Cell 4 are neighbouring cells.

Cell 2 indicates in System Information Block Type 11 that Cell 1 and Cell 4 are neighbouring cells.

Cell 4 indicates in System Information Block Type 11 that Cell 1 and Cell 2 are neighbouring cells.

Step a-c (FDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
Test Channel		1	1	2
PLMN		PLMN 1	PLMN 2	PLMN 3
CPICH_Ec	dBm/ 3.84 MHz	-60	-70	-80
Qrxlevmin	dBm	-115	-115	-115
Srxlev*	dB	55	45	35
CellBarred		Not barred	Not barred	Not barred

Step a-c (TDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
Test Channel		1	1	2
PLMN		PLMN 1	PLMN 2	PLMN 3
P-CCPCH RSCP	dBm	-69	-74	-79
Qrxlevmin	dBm	-103	-103	-103
Srxlev*	dB	34	29	24

Step d-f:

CellBarred		Not barred->Barred		
Intra-frequency cell re-selection indicator		Not Allowed		
Tbarred	s	10		

Step g-h:

Intra-frequency cell re-selection indicator		Not Allowed -> Allowed		
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Step i-k:

Parameter	Unit	Cell 1	Cell 2	Cell 4
CellBarred		Barred -> Not barred	Not barred	Not barred

Step l-m (FDD):

Qrxlevmin	dBm	-115 -> -51	-115	-115
Srxlev*	dBm	55 -> -9	45	35

Step l-m (TDD):

Qrxlevmin	dBm	-103 -> -59	-103	-103
Srxlev*	dBm	34 -> -10	29	24

Test procedure

Method C is applied.

- a) The SS activates Cell 2 and 4 and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE. A complete Location Update is done. SS specifies PLMN 2 and 3 are Equivalent to PLMN 1 in Location Update Accept Message.
- d) The SS sets Cell 1 to be barred. The SS notifies UE of the BCCH modification.
- e) The SS waits for random access requests from the UE. A complete Location Update is done. SS specifies PLMN 1 and 2 are Equivalent to PLMN 3 in Location Update Accept Message.
- f) The SS sets "Intra-frequency cell re-selection indicator" to "Allowed".
- g) The SS waits for random access requests from the UE. A complete Location Update is done.
- h) The UE is switched off.
- i) The SS activates Cell 1, 2 and 4 and monitors them for random access requests from the UE.
- j) The UE is switched on.
- k) The SS waits for random access requests from the UE. A complete Location Update is done. SS specifies PLMN 2 and 3 are Equivalent to PLMN 1 in Location Update Accept Message.
- l) For FDD cell, Qrxlevmin is increased to -51 dBm, so S will become negative.
For TDD cell, Qrxlevmin is increased to -59 dBm, so S will become negative.
The SS notifies UE of the BCCH modification
- m) The SS waits for random access requests from the UE.

6.1.2.8.5 Test requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step e), the UE shall respond on Cell 4.
- 3) In step g), the UE shall respond on Cell 2.
- 4) In step k), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 5) In step m), the UE shall respond on Cell 2.

6.1.2.9 Cell reselection using cell status and cell reservations

6.1.2.9.1 Definition

Test to verify that the UE correctly interprets cell status and cell reservations when performing cell reselection.

6.1.2.9.2 Conformance requirement

1. When cell status is indicated as "not barred", "not reserved" for operator use and "not reserved" for future extension (Cell Reservation Extension),
 - the UE may select/re-select this cell during the cell selection and cell re-selection procedures in Idle mode and in Connected mode.
2. When cell status is indicated as "not barred", "not reserved" for operator use and "reserved" for future extension (Cell Reservation Extension),
 - UEs shall behave as if cell status "barred" is indicated using the value "not allowed" in the IE "Intra-frequency cell re-selection indicator" and the maximum value for T_{barred} , see [8] (see also below).
3. When cell status is indicated as "not barred" and "reserved" for operator use,
 - UEs assigned to Access Class 11 or 15 may select/re-select this cell if in the home PLMN.
 - UEs assigned to an Access Class in the range 0 to 9 and 12 to 14 shall behave as if cell status "barred" is indicated using the value "not allowed" in the IE "Intra-frequency cell re-selection indicator" and the maximum value for T_{barred} , see [8] (see also below).
4. When cell status "barred" is indicated,
 - The UE is not permitted to select/re-select this cell, not even for emergency calls.
 - The UE shall ignore the "Cell Reserved for future extension (Cell Reservation Extension) use" IE.
 - The UE shall select another cell according to the following rule:
 - If the "Intra-frequency cell re-selection indicator" IE in Cell Access Restriction IE is set to value "allowed", the UE may select another cell on the same frequency if selection/re-selection criteria are fulfilled.
 - If the UE is camping on another cell, the UE shall exclude the barred cell from the neighbouring cell list until the expiry of a time interval T_{barred} . The time interval T_{barred} is sent via system information in a barred cell together with Cell status information in the Cell Access Restriction IE.
 - If the UE does not select another cell, and the barred cell remains to be the "best" one, the UE shall after expiry of the time interval T_{barred} again check whether the status of the barred cell has changed.
 - If the "Intra-frequency cell re-selection indicator" IE is set to "not allowed" the UE shall not re-select a cell on the same frequency as the barred cell. For emergency call, the Intra-frequency cell re-selection indicator IE shall be ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.
 - If the barred cell remains to be the "best" one, the UE shall after expiry of the time interval T_{barred} again check whether the status of the barred cell has changed.

The reselection to another cell may also include a change of RAT.

Reference(s)

3GPP TS 25.304, clause 5.3.1.1

6.1.2.9.3 Test purpose

1. To verify that when cell status is indicated as "not barred", "not reserved" for operator use and "reserved" for future extension (Cell Reservation Extension),

- UEs behave as if cell status "barred" is indicated using the value "not allowed" in the IE "Intra-frequency cell re-selection indicator" and the maximum value for T_{barred} .
2. To verify that when cell status is indicated as "not barred" and "reserved" for operator use,
- UEs assigned to Access Class 11 or 15 may select/re-select this cell if in the home PLMN.
 - UEs assigned to an Access Class in the range 0 to 9 and 12 to 14 shall behave as if cell status "barred" is indicated using the value "not allowed" in the IE "Intra-frequency cell re-selection indicator" and the maximum value for T_{barred} .

6.1.2.9.4 Method of test

Initial conditions

Test procedure 1: Use of USIM with "Type A" EF_{ACC} as defined in TS 34.108.

Step a-c (FDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
Test Channel		1	1	2
CPICH_Ec	dBm/3.84 MHz	-58	-68	-78
Qrxlevmin	dBm	-83	-83	-83
Srxlev*	dB	25	15	5
Cell Reserved for operator use		not reserved	not reserved	not reserved
Cell Reservation Extension		not reserved	not reserved	not reserved

Step a-c (TDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
P-CCPCH RSCP	dBm	-69	-74	-79
Qrxlevmin	dBm	-83	-83	-83
Srxlev*	dB	15	10	5

Step d-e:

Cell Reserved for operator use		not reserved -> reserved	not reserved	not reserved
Cell Reservation Extension		not reserved	not reserved	not reserved

Step f-g:

Cell Reserved for operator use		reserved -> not reserved	not reserved	not reserved
Cell Reservation Extension		not reserved	not reserved	not reserved

Test procedure 2: Use of USIM with "Type B" EF_{ACC} as defined in TS 34.108.

Step a-c (FDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
Test Channel		1	1	2
CPICH_Ec	dBm/3.84 MHz	-58	-68	-78
Qrxlevmin	dBm	-83	-83	-83
Srxlev*	dB	25	15	5
Cell Reserved for operator use		not reserved	not reserved	not reserved
Cell Reservation Extension		not reserved	not reserved	not reserved

Step a-c (TDD):

Parameter	Unit	Cell 1	Cell 2	Cell 4
P-CCPCH RSCP	dBm	-68	-73	-78
Qrxlevmin	dBm	-83	-83	-83
Srxlev*	dB	15	10	5

Step d-e:

Cell Reserved for operator use		not reserved	not reserved	not reserved
Cell Reservation Extension		not reserved -> reserved	not reserved	not reserved

Step f-g:

Cell Reserved for operator use		not reserved -> reserved	not reserved	not reserved
Cell Reservation Extension		reserved	not reserved	not reserved

Related ICS/IXIT Statement(s)

None

Test procedure 1

Method B applied.

- a) The SS activates Cell 1, 2 and 4, and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) The SS sets Cell 1 to "reserved" for operator use. The SS notifies UE of the BCCH modification.
- e) The SS waits for random access requests from the UE.
- f) The SS sets Cell 1 to "not reserved" for operator use.
- g) The SS waits for random access requests from the UE.

Test procedure 2

Method B applied.

- a) The SS activates Cell 1, 2 and 4, and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.

- d) The SS sets Cell 1 to "reserved" for future extension. The SS notifies UE of the BCCH modification.
- e) The SS waits for random access requests from the UE.
- f) The SS sets Cell 1 to "reserved" for operator use.
- g) The SS waits for random access requests from the UE.

6.1.2.9.5 Test requirements

Test procedure 1

- 1) In step c), the UE shall respond on Cell 1.
- 2) In step e), the UE shall respond on Cell 4.
- 3) In step g), the UE shall respond on Cell 1 after 1280 seconds (maximum value for T_{barred}) from SS notified UE of the BCCH modification in Cell 1 in step d).

Test procedure 2

- 1) In step c), the UE shall respond on Cell 1.
- 2) In step e), the UE shall respond on Cell 4.
- 3) In step g), the UE shall respond on Cell 1 after 1280 seconds (maximum value for T_{barred}) from SS notified UE of the BCCH modification in Cell 1 in step d).

6.2 Multi-mode environment (2G/3G case)

6.2.1 PLMN and RAT selection ~~and reselection~~

6.2.1.1 Selection of the correct PLMN and associated RAT

6.2.1.1.1 Definition

Test to verify that the UE selects the correct combination of PLMN and associated access technology according to the fields on the USIM.

6.2.1.1.2 Conformance requirement

- 1. At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see TS 23.122, clause 4.5.2) attempts to perform a Location Registration.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows either Automatic or Manual Network Selection Mode Procedure depending on its operating mode.

- 2. The "HPLMN Selector with Access Technology", "User Controlled PLMN Selector with Access Technology" and "Operator Controlled PLMN Selector with Access Technology" data fields in the SIM include associated access technologies for each PLMN entry. The PLMN/access technology combinations are listed in priority order. If an entry includes more than one access technology, then no priority is defined for the preferred access technology and the priority is an implementation issue.
- 3. To allow provision for multiple HPLMN codes, the HPLMN access technologies are stored on the SIM together with PLMN codes. This version of the specification does not support multiple HPLMN codes and the "HPLMN

Selector with Access Technology" data field is only used by the MS to get the HPLMN access technologies. The HPLMN code is the PLMN code included in the IMSI.

4. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 4.1 HPLMN (if not previously selected);
- 4.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 4.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 4.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 4.5 Other PLMN/access technology combinations in order of decreasing signal quality.

References

1. TS 23.122, clause 4.4.3.1.
2. TS 23.122, clause 4.4.3
3. TS 23.122, clause 4.4.3
4. TS 23.122, clause 4.4.3.1.1

NOTE: TS 31.102 defines the USIM fields.

6.2.1.1.3 Test purpose

1. To verify that the UE selects the correct combination of HPLMN/access technology combination according to the fields on the USIM.

6.2.1.1.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

Cell	CPICH Ec / RF signal level [dBm/3.84 MHz]	P-CCPCH RSCP/ RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-48	-48	1	PLMN 1	GSM
Cell 2	-70	-59	1	PLMN 1	UTRAN
Cell 3	-75	-64	2	PLMN 2	UTRAN
Cell 4	-50	-50	2	PLMN 2	GSM

The UE is equipped with a USIM containing default values except for those listed below.

USIM A

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}			
EF _{HPLMNwAcT}	1 st	PLMN 1	GSM
	2 nd	PLMN 1	UTRAN

USIM B

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}			
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd	PLMN 2	GSM

Test procedure

Method C is applied.

- The SS activates cells 1-4 and monitors the cells for random access requests from the UE. The UE shall have a USIM with settings according to USIM A.
- The UE is switched on.
- The SS waits for random access requests from the UE.
- The UE is switched off and a USIM with settings according to USIM B is inserted.
- The UE is switched on.
- The SS waits for random access requests from the UE.

6.2.1.1.5 Test Requirements

- In step c), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN1 (GSM).
- In step f), the response from the UE shall be on Cell 3. The displayed PLMN shall be PLMN2 (UTRAN).

6.2.1.2 Selection of RAT for HPLMN; Manual mode

6.2.1.2.1 Definition

Test to verify that the UE selects the HPLMN RAT according to the HPLMN RAT priority list on the USIM. If no RAT on the list is available, the UE shall try to obtain registration on the same PLMN using other UE-supported RATs.

6.2.1.2.2 Conformance requirement

- To allow provision for multiple HPLMN codes, the HPLMN access technologies are stored on the SIM together with PLMN codes. This version of the specification does not support multiple HPLMN codes and the "HPLMN Selector with Access Technology" data field is only used by the MS to get the HPLMN access technologies. The HPLMN code is the PLMN code included in the IMSI.
- For HPLMN, the MS shall search for all access technologies it is capable of. The MS shall start its search using the access technologies stored in the "HPLMN Selector with Access Technology" data field on the SIM in priority order (i.e. the PLMN/access technology combinations are listed in priority order, if an entry includes more than one access technology then no priority is defined for the preferred access technology and the priority is an implementation issue).
- Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

3.1 HPLMN;

3.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

3.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

3.4 Other PLMN/access technology combinations with received high quality signal in random order;

3.5 Other PLMN/access technology combinations in order of decreasing signal quality.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

NOTE: It is an MS implementation option whether to indicate access technologies to the user. If the MS does display access technologies, then the access technology used should be the access technology chosen by the user for that PLMN. If the MS does not display access technologies, then the access technology chosen for a particular PLMN should be the highest priority available access technology for that PLMN, if the associated access technologies have a priority order.

References

1. TS 23.122, clause 4.4.3.
2. TS 23.122, clause 4.4.3.1.1 (f).
3. TS 23.122, clause 4.4.3.1.2.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.2.3 Test purpose

1. To verify that:
 - 1.1 the UE searches for a HPLMN RAT according to the HPLMN Selector with Access Technology data field on the USIM in priority order.
 - 1.2 If no RAT on the priority list is available, the UE tries to obtain registration on the same PLMN using other UE-supported RATs.

6.2.1.2.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

Cell	CPICH_Ec / RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP/ RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-72	-59	1	PLMN 2	UTRAN
Cell 2	-48	-48	1	PLMN 2	GSM
Cell 3	-75	-64	2	PLMN 3	UTRAN
Cell 4	-50	-50	2	PLMN 3	GSM

The UE is equipped with a USIM containing default values except for those listed below.

USIM A

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		GSM

USIM B

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		

Test procedure

Method C is applied.

- a) The SS activates cells 1-4 and monitors the cells for random access requests from the UE. The UE shall have a USIM with settings according to USIM A.
- b) The UE is switched on.
- c) PLMN2 (UTRAN) shall be selected when the PLMN list is presented.
- d) The SS waits for random access requests from the UE.
- e) Cell 1 is switched off.
- f) PLMN2 (GSM) shall be selected when the PLMN list is presented.
- g) The SS waits for random access requests from the UE.
- h) The UE is switched off and a USIM with settings according to USIM B is inserted. All cells except Cell 1 are active.
- i) The UE is switched on.
- j) PLMN2 (GSM) shall be selected when the PLMN list is presented.
- k) The SS waits for random access requests from the UE.

6.2.1.2.5 Test Requirements

- 1) In step c), the list shall be presented. It shall contain as highest priority PLMN2 (UTRAN as number 1 on the list and GSM as number 2).
- 2) In step d), the response from the UE shall be on Cell 1 (1st priority RAT for EF_{HPLMNwAcT}). The displayed PLMN shall be PLMN2 (UTRAN).
- 3) In step f), the list shall be presented. It shall contain as highest priority PLMN2 (GSM).
- 4) In step g), the response from the UE shall be on Cell 2 (2nd priority RAT for EF_{HPLMNwAcT}). The displayed PLMN shall be PLMN2 (GSM).
- 5) In step j), the list shall be presented. It shall contain as highest priority PLMN2 (GSM).
- 6) In step k), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN2 (GSM). (PLMN2 is not available on UTRAN so registration on the same PLMN is attempted using other UE-supported RATs).

6.2.1.3 Selection of RAT for UPLMN; Manual mode

6.2.1.3.1 Definition

Test to verify that the UE selects the UPLMN RAT according to the UPLMN RAT priority list on the USIM. If no PLMN/RAT on the UPLMN RAT priority list is available then the UE shall search for PLMNs in the OPLMN list.

6.2.1.3.2 Conformance requirement

1. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

- 1.1 HPLMN;
- 1.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 1.5 Other PLMN/access technology combinations in order of decreasing signal quality.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

NOTE: It is an MS implementation option whether to indicate access technologies to the user. If the MS does display access technologies, then the access technology used should be the access technology chosen by the user for that PLMN. If the MS does not display access technologies, then the access technology chosen for a particular PLMN should be the highest priority available access technology for that PLMN, if the associated access technologies have a priority order.

References

1. TS 23.122, clause 4.4.3.1.2.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.3.3 Test purpose

1. To verify that:
 - 1.1 the UE selects the UPLMN RAT according to the UPLMN RAT priority list on the USIM.
 - 1.2 If no RAT on the UPLMN RAT priority list is available, the UE searches for PLMNs in the OPLMN list.

6.2.1.3.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

Cell	CPICH_Ec / RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP/ RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-72	-59	1	PLMN 3	UTRAN
Cell 2	-48	-48	1	PLMN 3	GSM
Cell 3	-75	-64	2	PLMN 4	UTRAN
Cell 4	-50	-50	2	PLMN 4	GSM
Cell 5	-78	-69	3	PLMN 5	UTRAN

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd	PLMN 2	GSM
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	GSM
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	GSM

Test procedure

Method C is applied.

- a) The SS activates cells 1-5 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) PLMN3 (UTRAN) shall be selected when the PLMN list is presented.
- d) The SS waits for random access requests from the UE.
- e) Cell 1 and Cell 2 are switched off. See note.
- f) PLMN4 (GSM) shall be selected when the PLMN list is presented.
- g) The SS waits for random access requests from the UE.
- h) Cell 4 and Cell 3 are switched off. See note.
- i) PLMN5 (UTRAN) shall be selected when the PLMN list is presented.
- j) The SS waits for random access requests from the UE.

NOTE: When the serving cell (Cell 1 in step e and Cell 4 in step h) is switched off then the UE will trigger the recovery from lack of coverage scenario (TS 23.122 clause 4.4.3.1). The UE will search for a cell within the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the UE is capable of. Thus Cell 2 in step e and Cell 3 in step h need to be switched off.

6.2.1.3.5 Test Requirements

- 1) In step c), the list shall be presented. It shall contain in priority PLMN3 (UTRAN), PLMN4 (GSM), other PLMNs.

- 2) In step d), the response from the UE shall be on Cell 1 (1st priority RAT for EF_{PLMNwACT}). The displayed PLMN shall be PLMN3 (UTRAN).
- 3) In step f), the list shall be presented. It shall contain in priority PLMN4 (GSM), PLMN5 (UTRAN), other PLMNs.
- 4) In step g), the response from the UE shall be on Cell 4 (2nd priority RAT for EF_{PLMNwACT}). The displayed PLMN shall be PLMN4 (GSM).
- 5) In step i), the list shall be presented. It shall contain as highest priority PLMN5 (UTRAN).
- 6) In step j), the response from the UE shall be on Cell 5 (1st priority RAT for EF_{OPLMNwACT}). The displayed PLMN shall be PLMN5 (UTRAN).

6.2.1.4 Selection of RAT for OPLMN; Manual mode

6.2.1.4.1 Definition

Test to verify that the UE selects the OPLMN RAT according to the OPLMN RAT priority list on the USIM. If no PLMN/RAT on the OPLMN RAT priority list is available then the UE shall search for other PLMN/access technology combinations with received high quality signal in random order.

6.2.1.4.2 Conformance requirement

1. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

1.1 HPLMN;

1.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

1.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);

1.4 Other PLMN/access technology combinations with received high quality signal in random order;

1.5 Other PLMN/access technology combinations in order of decreasing signal quality.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

NOTE: It is an MS implementation option whether to indicate access technologies to the user. If the MS does display access technologies, then the access technology used should be the access technology chosen by the user for that PLMN. If the MS does not display access technologies, then the access technology chosen for a particular PLMN should be the highest priority available access technology for that PLMN, if the associated access technologies have a priority order.

References

1. TS 23.122, clause 4.4.3.1.2.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.4.3 Test purpose

1. To verify that:

1.1 the UE selects the OPLMN RAT according to the OPLMN RAT priority list on the USIM.

1.2 If no PLMN/RAT on the OPLMN RAT priority list is available, the UE searches for "other PLMN/access technology combinations with received high quality signal in random order".

6.2.1.4.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

Cell	CPICH_Ec / RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP / RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-72	-59	1	PLMN 5	UTRAN
Cell 2	-48	-48	1	PLMN 5	GSM
Cell 3	-75	-64	2	PLMN 6	UTRAN
Cell 4	-50	-50	2	PLMN 6	GSM
Cell 5	-78	-69	3	PLMN 7	UTRAN

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd	PLMN 2	GSM
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	GSM
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	GSM

Test procedure

Method C is applied.

- a) The SS activates cells 1-5 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) PLMN5 (UTRAN) shall be selected when the PLMN list is presented.
- d) The SS waits for random access requests from the UE.
- e) Cell 1 and Cell2 are switched off. See note.
- f) PLMN6 (GSM) shall be selected when the PLMN list is presented.
- g) The SS waits for random access requests from the UE.
- h) Cell 4 and Cell 3 are switched off. See note.
- i) PLMN7 (UTRAN) shall be selected when the PLMN list is presented.

j) The SS waits for random access requests from the UE.

NOTE: When the serving cell (Cell 1 in step e and Cell 4 in step h) is switched off then the UE will trigger the recovery from lack of coverage scenario (TS 23.122 clause 4.4.3.1). The UE will search for a cell within the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the UE is capable of. Thus Cell 2 in step e and Cell 3 in step h need to be switched off.

6.2.1.4.5 Test Requirements

- 1) In step c), the list shall be presented. It shall contain in priority PLMN5 (UTRAN), PLMN6 (GSM), other PLMNs.
- 2) In step d), the response from the UE shall be on Cell 1 (1st priority RAT for EF_{OPLMNwAcT}). The displayed PLMN shall be PLMN5 (UTRAN).
- 3) In step f), the list shall be presented. It shall contain as highest priority PLMN6 (GSM) followed by PLMN5 (GSM), PLMN6 (UTRAN) and PLMN7 (UTRAN) in random order.
- 4) In step g), the response from the UE shall be on Cell 4 (2nd priority RAT for EF_{OPLMNwAcT}). The displayed PLMN shall be PLMN6 (GSM).
- 5) In step i), the list shall be presented. It shall contain PLMN5 (GSM), PLMN6 (UTRAN) and PLMN7 (UTRAN) in random order.
- 6) In step j), the response from the UE shall be on Cell 5. The displayed PLMN shall be PLMN7 (UTRAN).

6.2.1.5 Selection of "Other PLMN / access technology combinations"; Manual mode

6.2.1.5.1 Definition

Test to verify that if neither RPLMN, HPLMN, UPLMN nor OPLMN is available, the UE tries to obtain registration on "Other PLMN/access technology combinations with received high quality signal in random order". Forbidden PLMNs shall also be displayed in the list.

6.2.1.5.2 Conformance requirement

1. Manual Network Selection Mode Procedure:

The MS indicates whether there are any PLMNs, which are available using all supported access technologies. This includes PLMNs in the "forbidden PLMNs" list and PLMNs which only offer services not supported by the MS.

If displayed, PLMNs meeting the criteria above are presented in the following order:

- 1.1 HPLMN;
- 1.2 PLMNs contained in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.3 PLMNs contained in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 1.5 Other PLMN/access technology combinations in order of decreasing signal quality.

In 1.5, the MS shall order the PLMN/access technology combinations in order of decreasing signal quality within each access technology. The order between PLMN/access technology combinations with different access technologies is an MS implementation issue.

The user may select his desired PLMN and the MS then initiates registration on this PLMN using the access technology chosen by the user for that PLMN or using the highest priority available access technology for that PLMN, if the associated access technologies have a priority order. (This may take place at any time during the presentation of PLMNs). For such a registration, the MS shall ignore the contents of the "forbidden LAs for

roaming", "forbidden LAs for regional provision of service", "forbidden PLMNs for GPRS service" and "forbidden PLMNs" lists.

If the user does not select a PLMN, the selected PLMN shall be the one that was selected before the PLMN selection procedure started. If no such PLMN was selected or that PLMN is no longer available, then the MS shall attempt to camp on any acceptable cell and enter the limited service state.

NOTE: It is an MS implementation option whether to indicate access technologies to the user. If the MS does display access technologies, then the access technology used should be the access technology chosen by the user for that PLMN. If the MS does not display access technologies, then the access technology chosen for a particular PLMN should be the highest priority available access technology for that PLMN, if the associated access technologies have a priority order.

2. UTRA case: The UE shall scan all RF channels in the UTRA band according to its capabilities to find available PLMNs. On each carrier, the UE shall search for the strongest cell according to the cell search procedures (for FDD, see TS 25.214, and TDD, see TS 25.224) and read its system information, in order to find out which PLMN the cell belongs to. If the UE can read the PLMN identity, the found PLMN shall be reported to the NAS as a high quality PLMN (but without the RSCP value), provided that the following high quality criterion is fulfilled:

- For an FDD cell, the measured primary CPICH RSCP value shall be greater than or equal to -95 dBm.
- For a TDD cell, the measured P-CCPCH RSCP value shall be greater than or equal to -84 dBm.

Found PLMNs that do not satisfy the high quality criterion, but for which the UE has been able to read the PLMN identities are reported to the NAS together with the CPICH RSCP value for UTRA FDD cells and P-CCPCH RSCP for UTRA TDD cells.

3. GSM case: A PLMN shall be understood to be received with high quality signal if the signal level is above -85 dBm.

References

1. TS 23.122, clause 4.4.3.1.2.
2. TS 25.304, clause 5.1.2.2.
3. TS 03.22, clause 4.4.3.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.5.3 Test purpose

1. To verify that if neither RPLMN, HPLMN, UPLMN nor OPLMN is available, the UE tries to obtain registration on "Other PLMN/access technology combinations with received high quality signal in random order".
2. To verify that forbidden PLMNs are also displayed in the list.

6.2.1.5.4 Method of test

Initial conditions

The UE is in manual PLMN selection mode.

Cell	CPICH_Ec /RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP / RF signal level [dBm] (TDD)	High Quality signal	Test Channel	PLMN	Radio Access Technology
Cell 1	-80	-74	Yes	1	PLMN 7	UTRAN
Cell 2	-65	-65	Yes	1	PLMN 8	GSM
Cell 3	-80	-69	Yes	2	PLMN 9	UTRAN
Cell 4	-65	-65	Yes	3	PLMN 11	GSM

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 7	UTRAN
EF _{FPLMN}		PLMN 8	
		PLMN 9	

Test procedure

Method C is applied.

- a) The SS activates cells 1-4 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) PLMN7 shall be selected when the PLMN list is presented.
- d) The SS waits for random access requests from the UE.
- e) Cell 1 is switched off.
- f) PLMN8 shall be selected when the PLMN list is presented. The SS shall accept the Registration Request from the UE.
- g) The SS waits for random access requests from the UE.
- h) Cell 2 is switched off.
- i) PLMN9 shall be selected when the PLMN list is presented. The SS shall accept the Registration Request from the UE.
- j) The SS waits for random access requests from the UE.
- k) Cell 3 is switched off.
- l) PLMN11 shall be selected when the PLMN list is presented.
- m) The SS waits for random access requests from the UE.
- n) Cell 4 is switched off.

6.2.1.5.5 Test Requirements

In all steps, the PLMN priority list shall be as follows: PLMN7, PLMN8, PLMN9 and PLMN11 in random order.

- 1) In step c), the list shall be presented and contain PLMN7, 8, 9, 11.
- 2) In step d), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN7.
- 3) In step f), the list shall be presented and contain PLMN 8, 9, 11.
- 4) In step g), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN8.
- 5) In step i), the list shall be presented and contain PLMN9, 11.

- 6) In step j), the response from the UE shall be on Cell 3. The displayed PLMN shall be PLMN9.
- 7) In step l), the list shall be presented and contain PLMN11. The displayed PLMN shall be PLMN11.
- 8) After step n), the UE shall inform that no network is available

6.2.1.6 Selection of RAT for HPLMN; Automatic mode

6.2.1.6.1 Definition

Test to verify that the UE selects the HPLMN RAT according to the HPLMN RAT priority list on the USIM. If no RAT on the list is available, the UE shall try to obtain registration on the same PLMN using other UE-supported RATs.

6.2.1.6.2 Conformance requirement

1. To allow provision for multiple HPLMN codes, the HPLMN access technologies are stored on the SIM together with PLMN codes. This version of the specification does not support multiple HPLMN codes and the "HPLMN Selector with Access Technology" data field is only used by the MS to get the HPLMN access technologies. The HPLMN code is the PLMN code included in the IMSI.
2. The "HPLMN Selector with Access Technology", "User Controlled PLMN Selector with Access Technology" and "Operator Controlled PLMN Selector with Access Technology" data fields in the SIM include associated access technologies for each PLMN entry. The PLMN/access technology combinations are listed in priority order. If an entry includes more than one access technology, then no priority is defined for the preferred access technology and the priority is an implementation issue.
3. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 3.1 HPLMN (if not previously selected);
- 3.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 3.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 3.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 3.5 Other PLMN/access technology combinations in order of decreasing signal quality.

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in the "forbidden LAs for regional provision of service" list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

References

1. TS 23.122, clause 4.4.3.
2. TS 23.122, clause 4.4.3.
3. TS 23.122, clause 4.4.3.1.1.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.6.3 Test purpose

1. To verify that:

1.1 the UE searches for a HPLMN RAT according to the HPLMN Selector with Access Technology data field on the USIM in priority order.

1.2 If no RAT on the priority list is available, the UE tries to obtain registration on the same PLMN using other UE-supported RATs.

6.2.1.6.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

Cell	CPICH_Ec / RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP / RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-70	-59	1	PLMN 2	UTRAN
Cell 2	-48	-48	1	PLMN 2	GSM
Cell 3	-75	-64	2	PLMN 3	UTRAN
Cell 4	-50	-50	2	PLMN 3	GSM

The UE is equipped with a USIM containing default values except for those listed below.

USIM A

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd	PLMN 2	GSM

USIM B

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd		

Test procedure

Method C is applied.

- a) The SS activates cells 1-4 and monitors the cells for random access requests from the UE. The UE shall have a USIM with settings according to USIM A.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) The UE is switched off and a USIM with settings according to USIM A is again inserted. All cells except Cell 1 are active.
- e) The SS waits for random access requests from the UE.
- f) The UE is switched off and a USIM with settings according to USIM B is inserted. All cells except Cell 1 are active.
- g) The UE is switched on.
- h) The SS waits for random access requests from the UE.

6.2.1.6.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1 (1st priority RAT for EF_{HPLMNwAcT}). The displayed PLMN shall be PLMN2 (UTRAN).
- 2) In step e), the response from the UE shall be on Cell 2 (2nd priority RAT for EF_{HPLMNwAcT}). The displayed PLMN shall be PLMN2 (GSM).
- 3) In step h), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN2 (GSM). (PLMN2 is not available on UTRAN so registration on the same PLMN is attempted using other UE-supported RATs).

6.2.1.7 Selection of RAT for UPLMN; Automatic mode

6.2.1.7.1 Definition

Test to verify that the UE selects the UPLMN RAT according to the UPLMN RAT priority list on the USIM. If no PLMN/RAT on the UPLMN RAT priority list is available then the UE shall search for PLMNs in the OPLMN list.

6.2.1.7.2 Conformance requirement

1. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 1.1 HPLMN (if not previously selected);
- 1.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 1.5 Other PLMN/access technology combinations in order of decreasing signal quality.

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in the "forbidden LAs for regional provision of service" list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

References

1. TS 23.122, clause 4.4.3.1.1.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.7.3 Test purpose

1. To verify that:
 - 1.1 the UE selects the UPLMN RAT according to the UPLMN RAT priority list on the USIM.
 - 1.2 If no PLMN/RAT on the UPLMN RAT priority list is available, the UE searches for PLMNs in the OPLMN list.

6.2.1.7.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

In system information broadcast in each cell, the neighbouring cell list does not contain any other cell belonging to the same PLMN.

Cell	CPICH_Ec / RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH / RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-70	-59	1	PLMN 3	UTRAN
Cell 2	-48	-48	1	PLMN 3	GSM
Cell 3	-75	-64	2	PLMN 4	UTRAN
Cell 4	-50	-50	2	PLMN 4	GSM
Cell 5	-80	-69	3	PLMN 5	UTRAN

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd	PLMN 2	GSM
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	GSM
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	GSM

Test procedure

Method C is applied.

- a) The SS activates cells 1-5 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE. As no cell exists for neither registered PLMN (PLMN1) nor home PLMN/RAT (PLMN2, UTRAN or GSM) the UE shall select Cell 1 (1st priority PLMN/RAT in EF_{PLMNwAcT}).
- d) Cell 1 and Cell 2 are switched off. See note.
- e) The SS waits for random access requests from the UE. As no cell exists for neither registered PLMN (PLMN3 registered at step c), home PLMN (PLMN2, UTRAN or GSM) nor any cells for the 1st priority PLMN/RAT in EF_{PLMNwAcT} (PLMN3/UTRAN) then UE shall select Cell 4 (2nd priority PLMN/RAT in EF_{PLMNwAcT}).
- f) Cell 4 and Cell 3 are switched off. See note.
- g) The SS waits for random access requests from the UE. As no cell exists for neither registered PLMN (PLMN4 registered at step e), home PLMN (PLMN2, UTRAN or GSM) nor user controlled PLMN/RAT (PLMN3/UTRAN or PLMN4/GSM) then UE shall select Cell 5 (1st priority RAT for EF_{OPLMNwAcT}).

NOTE: When the serving cell (Cell 1 in step d and Cell 4 in step f) is switched off then the UE will trigger the recovery from lack of coverage scenario (TS 23.122 clause 4.4.3.1). The UE will search for a cell within the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the UE is capable of. Thus need Cell 2 in step d and Cell 3 in step f to be switched off.

6.2.1.7.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1 (1st priority RAT for EF_{PLMNwAcT}). The displayed PLMN shall be PLMN3 (UTRAN).
- 2) In step e), the response from the UE shall be on Cell 4 (2nd priority RAT for EF_{PLMNwAcT}). The displayed PLMN shall be PLMN4 (GSM).
- 3) In step g), the response from the UE shall be on Cell 5 (1st priority RAT for EF_{OPLMNwAcT}). The displayed PLMN shall be PLMN5 (UTRAN).

6.2.1.8 Selection of RAT for OPLMN; Automatic mode

6.2.1.8.1 Definition

Test to verify that the UE selects the OPLMN RAT according to the OPLMN RAT priority list on the USIM. If no PLMN/RAT on the OPLMN list is available then the UE shall search for other PLMN/access technology combinations with received high quality signal in random order.

6.2.1.8.2 Conformance requirement

1. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 1.1 HPLMN (if not previously selected);
- 1.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 1.5 Other PLMN/access technology combinations in order of decreasing signal quality.

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in the "forbidden LAs for regional provision of service" list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

References

1. TS 23.122, clause 4.4.3.1.1.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.8.3 Test purpose

1. To verify that:
 - 1.1 the UE selects the OPLMN RAT according to the OPLMN RAT priority list on the USIM.
 - 1.2 If no PLMN/RAT on the OPLMN RAT priority list is available, the UE searches for "other PLMN/access technology combinations with received high quality signal in random order".

6.2.1.8.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

Cell levels are from tables 6.3 and 6.4.

In system information broadcast in each cell, the neighbouring cell list does not contain any other cell belonging to the same PLMN.

Cell	CPICH_Ec / RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP / RF signal level [dBm] (TDD)	Test Channel	PLMN	Radio Access Technology
Cell 1	-70	-59	1	PLMN 5	UTRAN
Cell 2	-48	-48	1	PLMN 5	GSM
Cell 3	-75	-64	2	PLMN 6	UTRAN
Cell 4	-50	-50	2	PLMN 6	GSM
Cell 5	-80	-69	3	PLMN 7	UTRAN

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{LOCI}		PLMN 1	
EF _{HPLMNwAcT}	1 st	PLMN 2	UTRAN
	2 nd	PLMN 2	GSM
EF _{PLMNwAcT}	1 st	PLMN 3	UTRAN
	2 nd	PLMN 4	GSM
EF _{OPLMNwAcT}	1 st	PLMN 5	UTRAN
	2 nd	PLMN 6	GSM

Test procedure

Method C is applied.

- a) The SS activates cells 1-5 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE. As no cell exists for neither registered PLMN (PLMN1), home PLMN/RAT (PLMN2, UTRAN or GSM) nor user controlled PLMN/RAT (PLMN3/UTRAN or PLMN4/GSM) then the UE shall select Cell 1 (1st priority RAT for EF_{OPLMNwAcT}).
- d) Cell 1 and Cell 2 are switched off. See note.
- e) The SS waits for random access requests from the UE. As no cell exists for neither registered PLMN (PLMN5 registered in step c), home PLMN/RAT (PLMN2, UTRAN or GSM), user controlled PLMN/RAT (PLMN3/UTRAN or PLMN4/GSM) nor any cells for the 1st priority PLMN/RAT in EF_{OPLMNwAcT} (PLMN5/UTRAN) then UE shall select Cell 4 (2nd priority PLMN/RAT in EF_{OPLMNwAcT}).
- f) Cell 4 and Cell 3 are switched off. See note.
- g) The SS waits for random access requests from the UE. As no cell exists for neither registered PLMN (PLMN6 registered in step c), home PLMN/RAT (PLMN2, UTRAN or GSM), user controlled PLMN/RAT (PLMN3/UTRAN or PLMN4/GSM) nor operator controlled PLMN/RAT (PLMN5/UTRAN or PLMN6/GSM) then UE shall select another PLMN/access technology combinations with received high quality signal in random order (Cell 5).

NOTE: When the serving cell (Cell 1 in step d and Cell 4 in step f) is switched off then the UE will trigger the recovery from lack of coverage scenario (TS 23.122 clause 4.4.3.1). The UE will search for a cell within the registered PLMN or equivalent PLMN (if it is available) using all access technologies that the UE is capable of. Thus need Cell 2 in step d and Cell 3 in step f to be switched off.

6.2.1.8.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1 (1st priority RAT for EF_{OPLMNwACT}). The displayed PLMN shall be PLMN5 (UTRAN).
- 2) In step e), the response from the UE shall be on Cell 4 (2nd priority RAT for EF_{OPLMNwACT}). The displayed PLMN shall be PLMN6 (GSM).
- 3) In step g), the response from the UE shall be on either Cell 5 (other PLMN/access technology combination) with associated PLMN7 (UTRAN) shown.

6.2.1.9 Selection of "Other PLMN / access technology combinations"; Automatic mode

6.2.1.9.1 Definition

Test to verify that if neither RPLMN, HPLMN, UPLMN nor OPLMN is available, the UE tries to obtain registration on "Other PLMN/access technology combinations with received high quality signal in random order".

6.2.1.9.2 Conformance requirement

1. Automatic Network Selection Mode Procedure:

The MS selects and attempts registration on other PLMNs, if available and allowable in the following order:

- 1.1 HPLMN (if not previously selected);
- 1.2 Each PLMN in the "User Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.3 Each PLMN in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM (in priority order);
- 1.4 Other PLMN/access technology combinations with received high quality signal in random order;
- 1.5 Other PLMN/access technology combinations in order of decreasing signal quality.

In 1.5, the MS shall order the PLMN/access technology combinations in order of decreasing signal quality within each access technology. The order between PLMN/access technology combinations with different access technologies is an MS implementation issue.

If successful registration is achieved, the MS indicates the selected PLMN.

If registration cannot be achieved because no PLMNs are available and allowable, the MS indicates "no service" to the user, waits until a new PLMN is available and allowable and then repeats the procedure.

If there were one or more PLMNs which were available and allowable, but an LR failure made registration on those PLMNs unsuccessful or an entry in the "forbidden LAs for regional provision of service" list prevented a registration attempt, the MS selects the first such PLMN again and enters a limited service state.

2. UTRA case: The UE shall scan all RF channels in the UTRA band according to its capabilities to find available PLMNs. On each carrier, the UE shall search for the strongest cell according to the cell search procedures (for FDD, see TS 25.214, and TDD, see TS 25.224) and read its system information, in order to find out which PLMN the cell belongs to. If the UE can read the PLMN identity, the found PLMN shall be reported to the NAS as a high quality PLMN (but without the RSCP value), provided that the following high quality criterion is fulfilled:
 - For an FDD cell, the measured primary CPICH RSCP value shall be greater than or equal to -95 dBm.

- For a TDD cell, the measured P-CCPCH RSCP shall be greater than or equal to -84 dBm.

Found PLMNs that do not satisfy the high quality criterion, but for which the UE has been able to read the PLMN identities are reported to the NAS together with the CPICH RSCP value for UTRA FDD cells and P-CCPCH RSCP for UTRA TDD cells.

3. GSM case: A PLMN shall be understood to be received with high quality signal if the signal level is above -85 dBm.

References

1. TS 23.122, clause 4.4.3.1.1.
2. TS 25.304, clause 5.1.2.2.
3. TS 03.22, clause 4.4.3.

NOTE: TS 31.102 defines the USIM fields.

6.2.1.9.3 Test purpose

1. To verify that if neither RPLMN, HPLMN, UPLMN nor OPLMN is available, the UE tries to obtain registration on "Other PLMN/access technology combinations with received high quality signal in random order".

6.2.1.9.4 Method of test

Initial conditions

The UE is in automatic PLMN selection mode.

Cell	CPICH_Ec /RF signal level [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP / RF signal level [dBm] (TDD)	"High Quality signal"	Test Channel	PLMN	Radio Access Technology
Cell 1	-80	-69	Yes	1	PLMN 7	UTRAN
Cell 2	-65	-65	Yes	1	PLMN 8	GSM
Cell 3	-80	-69	Yes	2	PLMN 9	UTRAN

The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN	Access Technology Identifier
EF _{Loc1}		PLMN 7	UTRAN

Test procedure

Method C is applied.

- a) The SS activates cells 1-3 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) The cell on which a response was received, is switched off.
- e) Step c-d) is repeated until the UE informs that no network is available.

6.2.1.9.5 Test Requirements

- 1) In step c), the displayed PLMN is noted.

- 2) When the test procedure has finished, the noted PLMNs shall have appeared in the following order: PLMN7 first, then PLMN8 or PLMN9 in random order.

6.2.2 Cell selection and reselection

6.2.2.1 Cell reselection if cell becomes barred or $S < 0$; UTRAN to GSM

6.2.2.1.1 Definition

Test to verify that if both a GSM and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM if the UTRAN cell becomes barred or S falls below zero.

6.2.2.1.2 Conformance requirement

1. When camped on a cell, the UE shall regularly search for a better cell according to the cell reselection criteria. If a better cell is found, that cell is selected. The change of cell may imply a change of RAT.
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.
 - 2.1 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.
 - 2.2 The cell is not barred.
 - 2.3 The cell is not part of the list of "forbidden LAs for roaming".
 - 2.4 The cell selection criteria are fulfilled.
3. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
 - 3.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD and TS 25.123 for TDD.
 - 3.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
4. Cell Reselection Criteria:
 - 4.1 The UE shall perform ranking of all cells that fulfil the S criterion.
 - 4.2 The cells shall be ranked according to the R criteria, deriving $Q_{meas,n}$ and $Q_{meas,s}$ and calculating the R values using CPICH RSCP, P-CCPCH RSCP and the averaged received signal level as specified in TS 25.133 and TS 25.123 for FDD, TDD and GSM cells, respectively.

The offset $Q_{offset1_{s,n}}$ is used for $Q_{offset_{s,n}}$ to calculate R_n , the hysteresis Q_{hyst1_s} is used for Q_{hyst_s} to calculate R_s .

If the usage of HCS is indicated in system information, $TEMP_OFFSET1_n$ is used for $TEMP_OFFSET_n$ to calculate TO_n . If it is indicated in system information that HCS is not used, $TEMP_OFFSET_n$ is not applied when calculating R_n . The best ranked cell is the cell with the highest R value.

If a TDD or GSM cell is ranked as the best cell, then the UE shall perform cell re-selection to that TDD or GSM cell.
 - 4.3 In all cases, the UE shall reselect the new cell, only if the 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.

References

1. TS 25.304, clause 5.2.1.

2. TS 25.304, clause 4.3.
3. TS 25.304, clause 5.2.5.1.
4. TS 25.304, clause 5.2.6.1.4.

6.2.2.1.3 Test purpose

1. To verify that the UE performs [cell](#) reselection from UTRAN to GSM on the following occasions:
 - 1.1 Serving cell becomes barred.
 - 1.2 $S < 0$ for serving cell.

6.2.2.1.4 Method of test

Initial conditions

All cells belong to the same PLMN.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GSM) and Cell 10 (GSM).

The 3G Neighbour Cell Description of Cell 9 (GSM) and Cell 10 (GSM) refers to Cell 1 (UTRAN)

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH_Ec (FDD)	dBm / 3.84 MHz	-60
P-CCPCH_RSCP (TDD)	dBm	-60
Qrxlevmin	dBm	-101
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 9 (GSM)	Cell 10 (GSM)
Test Channel		1	2
RF Signal Level	dBm	-80	-85
RXLEV_ACCESS_MIN	dBm	-100	-100
C1*	dBm	20	15
FDD_Qmin	dB	-20	-20
FDD_Qoffset	dBm	0	0

Step d-f:

Parameter	Unit	Cell 1 (UTRAN)
CellBarred		Not barred -> Barred
Tbarred	s	80

Step g:

Parameter	Unit	Cell 1 (UTRAN)
Qrxlevmin	dB	-101 -> -41
Srxlev*	dB	40 -> -19

Test procedure

Method B is applied.

- a) The SS activates cells 1, 9, and 10. The SS monitors cells 1, 9 and 10 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access request from the UE.
- d) The SS sets Cell 1 to be barred.
- e) The SS waits for random access request from the UE.
- f) The UE is switched off.
- g) Step a-e) is repeated except that in step d), $Q_{rxlevmin}$ is increased, so S will become negative instead of being barred.

6.2.2.1.5 Test Requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step e), the UE shall respond on Cell 9.
- 3) In step g), the UE shall respond on Cell 9 after $Q_{rxlevmin}$ is increased.

6.2.2.2 Cell reselection if cell becomes barred or $C1 < 0$; GSM to UTRAN

6.2.2.2.1 Definition

Test to verify that if both a GSM and UTRAN network is available, the UE performs cell reselection from GSM to UTRAN if the GSM cell becomes barred or the path loss criterion $C1$ falls below zero for a period of 5 s.

6.2.2.2.2 Conformance requirement

1. At least every 5 s the MS shall calculate the value of $C1$ and $C2$ for the serving cell and re-calculate $C1$ and $C2$ values for non serving cells (if necessary). The MS shall then check whether:
 - 1.1 The path loss criterion ($C1$) for current serving cell falls below zero for a period of 5 s. This indicates that the path loss to the cell has become too high.
 2. While camped on a cell of the registered PLMN ("camped normally"), the MS may need to select a different cell ("normal cell reselection" state). The following events trigger a cell reselection:
 - 2.1 The path loss criterion parameter $C1$ (see TS 03.22, clause 3.6) indicates that the path loss to the cell has become too high;
 - 2.2 The cell camped on (current serving cell) has become barred.

References

1. TS 05.08, clause 6.6.2.
2. TS 03.22, clause 4.5.

6.2.2.2.3 Test purpose

1. To verify that the UE performs [cell](#) reselection from GSM to UTRAN on the following occasions:
 - 1.1 Serving cell becomes barred.
 - 1.2 The path loss criterion $C1$ for serving cell falls below zero for a period of 5 s.

6.2.2.2.4 Method of test

Initial conditions

The USIM does not contain any preferred RAT.

The 3G Neighbour Cell Description of Cell 9 (GSM) refers Cell 1 (UTRAN) and Cell 2 (UTRAN).

The Inter-RAT Cell Info List of Cell 1 (UTRAN) and Cell 2 (UTRAN) refers to Cell 9 (GSM).

Step a-c:

Parameter	Unit	Cell 9 (GSM)
Test Channel		1
RF Signal Level	dBm	-50
RXLEV_ACCESS_MIN	dBm	-70
MS_TXPWR_MAX_CCH	dBm	Max. output power of UE
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0
CELL_BAR_ACCESS		Not barred
C1*	dBm	20

Parameter	Unit	Cell 2 (UTRAN)	Cell 3 (UTRAN)
P-CCPCH_RSCP (TDD)	dBm	-60	-70
CPICH_Ec (FDD)	dBm/3.84 MHz	-60	-70
Qrxlevmin	dBm	-101	-101
Srxlev*	dBm	41	31

Step d-e:

Parameter	Unit	Cell 9 (GSM)
CELL_BAR_ACCESS		Not barred -> Barred

Step f-g:

Parameter	Unit	Cell 9 (GSM)
RF Signal Level	dBm	-50 -> -80 (4sec) -> -50
C1*	dBm	20 -> -10 (4sec) -> 20

Step h:

Parameter	Unit	Cell 9 (GSM)
RF Signal Level	dBm	-50 -> -80
C1*	dBm	20 -> -10

Test procedure

Method B is applied.

- a) The SS activates cells 1, 2, and 9. The SS monitors cells 1, 2 and 9 for random access requests from the UE.
- b) The UE is switched on.

- c) The SS waits for random access request from the UE.
- d) The SS sets Cell 9 to be barred.
- e) The SS waits for random access request from the UE.
- f) The UE is switched off.
- g) Step a-e) is repeated except that in step d), the SS reduces signal level on Cell 9 to -80 dBm for 4 s and then raises the level back to -50 dBm (C1 becomes -10 dBm during this period).
- h) The SS reduces signal level on Cell 9 to -80 dBm.

6.2.2.2.5 Test Requirements

- 1) In step c), after the UE has responded on Cell 9, it shall not respond on any other cell within 1 min.
- 2) In step e), the UE shall respond on Cell 1.
- 3) In step g), there shall be no access on Cell 1 within 30 s, after having reduced the signal level on Cell 1.
- 4) In step h), the UE shall respond on Cell 1.

6.2.2.3 Cell reselection timings; GSM to UTRAN

6.2.2.3.1 Definition

Test to verify that the UE meets the cell reselection timing requirements when both a GSM and UTRAN network is available.

6.2.2.3.2 Conformance requirement

1. If the 3G Cell Reselection list (see TS 04.18) includes UTRAN frequencies, the MS shall, at least every 5 s update the value RLA_C for the serving cell and each of the at least 6 strongest non-serving GSM cells.
 - 1.1 The MS shall then reselect a suitable UTRAN cell if its measured RSCP value exceeds the value of RLA_C for the serving cell and all of the suitable non-serving GSM cells by the value XXX_Qoffset for a period of 5 s and, for FDD, the UTRAN cells measured Ec/No value is equal or greater than the value FDD_Qmin.
 - Ec/No and RSCP are the measured quantities.
 - FDD_Qmin and XXX_Qoffset are broadcast on BCCH of the serving cell. XXX indicates other radio access technology/mode.
 - 1.2 In case of a cell reselection occurring within the previous 15 s, XXX_Qoffset is increased by 5 dB.
 - 1.3 Cell reselection to UTRAN shall not occur within 5 s after the MS has reselected a GSM cell from an UTRAN cell if a suitable GSM cell can be found.
 - 1.4 If more than one UTRAN cell fulfils the above criteria, the UE shall select the cell with the greatest RSCP value.
2. The MS shall be able to identify and select a new best UTRAN cell on a frequency, which is part of the 3G Cell Reselection list, within 30 s after it has been activated under the condition that there is only one UTRAN frequency in the list and under good radio conditions.

The allowed time is increased by 30 s for each additional UTRAN frequency in the 3G Cell Reselection list. However, multiple UTRAN cells on the same frequency in the neighbour cell list does not increase the allowed time.

NOTE: Definitions of measurements are in TS 25.215 and TS 25.101 for FDD mode, in TS 25.225 and TS 25.102 for TDD mode, clause 3.2 and TS 05.08, clause 6.1.

References

1. TS 05.08, clause 6.6.5.
2. TS 05.08, clause 6.6.4.

6.2.2.3.3 Test purpose

1. To verify that:
 - 1.1 The UE meets conformance requirement 1.1 and additionally, that no [cell](#) reselection is performed if the period is less than 5 s
 - 1.2 The UE meets conformance requirement 1.2.
 - 1.3 The UE meets conformance requirement 1.3.

6.2.2.3.4 Method of test

Initial conditions

The 3G Neighbour Cell Description of Cell 9 (GSM) and Cell 10 (GSM) refers Cell 1 (UTRAN).

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 9 (GSM) and Cell 10 (GSM).

Step a-c:

Parameter	Unit	Cell 9 (GSM)	Cell 10 (GSM)
Test Channel		1	2
RF Signal Level	dBm	-70	-85
RXLEV_ACCESS_MIN	dBm	-100	-100
MS_TXPWR_MAX_CCH	dBm	Max. output power of UE	Max. output power of UE
FDD_Qmin	dBm	-20	-20
FDD_Qoffset	dBm	5	5

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH_Ec (FDD)	dBm / 3.84 MHz	-74
P-CCPCH_RSCP (TDD)	dBm	-74
Qrxlevmin	dBm	-101
Srxlev*	dBm	27

Step d-g:

Parameter	Unit	Cell 9 (GSM)	Cell 10 (GSM)
RF Signal Level	dBm	-70 -> -82 (4 s) -> -70	OFF

Step h-j:

Parameter	Unit	Cell 9 (GSM)	Cell 10 (GSM)
RF Signal Level	dBm	-82 -> -70	OFF

Step k-m:

Parameter	Unit	Cell 9 (GSM)	Cell 10 (GSM)
RF Signal Level	dBm	-82 -> -70 -> -82	OFF

Test procedure

NOTE: Step a-c): Test purpose 1.3. Step d-g): test purpose 1.1. Step h-k): test purpose 1.2.

Method B is applied.

- a) The SS activates the channels. The UE is not paged on any of the cells.
- b) The UE is switched on.
- c) After 50 s, the SS starts paging continuously on cells 9 and 1 for 20 s. The SS monitors cells 9 and 1 for random access requests from the UE.
- d) Cell 10 is switched off. The SS stops paging on the cells and waits for 20 s. (The UE should revert to Cell 9 due to cell reselection).
- e) The SS starts paging continuously on Cell 1.
- f) The SS decreases the transmit level of Cell 9 to -82 dBm for a period of 4 s (RSCP will then exceed RLA_C value of Cell 9 by more than XXX_Qoffset) and then changes the level back to -70 dBm.
- g) The SS waits to see if there is any random access requests from the UE on Cell 1.
- h) The SS stops paging on all cells and sets the transmit level of Cell 9 to -82 dBm.
- i) The SS waits 20 s and then starts paging continuously on Cell 9. (The UE should revert to Cell 1 due to cell reselection).
- j) The SS increases the transmit level of Cell 9 to -70 dBm and waits for the UE to access on Cell 9. The SS records the time t from the increase in the level of Cell 9 to the first response from the UE.
- k) The SS stops paging on all cells and sets the transmit level of Cell 9 back to -82 dBm.
- l) The SS waits 20 s (The UE should revert to Cell 1 due to cell reselection).
- m) The SS increases the transmit level of Cell 9 to -70 dBm. After $t+2$ s (i.e. 2 s after reselection to Cell 9), the SS starts paging continuously on Cell 1, changes the level of Cell 9 back to -82 dBm and waits to see if there is any random access request on Cell 1. (Within 15 sec after [cell](#) reselection to GSM, the level of Cell 9 is $-82 + 10$ dBm= -72 dBm. After the 15 s period, the level of Cell 9 is $-82 + 5$ dBm= -77 dBm. The level of Cell 1 is -74 dBm, thus leading to reselection to Cell 1 after 15 s).

6.2.2.3.5 Test Requirements

- 1) In step c), after the UE has reselected Cell 9 from Cell 1 as indicated by random access requests, any random access requests on Cell 1 shall not occur within 4,5 s of the last random access request on Cell 9.
- 2) In step g), there shall be no access on Cell 1 within 34 s of decreasing the level of Cell 9.
- 3) In step j), the UE shall respond on Cell 9.
- 4) In step m), there shall be no response on Cell 1 within 11 s after the level of Cell 9 is changed back to -82 dBm.

NOTE: The 11 s is derived from $(t+15)$ s minimum cell reselection timer minus $(t+2)$ s from the start of step m) up to the decrease of the level of Cell 9. A further 2 s are subtracted to cover for any uncertainty introduced by the random access process occurring after step g).

Munich, Germany, 28th July – 1st August 2003

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 557 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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; Correction to package 1 RLC test case 7.2.3.18 according to RP-030292
Source:	⌘	T1
Work item code:	⌘	TEI
		Date: ⌘ 28/07/2003
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:	⌘	RP-030292 (CR223 to 25.322) was approved at RAN#20 plenary. The CR clarified when the polling bit for the case "Every Poll_SDU SDU" is to be set.
Summary of change:	⌘	TC 7.2.3.18: <ul style="list-style-type: none"> Conformance requirement is updated according to changes in RP-030292. No impact on test procedure or test requirement.
Consequences if not approved:	⌘	Conformance requirement of RLC test case 7.2.3.18 not aligned with core specifications.

Clauses affected:	⌘	7.2.3.18								
Other specs Affected:	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">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.
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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.

7.2.3.18 Polling for status / Poll every Poll_SDU SDUs

7.2.3.18.1 Definition

This case tests that the UE will poll for a status request every Poll_SDU SDUs when that mode is enabled. Incorrect operation of polling will cause degradation of service, or at worst service failure.

7.2.3.18.2 Conformance requirement

VT(SDU).

This state variable is used when the "poll every Poll_SDU SDU" polling trigger is configured. It shall be incremented by 1 for a given SDU when ~~all~~ the AMD PDUs carrying ~~a part~~ the first segment of this SDU is scheduled to be transmitted for the first time ~~have been transmitted at least once~~. When it becomes equal to the value Poll_SDU a new poll shall be transmitted and the state variable shall be set to zero. The "Polling bit" shall be set to "1" in the first transmission of the AMD PDU that contains the "Length Indicator" indicating the end of the SDU ~~the last segment of the SDU~~.

The initial value of this variable is 0.

Poll_SDU.

This protocol parameter indicates how often the transmitter shall poll the Receiver in the case where "polling every Poll_SDU SDU" is configured by upper layers. It represents the upper limit for state variable VT(SDU). When VT(SDU) equals the value Poll_SDU a poll shall be transmitted to the peer entity.

Every Poll_SDU SDU.

The Sender triggers the Polling function for every Poll_SDU SDU. The poll shall be triggered for the first transmission of the ~~last~~ AMD PDU that contains the "Length Indicator" indicating the end of the SDU segments ~~of the RLC SDU~~.

The Sender shall:

- if a poll has been triggered by one or several poll triggers (see TS 25.322 subclause 9.7.1):
- if polling is not prohibited, see TS 25.322 subclause 9.5:
 - set the "Polling bit" in the AMD PDU header to "1";
- otherwise:
 - set the "Polling bit" in the AMD PDU header to "0".

Reference

TS 25.322 clauses 9.4, 9.6, 9.7.1 and 11.3.2.1.1.

7.2.3.18.3 Test purpose

1. To verify that a poll is performed when VT(SDU) reaches Poll_SDU.
2. To verify that the poll is sent in the last PDU of the SDU.

7.2.3.18.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Uplink RLC Polling info Last transmission PDU poll Poll_SDU	FALSE 1
--	------------

These settings apply to both the uplink and downlink DTCH.

The Radio Bearer is placed in UE test loop mode 1 with the UL SDU size set to $(2 * AM_7_PayloadSize) - 1$ bytes.

Let the value of Poll_SDU be P.

- a) The SS sends $2 * P$ RLC SDUs of size $AM_7_PayloadSize - 1$ bytes to the UE in PDUs with sequence numbers that are contiguous, starting from zero.
- b) The SS checks the sequence numbers and polling bits of the RLC SDUs returned on the uplink.
- c) The SS terminates the connection.

The test is repeated with Poll_SDU set to 16.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1
2		←	DOWNLINK RLC PDU	SDU 2
3		←	...	SS continues to transmit RLC SDUs
4		←	DOWNLINK RLC PDU	SDU 2P
5		→	UPLINK RLC PDU	SDU 1 Expanded to $(2 * AM_7_PayloadSize) - 1$ bytes by test function
6		→	UPLINK RLC PDU	
7		→	...	SS continues to receive RLC SDUs
8		→	UPLINK RLC PDU	SDU P, Poll
9		←	STATUS PDU	
10		→	UPLINK RLC PDU	SDU P+1 Expanded to $(2 * AM_7_PayloadSize) - 1$ bytes by test function
11		→	UPLINK RLC PDU	
12		→	...	SS continues to receive RLC SDUs
13		→	UPLINK RLC PDU	SDU 2P, Poll
14			RB RELEASE	Optional step

NOTE 1: The Expected Sequence shown is informative.
The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity.
Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.

7.2.3.18.5 Test requirements

The UE shall return uplink PDUs that contain polls for status in sequence numbers $2 * P - 1$ and $4 * P - 1$. No other PDUs shall poll for status.

CR-Form-v7
CHANGE REQUEST
№ TS 34.123-1 CR 558 № rev - № Current version: 5.4.0 №

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Proposed change affects: UICC apps № ME Radio Access Network Core Network

Title:	№ Correction to 34.123-1 v5.4.0 Package 1 test case (8.4.1.5) – Revision of T1-031080		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 28/07/2003
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 test requirement is not update in accordance with the test sequence and specific message. Revision of T1-031080: Reporting of cell 2's RSCP value is not needed in step 15.
Summary of change:	№ The test requirement has been updated. Revision of T1-031080 has been highlighted in yellow.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.4.1.5										
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;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications № <input type="checkbox"/> Test specifications № <input type="checkbox"/> O&M Specifications № <input type="checkbox"/>	Y	N	X	X	X	X	X	X		
Y	N										
X	X										
X	X										
X	X										
Other comments:	№ Affects R'99, Rel-4 and Rel-5 UEs.										

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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.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)

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 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.

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 transmit 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 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	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Remove no intra-frequency cells
- CHOICE intra-frequency cell removal	2
- New intra-frequency info list	0 dB
- Intra-frequency cell id	Not Present
- Cell info	FALSE
- Cell individual offset	FDD
- Reference time difference to cell	Set to same code as used for cell 2
- Read SFN Indicator	Not Present
- CHOICE mode	FALSE
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	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	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	FALSE
- 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
- 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 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
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	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	
- 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 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 (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	TRUE
- 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	No report
indicator	
- 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	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 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
- Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- 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	14.5dB
- 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	
- CHOICE <i>reported cell</i>	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
- 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 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 ~~45~~14, 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.

CHANGE REQUEST

№ **TS 34.123-1 CR 559** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 Package 3 test case (8.4.1.24) – Revision of T1-031082		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 28/07/2003
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:	№ In Specific Message contents of step 1, Measurement control, Measurement Command is stated as Setup, and the IE Measurement Reporting Mode is said to be Not Present. As a result, the UE will respond with a Measurement Control Failure message. Revision of T1-031082, Measurement reporting mode should not be set to “Not present” since its sub IEs are included.
Summary of change:	№ IE “Measurement Reporting Mode” is included in step 1 with IE “Measurement reporting transfer mode” set to “Acknowledged mode RLC” and IE “Periodic reporting / Event trigger reporting mode” set to “Event Trigger reporting mode”. Revision of T1-031082, “Not present” for IE “Measurement reporting mode” in step 1 has been removed.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.4.1.24						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; 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> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	№	
Y	N						
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	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; 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> </table> Test 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; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; 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> </table> O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	№	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						

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

How to create CRs using this form:

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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.

8.4.1.24 Measurement Control and Report: Inter-frequency measurement for event 2A

8.4.1.24.1 Definition

8.4.1.24.2 Conformance requirement

When event 2a is configured in the UE within a measurement, the UE shall:

- 1> when the measurement is initiated or resumed:
 - 2> store the used frequency in the variable BEST_FREQUENCY_2A_EVENT.
- 1> if equation 1 below has been fulfilled for a time period indicated by "Time to trigger" for a frequency included for that event and which is not stored in the variable BEST_FREQUENCY_2A_EVENT:
 - 2> send a measurement report with IEs set as below:
 - 3> set in "inter-frequency measurement event results":
 - 4> "inter-frequency event identity" to "2a"; and
 - 4> "Frequency info" to the frequency that triggered the event; and
 - 4> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cells parameters ID" of the best primary CCPCH for TDD cells on that frequency, not taking into account the cell individual offset;
 - 3> if a non-used frequency triggered the measurement report:
 - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2, not taking into account the cell individual offset;
 - 3> if the used frequency triggered the measurement report:
 - 4> do not include the IE "Inter-frequency measured results list" in the measurement report;
 - 2> update the variable BEST_FREQUENCY_2A_EVENT with that frequency.

Equation 1:

$$Q_{NotBest} \geq Q_{Best} + H_{2a} / 2$$

The variables in the formula are defined as follows:

$Q_{NotBest}$ is the quality estimate of a frequency not stored the "best frequency" in the variable BEST_FREQUENCY_2A_EVENT.

Q_{Best} is the quality estimate of the frequency stored in "best frequency" in the variable BEST_FREQUENCY_2A_EVENT.

H_{2a} is the hysteresis parameter for the event 2a in that measurement.

Reference

3GPP TS 25.331 clause 14.2.1.1

8.4.1.24.3 Test Purpose

- 1.A To confirm that the UE sends MEASUREMENT REPORT message if event 2A is configured, and if any of the non- used frequencies quality estimate becomes better than the currently used frequency quality estimate.

- 1.B To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if hysteresis condition is not fulfilled.
- 1.C To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if time to trigger condition is not fulfilled.

8.4.1.24.4 Method of test

Initial Condition

System Simulator: 2 cells – The initial configurations of the 2 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.24-1. The table is found in "Test Procedure" clause.

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.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.24-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1", "T2", "T3", "T4" and "T5" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.24-1

Parameter	Unit	Cell 1						Cell 4					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
UTRA RF Channel Number		Ch. 1						Ch. 2					
CPICH Ec	dBm /3.8 4 Mhz	-65	-65	-65	-70	-65	-70	-75	-60	-75	-55	-75	-55

The UE is initially in CELL_DCH state of cell 1. SS commands the UE to perform measurements of transmitted power using MEASUREMENT CONTROL message. This measurement is setup to confirm that while sending MEASUREMENT REPORT message, the UE sets IE "Additional measured results" correctly. If UE requires compressed mode, SS performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS then commands the UE to perform Inter-frequency measurements and report event 2A by sending MEASUREMENT CONTROL message. In MEASUREMENT CONTROL message, IE "Hysteresis" is set to 14.5 dB and IE "Additional measurement list" is set to id of "UE Internal measurements" configured earlier. SS then configures itself according to the values in columns "T1" shown above. Even though quality estimate for Cell 4 has become better than that of Cell 1, event 2A will not be triggered since hysteresis condition is not fulfilled. SS then configures itself according to the values in columns "T2" shown above.

SS sends MEASUREMENT CONTROL message to modify parameter "Hysteresis" of Inter-frequency measurements to 1 dB. SS then configures Cell 1 and Cell 4 according to columns "T3" for short duration (less than 5 seconds), and then configures itself according to columns "T4" shown above. The UE will not send MEASUREMENT REPORT message because time to trigger condition is not fulfilled. SS then configures itself according to the values in columns "T5" shown above. The UE sends MEASUREMENT REPORT message reporting even 2A as well as measurement of transmitted power.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Important Note: Duration between time instant "T3" and "T4" (between steps 9 and 10 of expected sequence) must be less than 5 seconds.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	To setup UE Internal measurement. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2A.
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.24-1.
6				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as hysteresis condition is not fulfilled.
7				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.24-1.
8		←	MEASUREMENT CONTROL	Modify hysteresis parameter for event 2A.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.24-1.
10				SS re-adjusts the downlink transmission power settings according to columns "T4" in table 8.4.1.24-1. This step should be completed within 5 seconds after completing step 9.
11				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as time to trigger condition is not fulfilled.
12				SS re-adjusts the downlink transmission power settings according to columns "T5" in table 8.4.1.24-1.
13		→	MEASUREMENT REPORT	This message should come at least 5 seconds later after changing power setting of Cell 4.
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 Contents

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

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE transmitted power
- Filter Coefficient	4
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE mode	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE report criteria	No reporting
Measurement reporting mode	Not present
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger Reporting Mode
Additional measurements list	Not present
DPCH compressed mode status	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type found in [Annex A clause 9 of TS 34.108](#), 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 <ul style="list-style-type: none"> - Downlink DPCH info common for all RL - Timing Indication - Downlink DPCH power control information - DPC mode - CHOICE Mode - Power offset PPilot-DPDCH - DL rate matching restriction information - Spreading factor - Fixed or flexible position - TFCI existence - Number of bits for Pilot bits (SF=128, 256) - DPCH compressed mode info - TGPSI - TGPS status flag - TGCFN - Transmission gap pattern sequence configuration parameters <ul style="list-style-type: none"> - 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 - TX diversity mode - SSDT information - Default DPCH offset value 	Maintain 0 (Single) FDD 0 Not present Refer to the parameter set in TS 34.108 Flexible TRUE Not present 1 Activate (Current CFN+(256 – TTI/10msec)) mod 256 FDD Measurement Infinity 4 7 Not Present Undefined 3 Not Present Mode 0 Mode 0 UL and DL or DL only or UL only depending on UE capability SF/2 SF/2 or Not present depending on UE capability B 2.0 1.0 Not present Not present Not present Not present None Not present 0

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	Not present
- Inter-frequency cell removal	Not present
- New inter-frequency info list	Id of Cell 4
- Inter-frequency cell id	Frequency of Cell 4
- Frequency Information	Not present
- Cell info	Not present
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	Primary scrambling code of Cell 4
- Primary scrambling code	Not present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	0
- Filter Coefficient	CPICH RSCP
- Frequency quality estimate quantity	FALSE
- Inter-frequency reporting quantity	FALSE
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	FALSE
- 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
- Measurement validity	CELL_DCH state
- Inter-frequency SET UPDATE	On with no reporting
- UE autonomous update mode	Inter-frequency measurement reporting criteria
- CHOICE report criteria	2A
- Parameters required for each events	Not present
- Inter-frequency event identity	0
- Used frequency threshold	14.5 dB
- Used frequency W	5000 mSec
- Hysteresis	Not present
- Time to trigger	-72 dBm
- Reporting cell status	0
- Non-used frequency parameter list	-72 dBm
- Non-used frequency threshold	0
- Non-used frequency W	Acknowledged mode RLC
Measurement reporting mode	Event trigger
- Measurement reporting transfer mode	1
- Periodic reporting / Event trigger reporting mode	Not present
Additional measurement list	
- Measurement identity	
DPCH compressed mode status info	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement identity	2
Measurement command	Modify
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	Not present
- Cell for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Inter-frequency reporting quantity	Not present
- Measurement validity	Not present
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Used frequency threshold	Not present
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non-used frequency parameter list	
- Non-used frequency threshold	-72 dBm
- Non-used frequency W	0
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 13)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present
- UE RX TX report entry list	Check to see if it is absent
Event results	Inter-frequency measurement event results, 2A
- Inter-frequency event identity	
- Cell measurement event results	
- Frequency info	Frequency of Cell 4
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of Cell 4

8.4.1.24.5 Test Requirement

- 1.A In step 13 the UE shall send MEASUREMENT REPORT message indicating event 2A. IE 'Cell measurement event results' in MEASUREMENT REPORT message shall contain frequency information and primary scrambling code of Cell 4.
- 1.B In step 6, the UE shall not send MEASUREMENT REPORT message.
- 1.C In step 11, the UE shall not send MEASUREMENT REPORT message.

CHANGE REQUEST

TS 34.123-1 CR 560 # rev **-** # Current version: **5.4.0**

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:	# Corrections to 34.123-1 v5.4.0 Package 4 test case (8.4.1.12) – Revision of T1-031088		
Source:	# T1		
Work item code:	# TEI	Date:	# 28/7/2003
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:	# <ol style="list-style-type: none"> 1. The choice of compressed mode applicable in step 5 is not consistent with the applicability statement in TS 34.123-2. 2. TGPSI is not configured before step 2. 3. In step 1a, TGPRC is set to 62. Setting it to 'infinity' is a better choice because it is unsure if the repetition of 62 is sufficient to ensure overlap.
Summary of change:	# <ol style="list-style-type: none"> 1. Message content of step 5 has been revised so that the message can be used by UE that supports compressed mode in either "UL only" or "DL only" or "DL and UL". 2. Step 1a and 1b have been added to ensure that the UE receive the compressed mode information before SS requests it to activate compressed mode operation. 3. TGPRC in step 1a have been revised to 'infinity' so as to ensure overlap without having to consider the number of time of pattern repetition required.
Consequences if not approved:	# This test case could fail good UE.

Clauses affected:	#					
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="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications # <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<input checked="" type="checkbox"/>						
<input type="checkbox"/>						

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

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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.

8.4.1.12 Measurement Control and Report: Compressed Mode Configuration Failure during transport channel reconfiguration procedure

8.4.1.12.1 Definition

8.4.1.12.2 Conformance requirement

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> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified below.

When the UE has received from the UTRAN the configurations of several compressed mode transmission gap pattern sequences, and if several of these patterns are to be simultaneously active, the UE shall check to see if these simultaneously active transmission gap pattern sequences create transmission gaps in the same frame. An illegal overlap is created if two or more transmission gap pattern sequences create transmission gaps in the same frame, irrespective of the gaps are created in uplink or downlink.

If the parallel transmission gap pattern sequences create an illegal overlap, the UE shall:

- 1> delete the overlapping transmission gap pattern sequence configuration stored in the variable TGPS_IDENTITY, which is associated with the highest value of IE "TGPSI";
- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the information elements as specified below:
 - 2> not include the IE "RRC transaction identifier";
 - 2> set the cause value in IE "failure cause" to value "compressed mode runtime error".
- 1> terminate the inter-frequency and/or inter-RAT measurements corresponding to the deleted transmission gap pattern sequence;
- 1> when the PHYSICAL CHANNEL RECONFIGURATION FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.15

8.4.1.12.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a TRANSPORT CHANNEL RECONFIGURATION message which includes IE "DPCH compressed mode info" that causes an illegal overlap involving more than one parallel transmission gap pattern sequences.
2. To confirm that the UE terminate any measurements corresponding to the deleted transmission gap pattern sequence.

8.4.1.12.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) as specified in TS34.108 clause 7.4, depending on the CN domain supported.

Test Procedure

For this test case, the downlink transmission power settings shall follow that specified in table 8.4.1.11-1 in clause 8.4.1.11.4.

The UE is in the CELL_DCH state in cell 1. [SS sends PHYSICAL CHANNEL RECONFIGURATION message to request UE to store compressed mode pattern. UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.](#) SS sends a MEASUREMENT CONTROL message on the downlink DCCH to request the UE to start inter-frequency measurement for cell 4's CPICH Ec/No value, and also to report the UTRA RSSI in the UARFCN in which cell 4 resides. Simultaneously, the stored transmission gap pattern sequence configuration associated with TGPSI=1 is indicated to be activated in this message. The UE shall transmit MEASUREMENT REPORT messages periodically at 16 seconds interval to report the RSSI value of UTRA carrier in which cell 4 resides. Next, SS sends a second MEASUREMENT CONTROL message. In this message, a new measurement task is to be established for the measurement and reporting of "GSM carrier RSSI" on a periodic basis. A deactivated transmission pattern gap sequence configuration (with TGPSI=2) is associated with this new measurement task.

The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message and commands the activation of transmission gap pattern sequence with TGPSI=2. The UE then shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM-RLC. In this message, the value of IE "failure cause" shall be set to "compressed mode runtime error". The UE shall terminate all inter-RAT measurement tasks associated with TGPSI=2. The UE shall continue to send MEASUREMENT REPORT messages to report the UTRA RSSI in the UARFCN in which cell 4 resides.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state.
1a		←	PHYSICAL CHANNEL RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=1
1b		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
2		←	MEASUREMENT CONTROL	SS starts inter-frequency measurements for cell 4's CPICH Ec/No using transmission gap pattern sequence with TGPSI=1. Report the UTRA RSSI in the UARFCN in which cell 4 resides.
3		→	MEASUREMENT REPORT	UE reports UTRA RSSI for the UARFCN of cell 4 periodically.
4		←	MEASUREMENT CONTROL	SS assigns inter-RAT measurements for "GSM carrier RSSI". This measurement task is associated with transmission gap pattern sequence with TGPSI=2. The IE "TGPS status flag" is set to "Deactivate".
5		←	TRANSPORT CHANNEL RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=2 and activates it simultaneously
6				UE shall delete transmission gap pattern sequence configuration associated with TGPSI=2.
7		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	IE "Failure cause" shall be set to "Compressed mode runtime error"
8		→	MEASUREMENT REPORT	The contents shall be the same as that in step 3.

Specific Message Contents

[PHYSICAL CHANNEL RECONFIGURATION \(Step 1a\)](#)

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

<u>Information Element</u>	<u>Value/remark</u>
- DPCH compressed mode info	<u>1</u>
- TGPSI	<u>deactivate</u>
- TGPS Status Flag	<u>Not Present</u>
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	<u>FDD measurement</u>
- TGPRC	<u>Infinity</u>
- TGSN	<u>4</u>
- TGL1	<u>7</u>
- TGL2	<u>undefined</u>
- TGD	<u>undefined</u>
- TGPL1	<u>3</u>
- TGPL2	<u>undefined</u>
- RPP	<u>Mode 0</u>
- ITP	<u>Mode 0</u>
- CHOICE UL/DL Mode	<u>"UL and DL" or "UL only" or "DL only"</u>
- Downlink compressed mode method	<u>SF/2 (this IE is present only if IE "CHOICE UL/DL Mode" is not set to "UL only")</u>
- Uplink compressed mode method	<u>SF/2 (this IE is present only if IE "CHOICE UL/DL Mode" is not set to "DL only")</u>
- Downlink frame type	<u>B</u>
- DeltaSIR1	<u>2.0</u>
- DeltaSIRafter1	<u>1.0</u>
- DeltaSIR2	<u>Not Present</u>
- DeltaSIRafter2	<u>Not Present</u>
- N identify abort	<u>Not Present</u>
- T Reconfirm abort	<u>Not Present</u>

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Step 1b)

Check that this message is similar to the same message type found in clause 9 of TS 34.108.

MEASUREMENT CONTROL (Step 2)

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	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	0-chips 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	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Set to same code as used for cell 4
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	FALSE
- Cells for measurement	4
- Inter-frequency cell id	Inter-frequency reporting criteria
- Inter-frequency measurement quantity	0
- CHOICE reporting criteria	CPICH Ec/No
- Filter Coefficient	Inter-frequency reporting quantity
- Measurement quantity for frequency quality estimate	TRUE
- Inter-frequency reporting quantity	FALSE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	FALSE
- 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 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 reported cell	2
- Maximum number of reported cells	Not present
- Measurement validity	Not present
- Inter-frequency set update	Periodic reporting criteria
- CHOICE report criteria	Infinity
- Amount of reporting	16 seconds
- Reporting interval	(Current CFN+(256 – TTI/10msec)) mod 256
DPCH compressed mode status info	1
- TGPS reconfiguration CFN	Activate
- Transmission gap pattern sequence	(Current CFN+(256 – TTI/10msec)) mod 256
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
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 present
- Inter-frequency cell measurement results	
- 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 absent
- 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

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- 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	7
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
- 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	
CHOICE system	GSM
- Observed time difference to to GSM cell	FALSE
reporting indicator	
- 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	2
- TGPS status flag	Deactivate
- TGCFN	Not present

TRANSPORT CHANNEL RECONFIGURATION (Step 5)

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

Information Element	Value/remark
- DPCH compressed mode info	2
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	undefined
- TGPL1	3
- TGPL2	5
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	“UL and DL” or “UL only” or “DL only”
- Downlink compressed mode method	SF/2 (this IE is present only if IE “CHOICE UL/DL Mode” is not set to “UL only”
- Uplink compressed mode method	SF/2 (this IE is present only if IE “CHOICE UL/DL Mode” is not set to “DL only”
- 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

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 7)

Information Element	Value/remark
Failure cause	Checked to see if set to "compressed mode runtime error"
- Protocol error information	Checked to see if it is absent
- Deleted TGPSI	Checked to see if it is set to "2"

8.4.1.12.5 Test requirement

[After step 1a, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.](#)

[After step 2, UE shall transmit MEASUREMENT REPORT message according to the MEASUREMENT CONTROL message in step 2.](#)

After step 6 the UE shall keep transmission gap pattern sequence configuration associated with TGPSI=1. It shall delete the transmission gap pattern sequence configuration associated with TGPSI=2, and delete the inter-RAT measurements corresponding to it. It shall transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH, with the IE "Failure cause" set to "Compressed mode runtime error".

After step 7 the UE shall continue to send MEASUREMENT REPORT messages periodically, to report the UTRA RSSI value for the UARFCN in which cell 4 resides. The, MEASUREMENT REPORT messages sent by the UE shall not contain CPICH RSCP readings for cell 4.

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 561 ⌘ rev - ⌘ Current version: 5.4.0 ⌘	

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] Package 4 RRC test cases: 8.1.3.5 RRC Connection Release in CELL_FACH state: Invalid message 8.3.1.15 Cell Update: Unrecoverable error in Acknowledged Mode RLC SRB (Revision of T1-031102 merging Panasonic CRs T1-031083 and T1-031087)		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 29/07/03
Category:	⌘ F	Release:	⌘ REL-5

Reason for change:	⌘ 8.1.3.5 When the RRC connection is released the UE will move to idle state not CELL_FACH state and therefore it is not correct to use generic procedure C.2 to check this. The specific message contents for the RRC CONNECTION RELEASE and RRC CONNECTION RELEASE COMPLETE messages are mis-leading / incorrect. 8.3.1.15 At the RRC level the timer T304 is set to 2 secs and the counter V304 is set to 2 i.e. there will be 2 re-transmissions of the UE CAPABILITY INFORMATION PDU. The RLC default values for timer poll (200 ms), maxDAT (dat15) and RESET PDU timer (500 ms) mean that it will take (15*200 + 500) ms = 3.5 secs for the RLC to report an unrecoverable error. As this interval is greater than the RRC re-transmission timer of 2 secs, the next PDU will be transmitted and, as the window size is greater than 1, all re-transmissions will be of this new PDU. This scenario will be repeated for the next re-transmission of the UE CAPABILITY INFORMATION and when T304 expires for this last RRC re-transmission, a 'RL Failure' will be reported by RRC in the CELL UPDATE message rather than the required 'RLC unrecoverable error'.
Summary of change:	⌘ 8.1.3.5 The generic procedure called at the end of the test case is changed to C.1 rather than C.2 i.e. it is a check for UE IDLE mode. The specific message contents for the RRC CONNECTION RELEASE and RRC CONNECTION RELEASE COMPLETE are corrected.

8.3.1.15

The maxDAT value is updated to 4 (dat4) in Specific Message Contents for the RRC CONNECTION SETUP.

Consequences if not approved: ⌘ The UE will not behave in the expected manner.

Clauses affected: ⌘ 8.1.3.5, 8.3.1.15.

	Y	N		
Other specs Affected:	⌘	X	Other core specifications	⌘
		X	Test specifications	
		X	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

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 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.

Test Procedure

The UE is initially in CELL FACH state. Then SS transmits an 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 message on the uplink DCCH, which includes the IE "~~Protocol Error Information~~ Error indication". This IE shall contain the "Protocol error information" IE which in turn contains the IE "Protocol error cause" ~~is~~ set to "Message extension not comprehended". Upon completion of the procedure, the SS calls for generic procedure C.12 to check that UE is in CELL_FACH_IDLE state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3			Void	
4			Void	
5			Void	
6			Void	
7			Void	
8		←	RRC CONNECTION RELEASE	See specific message contents for this message
9		→	RRC CONNECTION RELEASE COMPLETE	<u>See specific message contents for this message</u> The IE "Protocol error cause" found in IE "Protocol error information" shall be set to "Message extension not comprehended". This message is sent using acknowledged mode.
10			Void	
11			Void	
12			Void	
13		↔	CALL C.12	If the test result of C.21 indicates that UE is in <u>CELL_FACH_IDLE</u> state, the test passes, otherwise it fails.

Specific Message Contents

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
Critical extensions	'01'

This message must be recognised by the UE as an RRC CONNECTION RELEASE message. However, it shall be constructed (see TS 25.331 clause 10.1.1) such that the UE will detect critical extensions not defined for the protocol release supported by the UE:

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	<u>Arbitrarily selects an integer between 0 and 3</u>
<u>Integrity check info</u>	<u>SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.</u>
<u>- Message authentication code</u>	<u>SS provides the value of this IE, from its internal counter.</u>
<u>- RRC Message sequence number</u>	<u>'01'H</u>
<u>Critical extensions</u>	

RRC CONNECTION RELEASE COMPLETE (Step 9)

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

<u>Information Element</u>	<u>Value/remark</u>
<u>Protocol error information</u>	
<u>- Protocol error cause</u>	<u>Message extension not comprehended</u>
<u>Information Element</u>	<u>Value/remark</u>
<u>Error indication</u>	<u>'Protocol error'</u>
<u>- Failure cause</u>	<u>Protocol error cause</u>
<u>- Protocol error information</u>	<u>Check to see if set to 'Message extension not comprehended'</u>
<u>- CHOICE diagnostics type</u>	
<u>- Protocol error cause</u>	

8.1.3.5.5 Test requirement

After step 8 the UE shall transmit an RRC CONNECTION RELEASE COMPLETE message which includes the appropriate cause values in IE "Protocol error information".

After step 12 the UE shall be in **CELL_FACH**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

[The RRC CONNECTION SETUP message used in the initial setup should be as shown under Specific Message Contents below.](#)

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.

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 any of the AM PDUs carrying the UE CAPABILITY INFORMATION message. The UE shall re-transmit these 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.
5		→	CELL UPDATE	UE shall send this message on CCCH within a maximum time of 5 seconds after the first RESET PDU is sent. 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

[RRC CONNECTION SETUP \(message used in the initial setup\)](#)

[Use the same message type found in clause 9 of TS 34.108 with the following exception:](#)

<u>Information Element</u>	<u>Value/remark</u>
<u>Signalling RB information to setup</u>	<u>(UM DCCH for RRC)</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>UM RLC</u>
- <u>Transmission RLC discard</u>	<u>Not Present</u>
- <u>CHOICE Downlink RLC mode</u>	<u>UM RLC</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>1</u>
- <u>CHOICE RLC size list</u>	<u>Configured</u>
- <u>MAC logical channel priority</u>	<u>1</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>1</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>1</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>1</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>1</u>
<u>Signalling RB information to setup</u>	<u>(AM DCCH for RRC)</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>4</u>
- <u>Transmission window size</u>	<u>32</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>200</u>
- <u>Timer_poll</u>	<u>200</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>32</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>Information Element</u>	<u>Value/remark</u>
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configure
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS DT High priority)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	4
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- 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	32
- 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	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	Configured
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1

<u>Information Element</u>	<u>Value/remark</u>
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS DT Low priority)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	4
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- 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	32
- 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	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	Configured
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4

Information Element	Value/remark
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4

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".

CR-Form-v7
CHANGE REQUEST
TS 34.123-1 CR 562 # rev - # Current version: 5.4.0

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:	#	Corrections to 34.123-1 v5.4.0 Package 2 test cases (8.3.1.21 and 8.3.1.22) – Revision of T1-031081
Source:	#	T1
Work item code:	#	TEI
		Date: # 29/7/2003
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 .
		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 initial conditions for cell selection test cases 8.3.1.21 and 8.3.1.22 are said to be CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4). But the UE (in general NAS state) is not in a stable state. It might have transmitted Service Request/Paging Response and waiting for response/further signaling. As these test cases do take considerable time (for example 8.3.1.21 to confirm that UE does not send Cell update in cell 3, we need to wait considerable amount of time), UE NAS timers may expire, and result in undesired signaling (like retransmission of Service request or Signaling connection release). Revision of T1-031081, In SIB3/4, Qrxlevmin is set to '-81dBm' and the power levels used in TC 8.3.1.21 and 8.3.1.22 are consider to be low and in some cases the cells may be undetectable if SS and UE tolerances are to be considered.
Summary of change:	#	The initial conditions of these test cases are changed to: PS-DCCH+DTCH_FACH. Test requirements are revised to clearly define the expected behaviour of the UE. The revision of T1-031081 has been highlighted in yellow. The power levels in table 8.3.1.21 and 8.3.1.22 are adjusted.
Consequences if not approved:	#	This test case could fail good UE.

Clauses affected:	#	8.3.1.21 and 8.3.1.22
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Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X	Other core specifications	⌘	TS 34.123-2
	Y	N							
		X							
	<table border="1"><tr><td>X</td><td></td></tr></table>	X		Test specifications					
X									
	<table border="1"><tr><td></td><td>X</td></tr></table>		X	O&M Specifications					
	X								
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.

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~~ PS-DCCH+DTCH_FACH (state 6-411) 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	-7360	-7972	-7972	Cell 2 is switched off	-7360	-7966	Cell 3 is switched off	Cell 3 is switched off	-7360
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.

- ~~a) At T0, the SS activates Cell 1.~~
- ~~a~~b) At T1, the SS activates Cell 2, and monitors Cell 2 for received messages from UE.
- ~~b~~e) UE re-selects to Cell 2, and sends a CELL UPDATE. The SS shall reply with CELL UPDATE CONFIRM message on downlink DCCH.
- ~~c~~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				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	'1010 1010 1010 1010'
- URA identity	Not present

8.3.1.21.5 Test requirement

[After step 1,](#) the UE shall send a CELL UPDATE at T1.

[After step 4, the UE shall](#) ~~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: PS-DCCH+DTCH_FACH~~CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-411)~~ 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	-7360	-7972	Cell 2 is switched off	-7360
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 on CCCH.
- 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	This message is sent on CCCH. The value "Normal event" is set in IE "Release cause"
3			Void	
4		→	RRC CONNECTION REQUEST	The value "Registration" is set in IE "Establishment cause"
5		←	RRC CONNECTION SETUP	Transits the UE to CELL_FACH state.
6		→	RRC CONNECTION SETUP COMPLETE	
7		→	INITIAL DIRECT TRANSFER	Includes MM message LOCATION UPDATING REQUEST, or GMM message ATTACH REQUEST.
8		←	DOWNLINK DIRECT TRANSFER	Includes MM message LOCATION UPDATING REJECT, or GMM message ATTACH with reject cause "Roaming not allowed in this location area"
9		←	RRC CONNECTION RELEASE	This message is sent on. 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	Transits the UE to CELL_FACH state.
13		→	RRC CONNECTION SETUP COMPLETE	
14		→	INITIAL DIRECT TRANSFER	Includes MM message LOCATION UPDATING REQUEST, or GMM message ATTACH REQUEST.
15		←	DOWNLINK DIRECT TRANSFER	Includes MM message LOCATION UPDATING ACCEPT, or GMM message ATTACH 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 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

In step 1, the UE shall send a CELL UPDATE in Cell 2 at T1 ~~and~~ attempt Location registration in Cell 2.

After step 2, the UE shall transmit RRC CONNECTION REQUEST message.

After step 5, the UE shall transmit RRC CONNECTION SETUP COMPLETE message, followed by an INITIAL DIRECT TRANSFER message

~~but,~~ Since the location registration is rejected in Cell 2, UE shall transmit RRC CONNECTION RELEASE COMPLETE message after receiving RRC CONNECTION RELEASE message from SS. UE shall not send any more messages in Cell 2.

After step 9, the UE shall transmit RRC CONNECTION REQUEST message in cell 1.

After step 12, the UE shall transmit RRC CONNECTION SETUP COMPLETE message followed by INITIAL DIRECT TRANSFER message.

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 563 ⌘ rev - ⌘ Current version: 5.4.0 ⌘	

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] Low priority GMM test cases: 12.2.2.8 Combined PS attach / abnormal cases / attempt counter check / miscellaneous reject causes; 12.3.2.4 PS detach / re-attach requested / accepted; 12.9.9 Service Request / Abnormal cases / Routing area update procedure is triggered (Revision of T1-031076 following comments from Motorola and Sony EMP)		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 30/07/03
Category:	⌘ F	Release:	⌘ REL-5

Reason for change:	⌘ 12.2.2.8
	After the repeated ATTACH REQUEST attempts on expiry of timer T3311, only a single further ATTACH REQUEST is issued on expiry of timer T3302. Typographical errors in Test Requirement
	12.3.2.4
	When a UE issues a DETACH REQUEST ('re-attach required' without a GMM cause code specified) – step 7 - whilst it is PS/IMSI detached the UE will remain IMSI attached and will only need to 'GPRS attach' subsequently. The stated conformance requirement is incomplete.
	12.9.9
	Step 6a is not specific about the type of upper layer service that will be requested by MMI or AT command. As a result the later behaviour of the UE at steps 13/14 cannot be predicted with certainty.
	At step 8 the conditions of cell A must be changed to that of a "non-suitable cell" in order to force a change to cell B and the required routing area update. As no P-TMSI signature has been received by the UE from the network in ATTACH ACCEPT or ROUTING AREA UPDATE ACCEPT messages prior to the

	ROUTING AREA UPDATE REQUEST in step 10, no P-TMSI signature should be included.
	The Test Method description contains some inaccuracies and typographical errors.
Summary of change:	<p>⌘ 12.2.2.8</p> <p>The redundant ATTACH REQUEST attempt at step 21a is deleted.</p> <p>Correct typographical errors in Test Requirement.</p> <p>12.3.2.4</p> <p>At step 7 it is specified that GMM cause code should be omitted from the Detach Request.</p> <p>At step 9 the attach type in the ATTACH REQUEST message is modified to allow either 'Combined PS/IMSI attach' or 'GPRS attach while IMSI attached' (Note: It is accepted in CN that the Core Spec is unclear on this matter and either Attach Type should be allowed).</p> <p>The reference to TS 24.008 is updated and the relevant extracts from the document are inserted.</p> <p>12.9.9</p> <p>At step 6a explicitly require that an Activate PDP Context Request be initiated. As a result we can predict that the UE will automatically re-send the Service Request message at Step 14 without the need for further MMI or AT command intervention (at step 13). Note: The UE must re-try the Activate PDP Context Request when T3380 expires.</p> <p>At step 8 change the conditions of cell A to that of a "non-suitable cell" in order to force a change to cell B. Add a new step 10a, after the start of the Routing Area Update procedure, to change the conditions of cell A to that of a "Suitable neighbour cell" and the conditions of cell B to that of a "Serving cell".</p> <p>The reference to the P-TMSI 2 signature in the ROUTING AREA UPDATE REQUEST message at step 10 is deleted.</p> <p>Correct the Test Method description inaccuracies and typographical errors.</p>
Consequences if not approved:	⌘ The UE will not behave in the expected manner.

Clauses affected:	⌘ 12.2.2.8, 12.3.2.4, 12.9.9								
Other specs Affected:	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </tbody> </table> <p>Other core specifications ⌘</p> <p>Test specifications</p> <p>O&M Specifications</p>	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

12.2.2.8 Combined PS attach / abnormal cases / attempt counter check / miscellaneous reject causes

12.2.2.8.1 Definition

12.2.2.8.2 Conformance requirement

- 1) When a combined PS attach procedure is rejected with the attempt counter less than five, the User Equipment shall repeat the combined PS attach procedure after T3311 timeout.
- 2) When a combined PS attach procedure is rejected with the attempt counter five, the User Equipment shall delete the stored TMSI, LAI, CKSN, P-TMSI, P-TMSI signature, PS CKSN and RAI and start T3302.
- 3) When the T3302 expire, a new combined PS attach procedure shall be initiated.

GMM cause codes that can be selected are:

'IMSI unknown in HLR'

'UE identity cannot be derived by the network'

'Network failure'

'Congestion'

'retry upon entry into a new cell'

'Semantically incorrect message'

'Invalid mandatory information'

'Message type non-existent or not implemented'

'Message type not compatible with the protocol state'

'Information element non-existent or not implemented'

'Conditional IE error'

'Message not compatible with the protocol state'

'Protocol error, unspecified'

Reference

3GPP TS 24.008 clause 4.7.3.2.

12.2.2.8.3 Test purpose

To test the behaviour of the UE with respect to the attempt counter.

12.2.2.8.4 Method of test

Initial condition

System Simulator:

One cell operating in network operation mode I.

User Equipment:

The UE has a valid TMSI, P-TMSI and RAI.

Related ICS/IXIT statements

Support of PS service Yes/No

UE operation mode A Yes/No Automatic PS attach procedure at switch on or power on Yes/No

Switch off on button Yes/No

Test procedure

The UE initiates a combined PS attach procedure (attempt counter zero).

The SS rejects the attach with an arbitrarily chosen cause code.

The UE initiates a new combined PS attach procedure (attempt counter one) after T3311 expires.

The SS rejects the attach with an arbitrarily chosen cause code.

The UE initiates a new combined PS attach procedure (attempt counter two) after T3311 expires.

The SS rejects the attach with an arbitrarily chosen cause code.

The UE initiates a new combined PS attach procedure (attempt counter three) after T3311 expires.

The SS rejects the attach with an arbitrarily chosen cause code.

The UE initiates a new combined PS attach procedure (attempt counter four) after T3311 expires.

The SS rejects the attach with an arbitrarily chosen cause code.

The UE shall not perform a new successful attach procedure after 15 seconds.

The UE initiates a combined PS attach procedure with attempt counter zero after T3302 expires without P-TMSI, P-TMSI signature, PS CKSN and RAI.

T3302; set to 10 minutes.

T3311; 15 seconds.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The UE is set in UE operation mode A (see ICS).
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
3	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
4	<-		ATTACH REJECT	Arbitrarily chosen GMM cause T3302 with value 10 min.
5	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
6	SS			The SS verifies that the time between the attach reject and attach request is T3311
7	<-		ATTACH REJECT	Arbitrarily chosen GMM cause T3302 with value 10 min.
8	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
9	SS			The SS verifies that the time between the attach reject and attach request is T3311
10	<-		ATTACH REJECT	Arbitrarily chosen GMM cause T3302 with value 10 min.
11	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
12	SS			The SS verifies that the time between the attach reject and attach request is T3311
13	<-		ATTACH REJECT	Arbitrarily chosen GMM cause T3302 with value 10 min.
14	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
15	SS			The SS verifies that the time between the attach reject and attach request is T3311
16	<-		ATTACH REJECT	Arbitrarily chosen GMM cause T3302 with value 10 min.
17	UE		Registration on CS	See TS 34.108
(optional step)				This is applied only for UE in UE operation mode A. Location Update Procedure may be initiated from the UE.
20	<-		PAGING TYPE1	Parameter mobile identity is IMSI. Paging order is for PS services. Mobile identity = P-TMSI-1
21	UE			No response from the UE to the request. This is checked for 10seconds.
21a	->		ATTACH REQUEST Void	Attach type = 'Combined PS/IMSI attach' or 'PS attach while IMSI attached' Mobile identity = IMSI TMSI status = no valid TMSI available
22	SS			The SS verifies that the UE does not attempt to attach for T3302 .
23	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' 'PS attach while IMSI attached' Mobile identity = IMSI TMSI status = no valid TMSI available
23a	<-		AUTHENTICATION AND CIPHERING REQUEST	
23b	->		AUTHENTICATION AND CIPHERING RESPONSE	
23c	SS			The SS starts integrity protection.

Step	Direction		Message	Comments
	UE	SS		
24		<-	ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity P-TMSI-1 P-TMSI signature Mobile identity = TMSI-1 Routing area identity = RAI-1
25		->	ATTACH COMPLETE	
26		<-	PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services..
27		->	RRC CONNECTION REQUEST	
28		<-	RRC CONNECTION SETUP	
29		->	RRC CONNECTION SETUP COMPLETE	
30		->	PAGING RESPONSE	Mobile identity = TMSI-1
31		<-	RRC CONNECTION RELEASE	After sending of this message, the SS waits for disconnection of the CS signalling link.
32		->	RRC CONNECTION RELEASE COMPLETE	
33		<-	PAGING TYPE1	Mobile identity = P-TMSI-1
33a		->	RRC CONNECTION REQUEST	
33b		<-	RRC CONNECTION SETUP	
33c		->	RRC CONNECTION SETUP COMPLETE	
34		->	SERVICE REQUEST	Service type = "paging response"
34a		<-	RRC CONNECTION RELEASE	
34b		->	RRC CONNECTION RELEASE COMPLETE	
35	UE			The UE is switched off or power is removed (see ICS).
36		->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, combined PS / IMSI detach'
37		SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.

Specific message contents

None.

12.2.2.8.5 Test requirements

At step3, when the UE is powered up or switched on, UE shall:

- initiate the combined PS attach procedure with the information elements specified in the above Expected Sequence.

UE shall perform the following actions depending on the conditions described below.

Case1) A combined PS attach procedure is rejected with the attempt counter less than five

At ~~step6~~ [step 5, 98, 42-11](#) and [4514](#), when the timer T3311 timeout has occurred, UE shall:

- repeat the combined [d](#) PS attach procedure.

Case2) A combined PS attach procedure is rejected with the attempt counter five

At step21, when the UE receives the paging message for PS domain, UE shall:

- not respond to the paging message for PS domain.

Case3) The T3302 expires

At step23, UE shall:

- re-initiate the new combined PS attach procedure.

At step30, when the UE receives the paging message for CS domain, UE shall:

- respond to the paging message for CS domain by sending the PAGING RESPONSE message.

At step34, when the UE receives the paging message for PS domain, UE shall:

- respond to the paging message for PS domain by sending the SERVICE REQUEST message.

.....

12.3.2.4 PS detach / re-attach requested / accepted

12.3.2.4.1 Definition

12.3.2.4.2 Conformance requirement

~~The UE shall deactivate the logical link and re-activate it.~~

When receiving the DETACH REQUEST message and the detach type IE indicates "re-attach required", the UE shall deactivate the PDP contexts and deactivate the logical link(s), if any. The UE shall then send a DETACH ACCEPT message to the network and shall change state to GMM-DEREGISTERED. The UE shall, after the completion of the GPRS detach procedure, initiate a GPRS attach procedure. The UE should also activate PDP context(s) to replace any previously active PDP contexts.

.....

A GPRS UE operating in UE operation mode A or B in network operation mode I, which receives an DETACH REQUEST message with detach type indicating "re-attach required" or "re-attach not required" and no cause code, is only detached for GPRS services in the network.

Reference

3GPP TS 24.008 clause ~~4.7.4.2.1~~, [4.7.4.2.2](#)

12.3.2.4.3 Test purpose

To test the behaviour of the UE for the detach procedure in case automatic re-attach.

12.3.2.4.4 Method of test

Initial condition

System Simulator:

One cell in operating in network operation mode I.

User Equipment:

The UE has a valid TMSI, P-TMSI and RAI.

Related ICS/IXIT statements

Support of PS service	Yes/No
UE operation mode A	Yes/No
Switch off on button	Yes/No
Automatic PS attach procedure at switch on or power on	Yes/No

Test procedure

The UE performs a combined PS attach procedure (for PS and non-PS services).

The SS sends a DETACH REQUEST message to the UE with cause re-attach. The UE then detaches for PS services. The UE automatically performs a new combined PS attach procedure with Attach Type "GPRS attach while IMSI attached" (for PS ~~and non-PS~~ services) and PS and CS services are again possible.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		The UE is set in UE operation mode A (see ICS).
2		UE		The UE is powered up or switched on and initiates an attach (see ICS).
3		->	ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
3a		<-	AUTHENTICATION AND CIPHERING REQUEST	
3b		->	AUTHENTICATION AND CIPHERING RESPONSE	
3c		SS		The SS starts integrity protection.
4		<-	ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = TMSI-1 Routing area identity = RAI-1 No new P-TMSI and P-TMSI signature assigned
5		->	ATTACH COMPLETE	
6		SS		The SS initiates a detach with re-attach.
7		<-	DETACH REQUEST	Detach type = 're-attach required', GMM cause omitted
8		->	DETACH ACCEPT	
9		->	ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' or 'GPRS attach while IMSI attached' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
10		<-	ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = TMSI-1 Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-1
11		->	ATTACH COMPLETE	
12		<-	PAGING TYPE1	Mobile identity = P-TMSI-2 Paging order is for PS services.
12a		->	RRC CONNECTION REQUEST	
12b		<-	RRC CONNECTION SETUP	
12c		->	RRC CONNECTION SETUP COMPLETE	
13		->	SERVICE REQUEST	service type = "paging response"
13a		<-	RRC CONNECTION RELEASE	
13b		->	RRC CONNECTION RELEASE COMPLETE	
14		<-	PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services.
15		->	RRC CONNECTION REQUEST	
16		<-	RRC CONNECTION SETUP	
17		->	RRC CONNECTION SETUP COMPLETE	
18		->	PAGING RESPONSE	Mobile identity = TMSI-1
19		<-	RRC CONNECTION RELEASE	After sending of this message, the SS waits for disconnection of the CS signalling link.
20		->	RRC CONNECTION RELEASE COMPLETE	
21		UE		The UE is switched off or power is removed (see ICS).
22		->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, combined PS / IMSI detach'
23		SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.

Specific message contents

None.

12.3.2.4.5 Test requirements

At step3, when the UE is powered up or switched on, UE shall:

- initiate the combined PS attach procedure with the information elements specified in the above Expected Sequence.

At step8, when the UE receives DETACH REQUEST message with Detach type = 're-attach required', UE shall;

- send DETACH ACCEPT message to SS.

At step9, after UE completed PS detach procedure with Detach type = 're-attach required', UE shall:

- initiate the combined PS attach procedure [with an Attach Type of either 'Combined PS / IMSI attach' or 'GPRS attach while IMSI attached'](#).

At step13, when the UE receives the paging message for PS domain, UE shall;

- respond to the paging message for PS domain by sending the SERVICE REQUEST message.

At step18, when the UE receives the paging message for CS domain, UE shall:

- respond to the paging message for CS domain by sending the PAGING RESPONSE message.

.....

12.9.9 Service Request / Abnormal cases / Routing area update procedure is triggered

12.9.9.1 Definition

12.9.9.2 Conformance requirement

If a cell change into a new routing area occurs and the necessity of routing area update procedure is determined before the security mode control procedure is completed, the UE shall:

- abort Service request procedure.
- start routing area update procedure immediately.

Reference

TS 24.008 clause 4.7.13.5

12.9.9.3 Test purpose

To test the behavior of the UE in case of collision between Routing area update procedure and Service request procedure.

12.9.9.4 Method of test

Initial condition

System Simulator:

Two cells, cell A in MCC1/MNC1/LAC1/RAC1 (RAI-1), cell B in MCC1/MNC1/LAC1/RAC2 (RAI-4). Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid P-TMSI-1 and RAI-1.

Related ICS/IXIT statements

Support of PS service Yes/No

UE operation mode A Yes/No

UE operation mode C Yes/No

Switch off on button Yes/No

Test procedure

- a) The UE sends a SERVICE REQUEST message to the SS in order to establish the PS signalling connection for the upper layer signalling in cell A.
- b) The ~~UE initiates the routing area update procedure~~ SS changes the conditions of cell A so that it is no longer a suitable "Serving cell".
- c) ~~e~~ The UE aborts Service request procedure and performs Routing area updating procedure with cell B.
- d) The UE re-sends the SERVICE REQUEST message to the SS in order to establish the PS signalling connection for the upper layer signalling, this time in cell B

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The following messages are sent and shall be received on cell A. The UE is set in UE operation mode C (see ICS).
2	SS			The SS is set in network operation mode II. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
3	UE			The UE is powered up or switched on and initiates an attach (see ICS). Cell A is preferred by the UE.
4	->		ATTACH REQUEST	Attach type = 'PS attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
4a	<-		AUTHENTICATION AND CIPHERING REQUEST	
4b	->		AUTHENTICATION AND CIPHERING RESPONSE	
4c	SS			The SS starts ciphering and integrity protection.
5	<-		ATTACH ACCEPT	No new mobile identity assigned. P-TMSI and P-TMSI signature not included. Routing area identity = RAI-1 Attach result = 'PS only attached'
6			Void	
6a	UE			The UE initiates an upper-layer signalling, e.g., Activate PDP Context request, by MMI or by AT command.
7	->		SERVICE REQUEST	Service type = "signalling"
8	SS			Activate cell B with a lower signal strength than cell A. The RF level of cell A is lowered until cell B is preferred by the UE <u>the level corresponds to that of a "Non-suitable cell"</u> . Note: the SS <u>does not initiate the security mode control procedure</u> .
9	UE			The UE aborts Service request procedure.
				Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
10	->		ROUTING AREA UPDATE REQUEST	The following message are sent and shall be received on cell B. Update type = 'RA updating' P-TMSI-2 signature
11	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4
12	->		ROUTING AREA UPDATE COMPLETE	
13	UE			The UE initiates an upper-layer signalling, e.g., Activate PDP Context request, <u>either automatically or</u> by MMI or by AT command.
14	->		SERVICE REQUEST	Service type = "signalling"
15	<-		AUTHENTICATION AND CIPHERING REQUEST	
16	->		AUTHENTICATION AND CIPHERING RESPONSE	
17	SS			The SS initiates a security mode control procedure.
18	SS			After the security mode control procedure is completed, the SS releases RRC connection.
19	UE			The UE is switched off or power is removed (see ICS).

20	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
21	SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have <u>has</u> been received within 1 second then the SS shall consider the UE as switched off.
NOTE: The definitions for "Suitable neighbour cell", " <u>Non-suitable cell</u> " and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

None.

12.9.9.5 Test requirements

At step3, when the UE is powered on or switched on, UE shall:

- initiate the PS attach procedure with information elements specified in the above Expected Sequence .

At step7, UE shall:

- perform the service request procedure.

At steps 9 and 10, ~~when the routing area update procedure is initiated~~ after the SS sets the cell type of cell A to "Non-suitable cell" before the security mode control procedure is completed, UE shall;

- abort ~~a~~ the Service request procedure
- perform the routing area updating procedure.

At step14, after the UE completes the routing area updating procedure, UE shall;

- restart the Service Request procedure.

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 1 August 2003

Tdoc # T1-031200

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 564 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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 GCF package 1 RLC testcases 7.2.3.19 and 7.2.3.24
Source:	⌘ T1
Work item code:	Date: ⌘ 30/07/2003
Category:	⌘ F Release: ⌘ Rel-5
<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p><i>Use <u>one</u> of the following releases:</i></p> <p>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)</p>	

Reason for change:	<p>⌘ A. This CR handles the following type of situation:</p> <p>The PDUs exchange in RLC test caes is dimensioned in such a way that as long as times related to Timer Poll or STATUS poll procedures there are PDUs going back and forth</p> <p>The underlying assumption was that sending is performed in every TTI, an assumption which turned out to be unrealistic with the consequence that the exchange of PDUs takes longer than originally expected.</p> <p>This implies that the Timer Poll or STATUS poll procedures are continued even after the actual test purpose has been reached.</p> <p>The TTCN test cases have been designed to wait in fact until all PDUs have been exchanged, allowing as a consequence that the Timer Poll or STATUS poll procedures continue running, and they may take up to a poll time interval until their reaction is received by the SS</p> <p>Thus, when the end of the PDU exchange is reached a poll procedure will therefore still be active and needs to be handled properly; this is done in the following ways:</p> <p>1. once the "P-bit test cases" are finished the next PDU with the P-bit is expected, and immediately answered with a STATUS PDU. (If a STATUS PDU were sent at the end of the PDU exchange collision situations would still be possible. Therefore it was decided to wait.) → <i>Handled in the present CR</i></p>
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	<p>2. once the "STATUS PDU test cases" are finished a flag is set, STATUS PDUs received afterwards, namely in the postamble are ignored → <i>Handled in CR T1-031201</i></p> <p>This issue was also raised by Anritsu in T1-030895 for approval of test cases 7.2.3.21 and 7.2.3.22. This CR (together with T1-031201) is raised to make the RLC ATS consistent and to bring the RLC test case prose specification in-line with the TTCN implementation.</p> <p>B. Test Requirement 4 "Timer $T_3 - T_2$ shall be $n \cdot T$ for some integer $n \geq 0$" of tc_7_2_3_19 is not reasonably testable as the timer tolerances adds up.</p> <p>The purpose of test requirement 4 is to verify that a UE, when there is no data available for transmission or re-transmission, will restart the Timer_poll_periodic timer. However, this is also verified by test step a) where the SS waits 2 times the value of the timer before any data is transmitted by the SS.</p> <p>The additional test coverage introduced by test requirement 4 where it is verified that the time between polls, while having been interrupted due to no data available for transmission, is a multiple of the actual timer value, have low impact on live network operation in case of a non-conformant UE and thus is less important to verify.</p> <p>Thus the test requirement in light of the complexity it adds to the test case can not be considered justified and is therefore proposed to be removed.</p>								
<p>Summary of change: ⌘</p>	<p>A. In clauses 7.2.3.19 and 7.2.3.24 amend test procedure to handle received PDUs with the P bit set after the measurement has been made.</p> <p>B. In clause 7.2.3.19</p> <ul style="list-style-type: none"> • Test procedure: Test steps h) to k) removed. • Expected sequence: Steps 11 to 17 removed • Test requirement 4 removed <p>TTCN impact:</p> <p>Although this requires changes to the already approved TTCN test case implementation, there is no real impact to the approval results as test requirement 4 was not implemented due to the timer tolerance problem.</p>								
<p>Consequences if not approved: ⌘</p>	<p>Sections 7.2.3.19, 7.2.3.24 in TS 34.123-1 not in-line with TTCN test case implementation.</p>								
<p>Clauses affected: ⌘</p> <p>Other specs affected: ⌘</p> <p>Other comments: ⌘</p>	<p>7.2.3.19, 7.2.3.24</p> <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> <p>Other core specifications ⌘</p> <p>Test specifications</p> <p>O&M Specifications</p> <p>Also affects R'99, Rel-4. The changes described here have also been implemented in 34.123-3</p>	Y	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<input checked="" type="checkbox"/>	<input type="checkbox"/>								

How to create CRs using this form:

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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.

7.2.3.19 Polling for status / Timer triggered polling (Timer_Poll_Periodic)

7.2.3.19.1 Definition

This case tests that the UE will poll for a status request every Timer_Poll_Periodic ms when that mode is enabled. Incorrect operation of polling will cause degradation of service, or at worst service failure.

7.2.3.19.2 Conformance requirement

This timer shall only be used when "timer based polling" is configured by upper layers. The value of the timer is signalled by upper layers. The timer shall be started when the RLC entity is created. When the timer expires, the RLC entity shall:

- restart the timer;
- if AMD PDUs are available for transmission or retransmission (not yet acknowledged):
 - trigger a poll.

[...]

The Sender shall:

- if a poll has been triggered by one or several poll triggers (see TS 25.322 subclause 9.7.1):
 - if polling is not prohibited, see TS 25.322 subclause 9.5:
 - set the "Polling bit" in the AMD PDU header to "1";
 - otherwise:
 - set the "Polling bit" in the AMD PDU header to "0".

Reference

TS 25.322 clauses 9.5, 9.7.1 and 11.3.2.1.1.

7.2.3.19.3 Test purpose

1. To verify that the UE polls the SS in the next PDU to be transmitted or retransmitted each time the Timer_Poll_Periodic timer expires.
2. To verify that if there is no PDU to be transmitted or retransmitted, ~~and all the PDUs have already been acknowledged~~, the timer is restarted, but no poll is sent.

7.2.3.19.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS 34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Uplink RLC Polling info	First run	Second run
Last retransmission PDU poll	FALSE	FALSE
Last transmission PDU poll	FALSE	FALSE
Timer_poll_periodic	500	2000

These settings apply to both the uplink and downlink DTCH.

The Radio Bearer is placed in UE test loop mode 1 with the UL SDU size set to $(AM_7_PayloadSize * \text{ceil}(T/(5*TTI))) - 1$ bytes.

Test procedure

Let T be the value of Timer_Poll_Periodic:

- a) The SS waits for at least $2*T$ ms before starting any transmissions, and monitors the uplink.
- b) The SS sends five RLC SDUs of size $\text{floor}(AM_7_PayloadSize/5) - 1$ bytes to the UE. The SDUs are concatenated five SDUs to one PDU. The UE is expected to loop this data back in five RLC SDUs, segmented into a total of at least $\text{ceil}(T/TTI)$ RLC PDUs.
- c) The SS checks that at least one RLC PDU is received on the uplink with the P bit set and records the arrival time of the last RLC PDU received with the P bit set (T_1). The SS does not send any STATUS PDUs in response to these poll requests.
- d) The SS continues to receive RLC PDUs until all of the data has been received.
- e) The SS waits for the UE to retransmit an RLC PDU in order to transmit a poll (this may be the PDU with SN $VT(S) - 1$, or a PDU that has not been acknowledged). The SS checks that the P bit is set, and records the arrival time (T_2).
- f) The SS responds with a STATUS PDU acknowledging all received PDUs.
- g) The SS waits for $2*T$ ms to ensure that no further polls are received from the UE.
- ~~h) The SS sends five RLC SDUs of size $\text{floor}(AM_7_PayloadSize/5) - 1$ bytes to the UE. The SDUs are concatenated five SDUs to one PDU. The UE is expected to loop this data back in five RLC SDUs, segmented into a total of at least $\text{ceil}(T/TTI)$ RLC PDUs.~~
- ~~i) The SS checks that at least one RLC PDU is received on the uplink with the poll bit set and records the arrival time of the first RLC PDU received with the poll bit set (T_3). The SS does not send any STATUS PDUs in response to these poll requests.~~
- ~~j) The SS continues to receive RLC PDUs until all of the data has been received.~~
- ~~k) The SS responds with a STATUS PDU acknowledging all received PDUs.~~
- h) The SS waits for at least Timer_Poll_Periodic to acknowledge any last Poll PDU from the UE.
- i) The SS may optionally release the radio bearer.

The Test is repeated using the parameters specified for the second run.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1, SDU2, SDU 3, SDU 4, SDU 5, SN=0
2		→	UPLINK RLC PDU	PDU 1, SN=0
3		→	UPLINK RLC PDU	PDU 2, SN=1
4		→	...	SS continues to receive RLC PDUs
5		→	UPLINK RLC PDU	Poll: Note T ₁
6		→	...	SS continues to receive RLC PDUs
7		→	UPLINK RLC PDU	SN = ceil(T/TTI) - 1
8		→	UPLINK RLC PDU	Retransmission of VT(S)-1 or unacknowledged PDU in order to transmit a poll. Poll: Note T ₂ .
9		←	STATUS PDU	Normal
10		SS monitors uplink for 2*T ms
11		←	DOWNLINK RLC PDU	SDU 6, SDU 7, SDU 8, SDU 9, SDU 10, SN=1
12		→	UPLINK RLC PDU	SN = ceil(T/TTI)
13		→	...	SS continues to receive RLC PDUs
14		→	UPLINK RLC PDU	Poll: Note T₃
15		→	...	SS continues to receive RLC PDUs
16		→	UPLINK RLC PDU	SN = 2*ceil(T/TTI)-1
17		←	STATUS PDU	Normal
18			RB RELEASE	Optional step

NOTE 1: The Expected Sequence shown is informative.
The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity.
Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.

7.2.3.19.5 Test requirements

1. No PDUs shall be received from the UE for 2*T ms before step 1.
2. Time T₂ - T₁ shall be T.
3. No PDUs shall be received from the UE for 2*T ms after step 9.
4. ~~Time T₃ - T₂ shall be n*T for some integer n ≥ 0.~~

7.2.3.24 Polling for status / Operation of timer Timer_Poll_Prohibit

7.2.3.24.1 Definition

This case tests that the UE will not send a poll request within Timer_Poll_Prohibit ms of a previous poll request when this mode of operation is enabled. Incorrect operation of polling will cause degradation of service, or possible service failure.

7.2.3.24.2 Conformance requirement

The timers defined in this subclause are normative. The timers shall be considered active from the time they are started until the time they either expire or are stopped.

- b) Timer_Poll_Prohibit.

This timer shall only be used when so configured by upper layers. It is used to prohibit transmission of polls within a certain period. The value of the timer is signalled by upper layers.

In the UE this timer shall be started when the successful or unsuccessful transmission of an AMD PDU containing a poll is indicated by lower layer. In UTRAN it should be started when an AMD PDU containing a poll is submitted to lower layer.

From the time a poll is triggered until the timer expires, polling is prohibited. If another poll is triggered while polling is prohibited, its transmission shall be delayed until the timer expires (see subclause 9.7.1). Only one poll shall be transmitted when Timer_Poll_Prohibit expires even if several polls were triggered in the meantime. This timer shall not be affected by the reception of STATUS PDUs.

When Timer_Poll_Prohibit is not configured by upper layers, polling is never prohibited.

The Sender shall:

- if a poll has been triggered by one or several poll triggers (see subclause 9.7.1):
 - if polling is not prohibited, see subclause 9.5:
 - set the "Polling bit" in the AMD PDU header to "1";
 - otherwise:
 - set the "Polling bit" in the AMD PDU header to "0".

Reference

TS 25.322 clauses 9.5, 9.7.1 and 11.3.2.1.1.

7.2.3.24.3 Test purpose

1. To verify that no poll is transmitted if one or several polls are triggered when the Timer_Poll_Prohibit timer is active and has not expired.
2. To verify that the UE polls only once after Timer_Poll_Prohibit expires even though triggered several times during the prohibit time.

7.2.3.24.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS 34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Uplink RLC	
Polling info	
Timer_poll_prohibit	500
Last transmission PDU poll	FALSE
Poll_PDU	2
Poll_Window	50
Transmission window size	32
Downlink RLC	
Receiving window size	128

These settings apply to both the uplink and downlink DTCH.

The Radio Bearer is placed in UE test loop mode 1 with the UL SDU size set to AM_7_PayloadSize - 1 bytes.

Test procedure

Let T be the value of the Timer_Poll_Prohibit timer.

- a) The SS starts transmission of at least $(2 * \text{Poll_PDU}) + \text{ceil}(T / \text{TTI})$ SDUs of size AM_7_PayloadSize - 1 bytes.
- b) Whilst transmitting, the SS receives PDUs from the UE, and notes the time on receiving the first PDU with the P bit set. This time will be recorded as T_1 .
- c) The SS does not respond to the poll request.
- d) The SS continues to receive PDUs from the UE and notes the time on receipt of the next PDU with the P bit set. This time will be recorded as T_2 .
- e) The SS waits for at least Timer_Poll_Prohibit to acknowledge any last Poll PDU from the UE.
- f) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1
2		←	...	SS continues to transmit RLC SDUs
3		←	DOWNLINK RLC PDU	SDU $(2 * \text{Poll_PDU}) + \text{ceil}(T / \text{TTI})$
4		→	UPLINK RLC PDU	SDU 1
5		→	UPLINK RLC PDU	SDU 2
6		→	...	SS continues to receive RLC PDUs
7		→	UPLINK RLC PDU	SN = Poll_PDU - 1, Poll: Note T_1
8		→	...	SS continues to receive RLC PDUs
9			Void	
10		→	UPLINK RLC PDU	SN = (Transmission Window Size / 2) - 1, No Poll
11		→	...	SS continues to receive RLC PDUs
12		→	UPLINK RLC PDU	SN = Poll_PDU + $\text{ceil}(T / \text{TTI}) - 1$, Poll: Note T_2
12a		→	...	SS continues to receive RLC PDUs acknowledging with STATUS PDUs when polled until all PDUs have been received and acknowledged
13			RB RELEASE	Optional step
NOTE: The Expected Sequence shown is informative. The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity. Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.				

7.2.3.24.5 Test requirements

1. The measured time $T_2 - T_1$ shall be Timer_poll_prohibit ms.
2. Only one poll shall be received from the UE after step 7, the poll in step 12.
3. After step 12 no further poll shall be received from the UE for the next Timer_poll_prohibit ms.

3GPP TSG-T1 Meeting #20
Munich, Germany, 28 July – 1 August 2003

Tdoc # T1-031201

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 565 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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

Title:	⌘ Correction to GCF package 1 RLC testcases 7.2.3.26 and 7.2.3.27		
Source:	⌘ T1		
Work item code:	⌘	Date:	⌘ 30/07/2003
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:	⌘ This CR handles the following type of situation: <p>The PDUs exchange in RLC test caes is dimensioned in such a way that as long as times related to Timer Poll or STATUS poll procedures there are PDUs going back and forth</p> <p>The underlying assumption was that sending is performed in every TTI, an assumption which turned out to be unrealistic with the consequence that the exchange of PDUs takes longer than originally expected.</p> <p>This implies that the Timer Poll or STATUS poll procedures are continued even after the actual test purpose has been reached.</p> <p>The TTCN test cases have been designed to wait in fact until all PDUs have been exchanged, allowing as a consequence that the Timer Poll or STATUS poll procedures continue running, and they may take up to a poll time interval until their reaction is received by the SS</p> <p>Thus, when the end of the PDU exchange is reached a poll procedure will therefore still be active and needs to be handled properly; this is done in the following ways:</p> <p>1. once the "P-bit test cases" are finished the next PDU with the P-bit is expected, and immediately answered with a STATUS PDU. (If a STATUS PDU were sent at the end of the PDU exchange collision situations would still be possible. Therefore it was decided to wait.) → <i>Handled in CR T1-031200</i></p>
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<p>2. once the "STATUS PDU test cases" are finished a flag is set, STATUS PDUs received afterwards, namely in the postamble are ignored → <i>Handled in present CR</i></p> <p>This issue was also raised by Anritsu in T1-030895 for approval of test cases 7.2.3.21 and 7.2.3.22. This CR (together with T1-031200) is raised to make the RLC ATS consistent and to bring the RLC test case prose specification in-line with the TTCN implementation.</p>																	
Summary of change:	⌘ In clauses 7.2.3.26 and 7.2.3.27 amend test procedure to handle received STATUS PDUs with the P bit set after the measurement has been made.																
Consequences if not approved:	⌘ Section 7.2.3.26 and 7.2.3.27 in TS 34.123-1 not in-line TTCN test case implementation																
Clauses affected:	⌘ 7.2.3.26, 7.2.3.27																
Other specs affected:	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td>X</td> <td>Other core specifications</td> <td>⌘</td> </tr> <tr> <td></td> <td>X</td> <td>Test specifications</td> <td></td> </tr> <tr> <td></td> <td>X</td> <td>O&M Specifications</td> <td></td> </tr> </tbody> </table>	Y	N				X	Other core specifications	⌘		X	Test specifications			X	O&M Specifications	
Y	N																
	X	Other core specifications	⌘														
	X	Test specifications															
	X	O&M Specifications															
Other comments:	⌘ Also affects R'99, Rel-4. The changes described here have also been implemented in 34.123-3.																

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7.2.3.26 Receiver Status Triggers / Operation of timer Timer_Status_Periodic

7.2.3.26.1 Definition

This case tests that the UE transmits a status report every Timer_Status_Periodic ms when this mode of operation is enabled. Incorrect operation of status reporting will cause degradation of service, or possible service failure.

7.2.3.26.2 Conformance requirement

This timer shall only be used when timer based status reporting is configured by upper layers.

This timer shall be started when the RLC entity is created. When the timer expires the transmission of a status report shall be triggered and the timer shall be restarted.

Reference

TS 25.322 clauses 9.5, 9.7.2 and 11.5.2.

7.2.3.26.3 Test purpose

To verify that a status report is transmitted each time the Timer_Status_Periodic timer expires.

7.2.3.26.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS 34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Downlink RLC Timer_STATUS_periodic	400
---------------------------------------	-----

These settings apply to both the uplink and downlink DTCH.

Test procedure

Let T be the value of the Timer_STATUS_periodic timer.

- a) The SS starts transmission of at least $\text{ceil}(2 * T / \text{TTI})$ SDUs of size AM_7_PayloadSize - 1 bytes.
- b) The SS waits to receive a STATUS PDU and notes the time. This time will be recorded as T₁.
- c) The SS waits to receive a second STATUS PDU and notes the time. This time will be recorded as T₂.

d) The SS waits for at least Timer_Status_Periodic to receive any last STATUS PDU from the UE.

ed) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1
2		←	...	SS continues to transmit RLC SDUs
3		←	DOWNLINK RLC PDU	SDU m
4		→	STATUS PDU	Note T ₁
5		←	DOWNLINK RLC PDU	
6		←	...	SS continues to transmit RLC SDUs
7		←	DOWNLINK RLC PDU	SDU m + ceil(T/TTI)
8		→	STATUS PDU	Note T ₂
9			RB RELEASE	Optional step
10		→	<u>STATUS PDU</u>	<u>SS may receive STATUS PDUs</u>

NOTE 1: The Expected Sequence shown is informative.
The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity.
Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.

7.2.3.26.5 Test requirements

The measured time $T_2 - T_1$ shall be 400 ms.

7.2.3.27 Receiver Status Triggers / Operation of timer Timer_Status_Prohibit

7.2.3.27.1 Definition

This case tests that the UE does not transmit a status report more often than every Timer_Status_Prohibit ms when this mode of operation is enabled. Incorrect operation of status reporting will cause degradation of service, or possible service failure.

7.2.3.27.2 Conformance requirement

In the UE, this timer shall be started when the successful or unsuccessful transmission of the last STATUS PDU of an acknowledgement status report is indicated by lower layer

[...]

When a status report is triggered the Receiver shall:

- if transmission of status reports is not prohibited by any of the functions "STATUS prohibit" or "EPC mechanism":
 - assemble and transmit the status report to the Sender, as specified in subclauses TS 25.322 11.5.2.2 and 11.5.2.3.
- otherwise (if the status report is prohibited by at least one of the functions "STATUS prohibit" or "EPC mechanism"):

[...]

- if ACK, LIST, BITMAP, or RLIST SUFIs are required in the status report:
- delay sending these SUFIs until the prohibit function terminates.

[...]

Upon expiry of the timer Timer_Status_Prohibit [...], the Receiver shall:

- if at least one status report was triggered during the time the transmission of a status reports was prohibited that could not be transmitted due to prohibition; and
- if transmission of a status reports is no longer prohibited by any of the functions "STATUS prohibit" or "EPC mechanism":
 - transmit one status report to the Sender, using the procedure described in subclause TS 25.322 11.5.2.3.

Reference

TS 25.322 clause 9.7.2.

7.2.3.27.3 Test purpose

1. To verify that a status report is not transmitted while the Timer_Status_Prohibit timer is active.
2. To verify that only one status report is sent on the expiry of the Timer_Status_Prohibit timer if several triggers occur while it is active.

7.2.3.27.4 Method of test

Initial conditions

The generic procedure for Radio Bearer establishment (clause 7.1.3 of TS 34.108) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests in clause 7.2.3.1.

The following RLC parameter values are used in place of the values in clause 7.2.3.1:

Downlink RLC	
Timer_Status_Prohibit	500
Timer_STATUS_periodic	200

These settings apply to both the uplink and downlink DTCH.

Test procedure

Let T_{pro} be the value of the Timer_Status_Prohibit timer, and T_{per} be the value of the Timer_Status_Periodic timer.

- a) The SS starts transmission of at least $\text{ceil}(2 * T_{pro} / TTI) + \text{ceil}(T_{per}/TTI)$ SDUs of size $AM_7_PayloadSize - 1$ bytes.
- b) Whilst transmitting, the SS monitors the uplink for a STATUS PDU and notes the time. This time will be recorded as T_1 .
- c) The SS sets the P bit in one of the next $\text{floor}(T_{pro}/TTI)$ PDUs transmitted on the downlink.
- d) The SS waits to receive a second STATUS PDU and notes the time. This time will be recorded as T_2 .
- e) [The SS waits for at least Timer_Status_Prohibit to receive any last STATUS PDU from the UE.](#)
- f) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		←	DOWNLINK RLC PDU	SDU 1
2		←	...	SS continues to transmit RLC SDUs
3		←	DOWNLINK RLC PDU	SDU m
4		→	STATUS PDU	Note T ₁
5		←	DOWNLINK RLC PDU	Poll
6		←	...	SS continues to transmit RLC PDUs
7		←	DOWNLINK RLC PDU	SDU m + ceil(T _{pro} / TTI)
8		→	STATUS PDU	Note T ₂
9			RB RELEASE	Optional step
<u>10</u>		→	<u>STATUS PDU</u>	<u>SS may receive STATUS PDUs</u>

NOTE 1: The Expected Sequence shown is informative.
The UPLINK and DOWNLINK PDU flows may overlap, but are shown separate for clarity.
Information such as SDU, PDU or Sequence numbers given in the comments column shall be considered informative only, for test case development purposes.

7.2.3.27.5 Test requirements

1. The measured time $T_2 - T_1$ shall be 500 ms.
2. Only one STATUS PDU shall be received in step 8; after $(T_1 + T_{pro})$ and before $(T_1 + 2 * T_{pro})$.
~~Timer_Status_Prohibit expiry.~~

CR-Form-v7	
CHANGE REQUEST	
№ 34.123-1 CR 566	№ rev - № Current version: 5.4.0 №

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] Package 1 RRC test cases: 8.3.4.3 Active set update in soft handover: combined radio link addition and removal 8.4.1.1 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state (FDD). (Revision of T1-031077 - merged with T1-031079 and of T1-031146)	
Source:	№ T1	
Work item code:	№ TEI	Date: № 30/07/03
Category:	№ F	Release: № REL-5

Reason for change:	№ 8.3.4.3 Some of the cell synchronisation values in the MEASUREMENT REPORT messages in steps 2 and 4b are not consistent with the default SIB values – monitored set (report) and active set (not report). 8.4.1.1 Cell 1 information appears in the MEASUREMENT REPORT (steps 6 and 6a) when all reporting indicators for active set cells are set to FALSE in SIB 11 (step 1). IE “Reporting Cell Status” in MEASUREMENT CONTROL message in step 7 is set to “Not present” when in fact its sub IEs are available. In the MEASUREMENT CONTROL messages at steps 7 & 12 the subsequent UE behaviour will be unpredictable if the Active Set cells are not re-included in the Cell Info list.
Summary of change:	№ 8.3.4.3 In step 2 MEASUREMENT REPORT the synchronisation information is set to present for cell 3 (monitored) and absent for cell 2 (active). In step 4b MEASUREMENT REPORT the synchronisation information is set to absent for cell 3 (active). 8.4.1.1

Cell 1 information is deleted from the MEASUREMENT REPORT (steps 6 and 6a).

Cell 1 information is added to the MEASUREMENT REPORT at step 10.

The value of "Not present" is removed.

Include the Active set cells in the Cell Info list of the MEASUREMENT CONTROL messages.

Consequences if not approved: ⌘ The information received in MEASUREMENT REPORTs would not be consistent with the specified values and a good UE would fail.

Clauses affected: ⌘ 8.3.4.3, 8.4.1.1

	Y	N		⌘
Other specs Affected:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	<input checked="" 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

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. The UE shall be triggered to 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 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. The 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 '1b' in the SYSTEM INFORMATION BLOCK TYPE 11.

After the MEASUREMENT REPORT is received, the 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
4b		→	MEASUREMENT REPORT	See specific message contents for this message.
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
8a		→	MEASUREMENT REPORT	See specific message contents for this message.
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

MEASUREMENT REPORT (Step 0b)

NOTE 1: Cell measured results for cells 1 and 2 may appear in either order (i.e. cell 1 then cell 2 or cell 2 then cell 1)

NOTE 2: Cell measured results for cell 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

Information Element	Value/remark
Message Type	
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. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- 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	See Note 1
- Cell Identity	Checked that this IE is absent
- Cell synchronisation information	Checked that this IE is absent
- 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
- 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	See Note 1
- 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
- Cell measured results	See Note 2
- 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.3 (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 - 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	Set to same code as assigned for cell 2 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 1 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 FALSE Not Present

MEASUREMENT REPORT (Step 2)

NOTE 1: Cell measured results for cells 1, 2 and 3 may appear in any order.

Information Element	Value/remark
<p>Message Type</p> <p>Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Measurement identity</p> <p>Measured Results</p> <ul style="list-style-type: none"> - Intra-frequency measured results - Cell measured results - Cell Identity - Cell synchronisation information - Primary CPICH info - Primary scrambling code <ul style="list-style-type: none"> - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code <ul style="list-style-type: none"> - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - Cell synchronisation information <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code <ul style="list-style-type: none"> - CPICH Ec/N0 - CPICH RSCP - Pathloss <p>Measured results on RACH</p> <p>Additional measured results</p> <p>Event results</p> <ul style="list-style-type: none"> - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code 	<p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.</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>See Note 1</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>See Note 1</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is present and includes IE COUNT-C-SFN frame differenceChecked that this IE is absent</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>See Note 1</p> <p>Checked that this IE is absent</p> <p>Checked that this IE is absentChecked 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 absent</p> <p>1a</p> <p>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108</p>

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	FDD
- CHOICE mode	P-CPICH can be used.
- Primary CPICH usage for channel estimation	Calculated value from Cell synchronisation information
- DPCH frame offset	Not Present
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	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	FALSE
- SCCPCH information for FACH	Not Present
Radio link removal information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	

MEASUREMENT REPORT (Step 4b)

Information Element	Value/remark
Message Type	
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. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- 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 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.3 (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	1b
- Cell measurement event results	
- 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

MEASUREMENT REPORT (Step 8a)

Information Element	Value/remark
Message Type	
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. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- 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	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (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
- 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	1b
- 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

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 4a the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

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

After step 8 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH using AM RLC.

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

.....

8.4 Measurement procedure

8.4.1 Measurement Control and Report

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

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> include only the available additional measured results, and 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;

If the IE "Reporting Cell Status" is not received for intra-frequency, inter-frequency measurement, or inter-RAT measurement, the UE shall:

1> for intra-frequency measurement, inter-frequency measurement and inter-RAT measurement:

2> exclude the IE "Measured Results" in MEASUREMENT REPORT.

Reference

3GPP TS 25.331 clause 8.4.1.8.1, 8.4.1.3, 8.4.2.2, 8.6.7.9.

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" and "T2" 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. The key measurement parameters in the modified System Information Block message are as follow: 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 "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.

Step	Direction		Message	Comment
	UE	SS		
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.
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 "T1" 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
Measurement control system information - Intra-frequency measurement system information - Intra-frequency measurement identity - Intra-frequency cell info list - CHOICE intra-frequency cell removal - 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 - Primary CPICH TX power - TX Diversity Indicator - Cell selection and Re-selection - 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 - Cell selection and Re-selection info - Reporting information for state CELL_DCH - Intra-frequency reporting quantity - Reporting quantities for active set cells - Cell synchronisation information reporting indicator - Cell identity reporting indicator - CHOICE mode - CPICH Ec/No reporting indicator - CPICH RSCP reporting indicator - Pathloss reporting indicator - Reporting quantities for monitored set cells - Cell synchronisation information reporting indicator - Cell identity reporting indicator - CHOICE mode - CPICH Ec/No reporting indicator - CPICH RSCP reporting indicator - Pathloss reporting indicator - Measurement Reporting Mode - Measurement Report Transfer Mode - Periodical Reporting / Event Trigger Reporting Mode - CHOICE report criteria - Amount of reporting - Reporting interval	Not Present Absence of this IE is equivalent to default value 1 Not present (This IE shall be ignored by the UE for SIB11) 1 Not present Absence of this IE is equivalent to default value 0 dB Not Present TRUE FDD Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108 Not Present FALSE Not Present (The IE shall be absent as this is the serving cell) 2 Not present Absence of this IE is equivalent to default value 0dB 1024 TRUE FDD Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108 Not Present FALSE 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. FALSE FALSE FDD FALSE FALSE FALSE FALSE FALSE FDD FALSE TRUE FALSE Acknowledged mode RLC Periodical reporting Periodic reporting criteria Infinity 64 seconds

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 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	"Checked to see if set to within an acceptable range"
- 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 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	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency measurement objects list	Remove all intra-frequency cells
- CHOICE intra-frequency cell removal	+2 new intra-frequency cells
- New intra-frequency cells	1
- Intra-frequency cell id	
- 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	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	256 chips
- Read SFN Indicator	TRUE
- 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	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE Mode	FDD
- 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
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- 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
- 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	1e
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range constant	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
- Time to trigger	0 ms
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Reporting cell status	Not Present
- 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	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 10)

Note 1: Cell measured results for cells 1 and 3 may appear in either order (i.e. cell 1 then cell 3 or cell 3 then cell 1)

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	See Note 1
- 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 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) See Note 1
- 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 cell
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	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 2 cells are included (the order in which the different cells are reported is not important)
- 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	Check to see if it's the same code for cell 2
- 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	
- 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	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	
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	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	Remove all intra-frequency cells
- CHOICE intra-frequency cell removal	+2 new intra-frequency cells
- New intra-frequency cells	1
- Intra-frequency cell id	
- 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	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 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 constant	8 dB
- 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	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.

CHANGE REQUEST

34.123-1 CR 567 # rev **-** # Current version: **5.4.0**

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; Periodical RLC STATUS PDU detection in RRC Radio Bearer Reconfiguration Package 2 and 3 test cases	
Source:	#	T1	
Work item code:	#	TEI	Date: # July 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:	#	In several RRC Radio Bearer Reconfiguration test cases, SS is supposed to use detection of the transmission or non-transmission of periodical RLC STATUS PDUs to verify thatb the UE performed the ordered reconfiguration. However, this method would have a large impact on the SS side since the TTCN environment for RRC tests does not provide an interface to RLC for this detection.
Summary of change:	#	8.2.2.1 (Package 2) 8.2.2.23 (Package 2) 8.2.2.25 (Package 3) The checks of transmission / non-transmission of periodical RLC STATUS PDUs are removed from these test cases.
Consequences if not approved:	#	The current test cases would not be possible to implement in TTCN in today's environment.

Clauses affected:	#	8.2.2.1, 8.2.2.23, 8.2.2.25								
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="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 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.

8.2.2.1 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success

8.2.2.1.1 Definition

8.2.2.1.2 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 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 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.

8.2.2.1.3 Test purpose

To confirm that the UE reconfigures the radio bearers according to a RADIO BEARER RECONFIGURATION message, which indicates a change of UL scrambling code and change of RLC parameters.

8.2.2.1.4 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 RADIO BEARER RECONFIGURATION message to the UE, which commands a change of UL scrambling code and change of RLC parameters to be performed. The UE reconfigures the new parameter and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC. ~~The SS verifies that the UE starts to transmit periodic RLC STATUS PDUs.~~

The SS transmits a new RADIO BEARER RECONFIGURATION message to the UE, which commands the UE to reconfigure RLC parameters. The UE reconfigures the new parameters and and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC. ~~The SS verifies that the UE does not transmit any periodic RLC STATUS PDUs.~~ 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			Void	
2			Void	
3		←	RADIO BEARER RECONFIGURATION	UL scrambling code is modified. RLC configuration is modified.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	
5		SS	Void	The SS verifies that periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers each 400 ms during at least 5 seconds.
6		←	RADIO BEARER RECONFIGURATION	RLC configuration is modified.
7			RADIO BEARER RECONFIGURATION COMPLETE	
8		SS	Void	The SS verifies that no periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers during at least 5 seconds.
9		↔	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 (FDD) (Step 3)

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 Annex A, with the following exceptions:

Information Element		Value/remark
<ul style="list-style-type: none"> RB information to reconfigure list - 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 15 128 400 4 150 150 Not present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not present TRUE 400 Not Present Not Present (AM DCCH for NAS_DT High priority) 3 Not Present Not Present AM RLC No discard 15 128 400 4 150 150 Not present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not present TRUE 400 Not Present Not Present (AM DCCH for NAS_DT Low priority) 4 Not Present Not Present

<ul style="list-style-type: none"> - 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 - 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 	A3	<ul style="list-style-type: none"> AM RLC No discard 15 128 400 4 150 150 Not present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not Present TRUE 400 Not Present Not Present (AM DTCH) 20 Not Present Not Present AM RLC No discard 15 128 400 4 150 150 Not Present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not Present TRUE 400 Not Present 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
Frequency info		Not Present
Maximum allowed UL TX power		Not Present

CHOICE channel requirement - Scrambling code number		Uplink DPCH info 1
CHOICE Mode - Downlink PDSCH information		FDD Not Present
Downlink information common for all radio links Downlink information per radio link list - Downlink information for each radio link - Primary CPICH info - Primary scrambling code		Not present Set to same code as used for cell 1

Condition	Explanation
A1	This IE need for "Non speech in CS"
A2	This IE need for "Speech in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"

RADIO BEARER RECONFIGURATION (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
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

RADIO BEARER RECONFIGURATION (FDD) (Step 6)

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 Annex A, with the following exceptions:

Information Element	Condition	Value/remark
<ul style="list-style-type: none"> RB information to reconfigure list - 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 15 128 500 4 200 200 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 High priority) 3 Not Present Not Present AM RLC No discard 15 128 500 4 200 200 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

Information Element	Condition	Value/remark
<ul style="list-style-type: none"> - 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 - 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 	A3	<ul style="list-style-type: none"> AM RLC No discard 15 128 500 4 200 200 Not present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not Present TRUE Not Present Not Present Not Present (AM DTCH) 20 Not Present Not Present AM RLC No discard 15 128 500 4 200 200 Not Present 1 TRUE TRUE 99 Not Present AM RLC TRUE 128 200 Not Present TRUE Not Present Not Present 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
Frequency info		Not Present

Information Element	Condition	Value/remark
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		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

Condition	Explanation
A1	This IE need for "Non speech in CS"
A2	This IE need for "Speech in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"

8.2.2.1.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the new DPCH after the specified activation time has expired.

~~After step 4, the UE shall start transmitting periodical RLC STATUS PDUs.~~

After step 6, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message.

~~After step 7, the UE shall stop transmitting periodical RLC STATUS PDUs.~~

8.2.2.23 Radio Bearer Reconfiguration from CELL_FACH to CELL_PCH: Success

8.2.2.23.1 Definition

8.2.2.23.2 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.

8.2.2.23.3 Test purpose

To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL_FACH to CELL_PCH. ~~To check that the UE does not transmit periodical RLC status in CELL_PCH state after it has been activated.~~

8.2.2.33.4 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 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		SS		The UE is in CELL_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.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_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
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	500
- 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

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

8.2.2.23.5 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.~~

8.2.2.25 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH including modification of previously signalled CELL_DCH configuration

8.2.2.25.1 Definition

8.2.2.25.2 Conformance requirement

1. 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 or TS 25.224 for TDD;
- 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.

...

2. 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;

...

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 as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

8.2.2.25.3 Test purpose

To confirm that the UE applies a previously signalled configuration for CELL_DCH and in addition modifies the parameters for which reconfiguration is requested in the RADIO BEARER RECONFIGURATION message that is used to initiate transition from CELL_FACH to CELL_DCH.

8.2.2.25.4 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

- a) The UE is in CELL_FACH state.
- b) The SS transmits a RADIO BEARER RECONFIGURATION message including dedicated physical channel information to request the UE to transit from CELL_FACH to CELL_DCH and change the configuration of RLC parameters. Upon receiving this message, the UE establishes the radio bearer and transport channel configuration for CELL_DCH included in a previous RADIO BEARER SETUP message and modifies the parameters for which reconfiguration was requested in the RADIO BEARER RECONFIGURATION message.
- c) The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.
- ~~d) The SS verifies that the UE starts to transmit periodic RLC STATUS PDUs.~~
- ed) 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		←	RADIO BEARER RECONFIGURATION	Initiates the transition from CELL_FACH to CELL_DCH and reconfigures RLC parameters.
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
2a		SS	Void	The SS verifies that periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers each 400 ms during at least 5 seconds.
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.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message is identical as "RADIO BEARER RECONFIGURATION message" as found in TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
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	300
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	Not present
- Timer_poll	100
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	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	100
- Timer_ECP	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	400
- 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	Same as for RB identity 2
- 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	Same as for RB identity 2
- RB mapping info	Not Present
- RB stop/continue	Not Present

RADIO BEARER RECONFIGURATION COMPLETE (Step 2)

The contents of RADIO BEARER RECONFIGURATION COMPLETE message is identical as "RADIO BEARER RECONFIGURATION COMPLETE message" as found in clause 9 of TS 34.108.

8.2.2.25.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

~~After step 2, the UE shall start transmitting periodical RLC STATUS PDUs.~~

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 568 ⌘ rev - ⌘ Current version: 5.4.0 ⌘	

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] Package 2 RRC test case 8.2.2.19 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (Subsequently received) (Revision of T1-030990 and T1-031205)
Source:	⌘ T1
Work item code:	⌘ TEI Date: ⌘ 30/07/03
Category:	⌘ F Release: ⌘ REL-5

Reason for change:	⌘ In the RADIO BEARER RECONFIGURATION messages (FDD) the contents of the IE Downlink information per radio link is set to 'Not Present' but this IE is mandatory for R99. The specific message contents specified for the RADIO BEARER RECONFIGURATION messages (FDD) is currently given as common for both PS and CS domains. However, the reconfiguration involves activating Periodic RLC STATUS PDU transmission. This change is relevant to the PS RB ID 20, but not relevant to the CS domain RB IDs 10, 11, 12. Different "RB Information to reconfigure list" information needs to be specified for PS and CS domains. SS is supposed to use detection of the transmission or non-transmission of periodical RLC STATUS PDUs to verify that the UE performed the ordered reconfiguration. However, this method would have a large impact on the SS side since the TTCN environment for RRC tests does not provide an interface to RLC for this detection.
Summary of change:	⌘ The contents of the RADIO BEARER RECONFIGURATION messages are modified to make the IE Downlink information per radio link content dependent on the release supported by the UE. Different RADIO BEARER RECONFIGURATION message Specific Message Contents added for "PS domain" and "Speech in CS and Non-Speech in CS domain" alternatives. The check of transmission / non-transmission of periodical RLC STATUS PDUs is removed. Instead, different UL Scrambling codes are added for the two RADIO BEARER RECONFIGURATION messages to enable SS to detect that the UE handled the right message.

Consequences if not approved: ☹ The UE will not behave in the expected manner.

Clauses affected: ☹ 8.2.2.19

Other specs Affected:

	Y	N		
☹		X	Other core specifications	☹
		X	Test specifications	
		X	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

8.2.2.19 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (Subsequently received)

8.2.2.19.1 Definition

8.2.2.19.2 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.

8.2.2.19.3 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.

8.2.2.19.4 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 transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the radio bearer according to the RADIO BEARER RECONFIGURATION message prior to this new message. The UE ignores the new RADIO BEARER RECONFIGURATION message and configures 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 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Periodic RLC STATUS PDU transmission is activated. For FDD, the UL scrambling code is set to "1" . For TDD, the code combination is assigned by SS.
2		←	RADIO BEARER RECONFIGURATION	Sent before the "activation time" in step 1 has elapsed. Periodic RLC STATUS PDU transmission is not activated. For FDD, the UL scrambling code is set to "2" . 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 performs configuration according to the RADIO BEARER RECONFIGURATION message in step 1.
4		SS	Void	The SS verifies that periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers during at least 5 seconds.
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 1) (FDD [and PS Domain](#))

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 [Annex A TS 34.108 clause 9.1](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
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	400
- 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	400
- 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	400
- 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	400
- 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
Frequency info	Not Present
Maximum allowed UL TX power	Not Present

CHOICE channel requirement - CHOICE mode - Scrambling code number		Uplink DPCH info Not Present
CHOICE Mode - Downlink PDSCH information		FDD 1 FDD Not Present
Downlink information common for all radio links		Not Present
Downlink information per radio link list	Rel-4 or later	Not Present
Downlink information per radio link list - Downlink information for each radio link - Primary CPICH info - Primary scrambling code	R99	Set to same code as used for cell 1

[RADIO BEARER RECONFIGURATION \(Step 1\) \(FDD and CS Domain\)](#)

The contents of the RADIO BEARER RECONFIGURATION message in this test case are identical to those specified for "Speech in CS" or "Non speech in CS" as found in TS 34.108 clause 9.1 with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]IMOD 256
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	400
- 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	400
- 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		400
- 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
Frequency info		Not Present
Maximum allowed UL TX power		Not Present
CHOICE channel requirement		Uplink DPCH info
- CHOICE mode		FDD
- Scrambling code number		1
CHOICE Mode		FDD
- Downlink PDSCH information		Not Present
Downlink information common for all radio links		Not Present
Downlink information per radio link list	Rel-4 or later	Not Present
Downlink information per radio link list	R99	
-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 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 [Annex A TS 34.108 clause 9.1](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS

RADIO BEARER RECONFIGURATION (Step 2) (FDD [and PS Domain](#))

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 ~~Annex A~~ [TS 34.108 clause 9.1](#) 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	Not Present
- RB identity	(AM DTCH)
- PDCP info	20
- PDCP SN info	Not Present
- RLC info	Not Present
- 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
Frequency info	Not Present
Maximum allowed UL TX power	Not Present

CHOICE channel requirement - CHOICE mode - Scrambling code number		Uplink DPCH info Not Present FDD 2
CHOICE Mode - Downlink PDSCH information		FDD Not Present
Downlink information common for all radio links Downlink information per radio link list		Not Present Not Present
<u>Downlink information per radio link list</u>	<u>Rel-4 or later</u>	<u>Not Present</u>
<u>Downlink information per radio link list</u> - Downlink information for each radio link - Primary CPICH info - Primary scrambling code	<u>R99</u>	<u>Set to same code as used for cell 1</u>

RADIO BEARER RECONFIGURATION (Step 2) (FDD and CS Domain)

The contents of the RADIO BEARER RECONFIGURATION message in this test case are identical to those specified for "Speech in CS" or "Non speech in CS" as found in TS 34.108 clause 9.1 with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC transaction identifier</u>	<u>0</u>
<u>Activation Time</u>	<u>Not Present</u>
<u>RB information to reconfigure list</u>	
<u>- RB information to reconfigure</u>	<u>(AM DCCH for RRC)</u>
<u>- RB identity</u>	<u>2</u>
<u>- PDCP info</u>	<u>Not Present</u>
<u>- PDCP SN info</u>	<u>Not Present</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>400</u>
<u>- Max_RST</u>	<u>4</u>
<u>- Polling info</u>	
<u>- Timer_poll_prohibit</u>	<u>150</u>
<u>- Timer_poll</u>	<u>150</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>Not Present</u>
<u>- RB stop/continue</u>	<u>Not Present</u>
<u>- RB information to reconfigure</u>	<u>(AM DCCH for NAS_DT High priority)</u>
<u>- RB identity</u>	<u>3</u>
<u>- PDCP info</u>	<u>Not Present</u>
<u>- PDCP SN info</u>	<u>Not Present</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>400</u>
<u>- Max_RST</u>	<u>4</u>
<u>- Polling info</u>	
<u>- Timer_poll_prohibit</u>	<u>150</u>
<u>- Timer_poll</u>	<u>150</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>Not Present</u>
<u>- RB stop/continue</u>	<u>Not Present</u>
<u>- RB information to reconfigure</u>	<u>(AM DCCH for NAS_DT Low priority)</u>
<u>- RB identity</u>	<u>4</u>

- 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
Frequency info		Not Present
Maximum allowed UL TX power		Not Present
CHOICE channel requirement		Uplink DPCH info
- CHOICE mode		FDD
- Scrambling code number		2
CHOICE Mode		FDD
- Downlink PDSCH information		Not Present
Downlink information common for all radio links		Not Present
Downlink information per radio link list	Rel-4 or later	Not Present
Downlink information per radio link list	R99	
- 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 2) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_DCH in PS" found in ~~Annex A~~ [TS 34.108 clause 9.1](#) 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.

8.2.2.19.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

CR-Form-v7
CHANGE REQUEST
⌘ TS 34.123-1 CR 569 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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; URA Identity in Cell Update Confirm and URA Update Confirm.		
Source:	⌘ T1		
Work item code:	⌘ MISTST1	Date:	⌘ 30/07/2003
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:	⌘ According to TS 25.331 clause 8.6.2.1 the URA Identity IE is only used by the UE if the IE "RRC State Indicator" is included in the same message and set to "URA_PCH" (8.6.2.1) and the UTRAN includes URA Identity in URA Update Confirm when "in a cell where multiple URA identifiers are broadcast" (8.3.1.5). T1-031178 and T1-031179 propose changes to the default messages defined in TS 34.108 to remove URA identity where it is not applicable based on TS 25.331 as described above. This CR is to make 34.123-1 consistent with the changes to 34.108 as follows: <ol style="list-style-type: none"> 1. Indicate the inclusion of URA Identity where it is applicable, but is not in the default message according to T1-031178/T1-031179. 2. Remove explicit inclusion of URA Identity where it not applicable 3. Remove redundant deviations from the default messages.
Summary of change:	⌘ <ol style="list-style-type: none"> 1. Remove URA Identity from URA UPDATE CONFIRM in 8.3.2.11 and 8.3.2.13. 2. Remove explicit RRC State Indicator and omission of URA identity in 8.3.1.1 and 8.3.1.21 respectively
Consequences if not approved:	⌘ The URA Identity will be included when it is inappropriate. In some test cases the presence of the URA Identity may be undefined.

Clauses affected:	⌘ 8.3.1.1.4, 8.3.1.21.4, 8.3.2.11.4, 8.3.2.13.4
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Other specs affected:	⌘	<input type="checkbox"/> Y	<input type="checkbox"/> N	Other core specifications	⌘	TS 34.108	
		<input checked="" type="checkbox"/> X					Test specifications
		<input type="checkbox"/> X					O&M Specifications
Other comments:	⌘						

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.

8.3.1.1.4 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. 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 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. 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 next step. If $k=2$ and this message is not received, test fails.
10a		←	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.
10b		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

10c			The SS reverses the transmission power level of cell 1 and cell 2.
10d	→	CELL UPDATE	
10e	←	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.
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, 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
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 10e 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 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.

8.3.1.21.4 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.

- 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 CELL UPDATE. The SS shall reply with CELL UPDATE CONFIRM message on downlink DCCH.
- 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				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	'1010 1010 1010 1010'
-URA identity	Not present

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. The SS replies with an URA UPDATE CONFIRM message on the downlink CCCH.
- 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

8.3.2.13.4 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
- Slimit,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 CCCH. 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 CCCH. 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	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	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	TDD
- CHOICE mode	47 dB
- SsearchHCS	10 (gives actual value of 20 dB)
- Qhyst1s	
- 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	
- 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
- 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	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 [and 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-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

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 570 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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: Correction to C/T field value for test case 7.1.1.8		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 31/07/2003
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:	⌘ In Step b (sub-clause 3) of 7.1.1.8.4 an incorrect value of the C/T field need to be used in the MAC header. The currently used value of 0100'B is likely to be used in future for SRB 5 and is therefore not suitable. The alternative value 0111'B which is proposed is not configured in the test and is more suitable for this step.
Summary of change:	⌘ In 7.1.1.8.4, test procedure clause b) step 3, the value of C/T field is changed from '0100'B to '0111'B.
Consequences if not approved:	⌘ Test case will not work correctly in future when SRB5 uses the current value '0100'B.

Clauses affected:	⌘ 7.1.1.8.4						
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> </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; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘			
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘			
<input type="checkbox"/>	<input checked="" type="checkbox"/>						

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- 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.

7.1.1.8 DTCH or DCCH mapped to DCH / Invalid C/T Field

7.1.1.8.1 Definition

This tests that the MAC applies the correct header to the MAC PDU according to the type of logical channel carried on the DCH transport channel. Incorrect application of MAC headers would result in inoperation of the UE.

7.1.1.8.2 Conformance requirement

DTCH or DCCH mapped to DCH, no multiplexing of dedicated channels on MAC: -no MAC header is required.

DTCH or DCCH mapped to DCH, with multiplexing of dedicated channels on MAC: -C/T field is included in MAC header.

The following fields are defined for the MAC header:

- C/T field
The C/T field provides identification of the logical channel instance when multiple logical channels are carried on the same transport channel...

Structure of the C/T field

C/T field	Designation
0000	Logical channel 1
0001	Logical channel 2
...	...
1110	Logical channel 15
1111	Reserved (PDUs with this coding will be discarded by this version of the protocol)

Reference(s)

TS 25.321 clauses 9.2.1 and 9.2.1.1 b).

7.1.1.8.3 Test purpose

1. To verify that the UE discards PDUs with reserved or incorrect values in C/T field.
2. To verify that the C/T field is correctly applied when a DTCH or DCCH is mapped to a DCH.

7.1.1.8.4 Method of test

Initial conditions

System Simulator:

- 1 cell, default parameters, Ciphering Off.

The DCH/DPCH is configured as specified in TS 34.108 clause 6.10.2.4.1.2: Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH) with the following exception:

Higher layer	RAB/signalling RB	RB#3 (SRB#3)	
	User of Radio Bearer	NAS_DT High prio	
RLC	Logical channel type	DCCH	
	RLC mode	TM	
	Payload sizes, bit	148	
	Max data rate, bps	3700	
	RLC header, bit	0	
MAC	MAC header, bit	0 (note)	
	MAC multiplexing	Simulated by SS	
Layer 1	TrCH type	DCH	
	TB sizes, bit	148	
	TFS	TF0, bits	0 x 148
		TF1, bits	1 x 148
	TTI, ms	40	
	Coding type	CC 1/3	
	CRC, bit	16	
	Max number of bits/TTI before rate matching	516	
	Uplink; Max number of bits/radio frame before rate matching	129	
	RM attribute	155-165	
NOTE:	The SS MAC layer must be configured not to add a MAC header so that the header can be added by the test case in order to create the necessary invalid values.		

The TFCS should be configured as specified in clause 6.10.2.4.1.2.1.1.2.

User Equipment:

The UE shall operate under normal test conditions, Ciphering Off.

The Test-USIM shall be inserted.

The SS starts broadcasting the System Information as specified in TS 34.108 clause 6.1, using the configuration for the PRACH and SCCPCH (signalled in SYSTEM INFORMATION 5) as follows:

1. The SCCPCH is configured as specified in TS 34.108 clause 6.10.2.4.3.3 (Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH).
2. The PRACH is configured as specified in TS 34.108 clause 6.10.2.4.4.1.

The SS follows the procedure in TS 34.108 clause 7.4.2.1 (Mobile Terminated) so that the UE shall be in state BGP 6-1 (CS-CELL_DCH_INITIAL). During this procedure the RRC CONNECTION SETUP message shall allocate a DCH to carry the signalling radio bearers as follows:

1. The DCH/DPCH is configured as specified in TS 34.108 clause 6.10.2.4.1.2: Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH).

Test procedure

- a) The SS receives the PAGING RESPONSE message from the UE and checks the C/T field.
- b) The SS transmits MAC PDUs containing RLC AM PDUs containing a DIRECT TRANSFER message containing
 1. Dummy octet string for NAS Message, of size sufficient enough to fit in one RLC PDU of 144 bits, including the correct RLC AM header.
 2. The IE CN Domain Identity is Set to PS Domain (no signalling connection for this Domain exists).

3. The polling bit in RLC header is set for transmission of RLC STATUS PDU.

The MAC header shall be set as follows:

Field	Value
C/T	'0111'B 0100'B

- c) The SS checks that UE shall neither transmit RRC Status message on SRB2 nor RLC Status PDU on SRB3.

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 571 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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

Title:	⌘ CR to TS 34.123-1 [REL-5] Package 2 RRC test case 8.3.1.10 Cell Update: expiry of T307 timer after T305 expiry and being out of service area. (Revision of T1-031101)		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 30/07/03
Category:	⌘ F	Release:	⌘ REL-5

Reason for change:	⌘ When out of service area is detected by the UE, timer T317 is started. This timer will expire before T305 as it has a lower value. On T317 expiry the UE will go to idle mode but the test case purpose is for the UE to go to idle mode on expiry of timer T307.
Summary of change:	⌘ The SS delays reconfiguring the downlink power settings to ensure that timers T305 and, subsequently, T307 both expire before T317, as required by the test purpose. Additionally, timer T305 is changed to the value 5min from the default 30min to reduce total test time. Note added in Test Procedure describing change of UE behaviour regarding T317 expiry required by TS 25.331 from June 2003.
Consequences if not approved:	⌘ The UE will not behave in the expected manner.

Clauses affected:	⌘ 8.3.1.10						
Other specs Affected:	<table border="1" style="font-size: x-small;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	⌘	X	Other core specifications	⌘
	Y	N					
	⌘	X					
⌘	X	Test specifications					
	⌘	X	O&M Specifications				
Other comments:	⌘ Affects R99, Rel-4 and Rel-5 test cases.						

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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

8.3.1.10 Cell Update: expiry of T307 after T305 expiry and being out of service area

8.3.1.10.1 Definition

8.3.1.10.2 Conformance requirement

When the T307 expires, the UE shall:

- 1> move to idle mode;
- 1> release all dedicated resources;
- 1> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;
- 1> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.10.3 Test purpose

- 1 To confirm that the UE moves to idle mode after the expiry of T307, indicating that it is out of service area when attempting to perform a periodic cell updating procedure.

8.3.1.10.4 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.

[Timer T305 is set to 5min.](#)

Test Procedure

Table 8.3.1.10

Parameter	Unit	Cell 1	
		T0	T1
UTRA RF Channel Number		Ch. 1	
CPICH Ec (FDD)	DBm/3.84MH z	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.1.10 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in CELL_FACH state at the start of the test. Before the expiry of periodic cell updating timer T305, the content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. 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. Now the UE and SS are synchronized. Immediately after the cell update procedure is finalized, [the SS starts a delay timer \$T_{delay}\$](#) (see below for limits on the timer value). [When \$T_{delay}\$ expires the SS](#) configures its downlink transmission power settings according to columns "T1" in table 8.3.1.10 so that $S < 0$ and this results in a "out of service area" condition. The SS continues to listen to the uplink channel to detect possible attempts to perform a cell

updating procedure. The UE shall not send any CELL UPDATE message on the uplink CCCH, instead it triggers timer T307 ~~and after expiry of~~ T305. After the expiry of timer T305+T307+10% margin since completion of the cell update procedure, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.10 so that S>0, the UE shall enter idle state. SS waits for 5s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Note 1 : The value chosen for T_{delay} should be midway between the following logical minimum and maximum values:

Minimum > T305 + T307 – T317

Maximum < T305

Note 2 : TS 25.331 (from June 2003) specifies that the UE should treat any value of T317 received from UTRAN as though it is equal to infinity. Nevertheless, the value of T317 used in Note 1 should be the value broadcast in SIB1 by the SS (or the implied default value if none is broadcast).

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state.
1a		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents).
1b		←	SYSTEM INFORMATION CHANGE INDICATION	
1c		→	CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell update".
1d		←	CELL UPDATE CONFIRM	
<u>1e</u>				<u>SS waits T_{delay} (see above)</u>
2a				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.10 so that the cell is no longer suitable for camping. The UE shall detect that it is out of service area and refrains from transmitting CELL UPDATE message due to periodic cell updating.
2b				SS waits <u>a further</u> ($T305+T307 - T_{\text{delay}}$) +10% for UE to enter idle mode.
3				The UE detects the expiry of timer T305 and it searches for other cells to camp on. After the expiry of timer T307, the UE shall enter idle mode. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.10 so that the cell is suitable for camping. SS waits for 5s.
4		↔	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

MASTER INFORMATION BLOCK (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception.

Information Element	Value/remark
Qrxlevmin	-70

SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

Information Element	Value/remark
Message Type BCCH modification info MIB Value tag	2

CELL UPDATE (Step 1c)

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

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'

PAGING TYPE 1 (Step 4)

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

Information Element	Value/remark
Paging record list Paging record CHOICE Used paging identity - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN identity Terminating Call with one of the supported services Supported Domain (PS Domain or CS Domain) IMSI Set to the same IMSI value stored in the TEST USIM card.

8.3.1.10.5 Test requirement

After step 3 the UE shall move to idle mode.

CHANGE REQUEST

34.123-1 CR 572 # rev **-** # Current version: **5.4.0**

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; Correction to CC test cases 10.1.2.2.1 (package 4), 10.1.2.2.2 (package 3) and 10.1.2.9.2 (low prio)		
Source:	# T1		
Work item code:	# TEI	Date:	# 31/07/2003
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:	# When UE is in state U0.1 according to table 10.1.2/4 integrity has not yet been activated. UE will thus reject the STATUS ENQUIRY message used to verify the state of the UE.
Summary of change:	# TC 10.1.2.2.1: <ul style="list-style-type: none"> • Test procedure and expected sequence (between step 1 and 2): Added authentication and activation of integrity before checking the UE state by the STATUS ENQUIRY message. TC 10.1.2.2.2: <ul style="list-style-type: none"> • Removed CM SERVICE ACCEPT as for UMTS this only will be sent by the network for emergency calls (for basic calls in UMTS the completion of the security mode control procedure shall be treated by the UE as service acceptance, see 24.008 clause 4.5.1.1). • Test procedure and expected sequence (between step 1 and 2): Added authentication and activation of integrity before checking the UE state by the STATUS ENQUIRY message. TC 10.1.2.9.2: <ul style="list-style-type: none"> • Expected sequence (after step 9a): Added authentication and activation of integrity.
Consequences if not approved:	# Good UE will fail test case.

Clauses affected:	⌘	10.1.2.2.1, 10.1.2.2.2 and 10.1.2.9.2								
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></table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
	Y	N								
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
		Test specifications								
		O&M Specifications								
Other comments:	⌘	Affects R99, REL-4 and REL-5 test cases.								

How to create CRs using this form:

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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.

10 Circuit Switched Call Control (CC)

10.1 Circuit switched Call Control (CC) state machine verification

10.1.1 General on CC state machine verification

The principle of checking the call control functions consists in the validation of each call control identified state.

State U0 as an initial state is not verified in the tests of 10.1.2 (establishment of an outgoing call).

State U0.1 is never verified.

The steps to be followed within each performed test are:

- bring the UE into the required state;
- trigger the tested event;
- check the UE response and new state.

In clauses 10.1.2 and 10.1.3 different tables are defined to bring the UE into the required initial state. The exact table to be chosen is specified individually in clause "Initial conditions" of "Method of test" for each test case.

For each test, unless otherwise specified, a circuit switched basic service among those supported by the UE but excluding the emergency call teleservice shall be chosen arbitrarily, and the test shall be performed according to that basic service. If the only circuit switched basic service supported by the mobile is emergency call, then the incoming call tests shall not be performed and the other call control tests shall be performed with the EMERGENCY SETUP message replacing the SETUP message.

The initial states are to be checked through STATUS ENQUIRY messages sent by the SS, when feasible. This is not explicitly stated in the tables of expected sequences of signalling messages. The checking of final states are explicitly included into the expected sequences of signalling messages.

The following postamble may be used by the SS to bring UE back to idle mode in those test cases, in which it is not already included into expected sequence of signalling messages:

Table 10.1.1/1: A postamble to bring the UE back to idle mode.

Step	Direction		Message	Comments
	UE	SS		
N	<--		RRC CONNECTION RELEASE	
n+1	-->		RRC CONNECTION RELEASE COMPLETE	
n+2		UE		the UE releases the RRC connection

The postamble has not been included into the all of the tests in order to leave an option to concatenate the procedures in the future by using a final state of a test case as an initial state to another one.

For the special case of U0, the state is checked by sending STATUS ENQUIRY message with all possible values of transaction identifier (seven values) as U0 is the only state in which for every TI the UE will answer with release complete with cause #81. If U0 is to be verified when no RRC connection exists, first a mobile terminating radio connection must be established.

The UE responses are either call management messages received by the SS or lower layers functions activated within the UE or MMI actions (e.g. the buzzing of an alerting tone).

A time-out within the UE is triggered by the SS when it does not answer back an UE expected response.

The test sequences may be split in 3 main groups:

- establishment and release of an outgoing call;
- establishment and release of an incoming call;
- in-call functions.

Some test cases use Basic Generic Procedures, "Mobile terminated establishment of Radio Resource Connection" and "Radio Bearer Setup Procedure" defined in TS34.108 clause 7.

General tolerance value on protocol timers defined in TS34.108 is used in some test cases if no specific tolerance on timer is defined in a test case.

Remark on verification of transient states

Some call control states of the user equipment may be transient, depending on implementation, configuration of the UE and previous messages.

If a test starts in a transient state, then the test is executed without verification of the starting state.

10.1.2 Establishment of an outgoing call

Initial conditions

As a minimum requirement the UE is updated and has been given a TMSI, a ciphering key and cipher key sequence number, and the layer 2, RRC and MM functionalities have been verified.

There are as many CM initial conditions as states to be checked.

The tables below describe message exchanges which bring the UE in the requested initial states.

A state may be taken as initial only when all the states which lead to this initial states have been validated. The order followed in the test procedure will be U0, U0.1, U1, U3, U4, U10, U12, U19, U11 as seen in the table underneath.

The UE is brought again in the initial state starting with U0 at each new test performed.

Table 10.1.2/1: Establishment of an outgoing call, procedure 1 (late assignment)

Step	Direction		Message	Comments
	UE	SS		
1			Mobile Originated establishment of Radio Resource Connection	Establishment cause: Originating Conversational Call
2			Void	
3			Void	
4	->		CM SERVICE REQUEST	
5	<-		AUTHENTICATION REQUEST	
6	->		AUTHENTICATION RESPONSE	
7	<-		SECURITY MODE COMMAND	
8	->		SECURITY MODE COMPLETE	
9	->		SETUP	
10	<-		CALL PROCEEDING	
11	<-		ALERTING	
12			Radio Bearer Setup Procedure	
13	<-		CONNECT	
14	->		CONNECT ACKNOWLEDGE	
A15	<-		DISCONNECT	U12 (note 1)
B15	<-		DISCONNECT	U12 (note 2)
B16	->		RELEASE	U19
C15				MMI action, terminate call
C16	->		DISCONNECT	U11
NOTE 1: The Progress Indicator IE with progress description #8 "in band information or appropriate pattern now available" is included.				
NOTE 2: The Progress Indicator IE is not included.				

Table 10.1.2/2: Void

Table 10.1.2/3: Establishment of an outgoing call, procedure 3

Step	Direction		Message	Comments
	UE	SS		
1			Mobile Originated establishment of Radio Resource Connection	Establishment cause: Originating Conversational Call
2			Void	
3			Void	U0.1
4	->		CM SERVICE REQUEST	
4a	<-		AUTHENTICATION REQUEST	
4b	->		AUTHENTICATION RESPONSE	
5	<-		SECURITY MODE COMMAND	
6	->		SECURITY MODE COMPLETE	
7	->		SETUP	U1
8			Void	U3
9			Void	
10	<-		CALL PROCEEDING	See TS 34.108 clause 7.1.3
11			Radio Bearer Setup Procedure	
12	<-		ALERTING	U4
13	<-		CONNECT	U10
14	->		CONNECT ACKNOWLEDGE	
A15	<-		DISCONNECT	U12 (note 1)
B15	<-		DISCONNECT	U12 (note 2)
B16	->		RELEASE	U19
C15				MMI action, terminate call
C16	->		DISCONNECT	
NOTE 1: The Progress Indicator IE with progress description #8 "in band information or appropriate pattern now available" is included.				
NOTE 2: The Progress indicator IE is not included.				

Table 10.1.2/4: Establishment of an outgoing call, procedure 4

Step	Direction		Message	Comments
	UE	SS		
1			Mobile Originated establishment of Radio Resource Connection	Establishment cause: Originating Conversational Call
2			Void	
3			Void	U0.1
4	->		CM SERVICE REQUEST	
5	<-		IDENTITY REQUEST	
6	->		IDENTITY RESPONSE	
6a	<-		AUTHENTICATION REQUEST	
6b	->		AUTHENTICATION RESPONSE	
7	<-		SECURITY MODE COMMAND	U1
8	->		SECURITY MODE COMPLETE	
9	->		SETUP	See TS 34.108 clause 7.1.3 (note 1)
10			Radio Bearer Setup Procedure	
11	<-		CALL PROCEEDING	U3
12	<-		ALERTING	U4
13	<-		CONNECT	U10
14	->		CONNECT ACKNOWLEDGE	
A15	<-		DISCONNECT	U12 (note 2)
B15	<-		DISCONNECT	U12 (note 3)
B16	->		RELEASE	U19
C15				MMI action, terminate call
C16	->		DISCONNECT	
NOTE 1: Assigned channel is appropriate for the chosen bearer capability (see 10.1).				
NOTE 2: The Progress Indicator IE with progress description #8 "in band information or appropriate pattern now available" is included.				
NOTE 3: The Progress Indicator IE is not included.				

<Skip until first modified section>

<Start of first modified section>**10.1.2.2 Outgoing call / U0.1 MM connection pending****10.1.2.2.1 Outgoing call / U0.1 MM connection pending / CM service rejected****10.1.2.2.1.1 Definition**

A request for MM connection is rejected by the SS.

10.1.2.2.1.2 Conformance requirement

If a CM SERVICE REJECT message is received by the UE, timer T3230 shall be stopped, the requesting CM sublayer entity informed. Then the UE shall proceed as follows:

- If the cause value is not #4 or #6 the MM sublayer returns to the previous state (the state where the request was received). Other MM connections shall not be affected by the CM SERVICE REJECT message.
- If cause value #4 is received, the UE aborts any MM connection, deletes any TMSI, LAI and ciphering key sequence number in the SIM, changes the update status to NOT UPDATED (and stores it in the SIM according to clause 4.1.2.2), and enters the MM sublayer state WAIT FOR NETWORK COMMAND. If subsequently the RR connection is released or aborted, this will force the UE to initiate a normal location updating). Whether the CM request shall be memorized during the location updating procedure, is a choice of implementation.
- If cause value #6 is received, the UE aborts any MM connection, deletes any TMSI, LAI and ciphering key sequence number in the SIM, changes the update status to ROAMING NOT ALLOWED (and stores it in the SIM according to clause 4.1.2.2), and enters the MM sublayer state WAIT FOR NETWORK COMMAND. The UE shall consider the SIM as invalid for non-GPRS services until switch-off or the SIM is removed.

References

TS 24.008, clause 4.5.1.1.

10.1.2.2.1.3 Test purpose

To verify that a CC entity of the UE in CC-state U0.1, "MM-connection pending", upon the UE receiving a CM SERVICE REJECT message, returns to CC state U0, "Null".

10.1.2.2.1.4 Method of test**Related ICS/IXIT statements**

- supported MO circuit switched basic services.

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in MM-state "idle, updated" with valid TMSI and CKSN.

The UE is brought into the state U0.1 by using table 10.1.2/1.

Test procedure

An MO circuit switched basic service is selected that is supported by the UE; if the UE supports MO telephony, the selected basic service is telephony. If necessary, the UE is configured for that basic service. Then, the UE is made to initiate a call. When the SS receives CM SERVICE REQUEST, the contents of it shall be checked. The SS rejects it by

CM SERVICE REJECT. [The SS performs authentication and starts integrity.](#) Then the SS will check the state of the UE by using STATUS ENQUIRY with all the relevant transaction identifiers.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	<-		CM SERVICE REJECT	
1a	<=		AUTHENTICATION REQUEST	
1b	=>		AUTHENTICATION RESPONSE	
1c				SS starts integrity
2	<-		STATUS ENQUIRY	
3	=>		RELEASE COMPLETE	
4		SS		cause shall be #81 (invalid TI value) repeat steps 2-3 to cover all the transaction identifiers from 000 ...110
5	<-			The SS releases the RRC connection.

Specific message contents:

None.

10.1.2.2.1.5 Test requirements

After step 2 CC entities relating to all mobile originating transaction identifiers shall send RELEASE COMPLETE messages with cause value #81 (invalid TI value).

10.1.2.2.2 Outgoing call / U0.1 MM connection pending / CM service accepted

10.1.2.2.2.1 Definition

A CM request is accepted for the MM-connection by the SS.

10.1.2.2.2.2 Conformance requirement

Having entered the "MM connection pending" state, upon MM connection establishment, the call control entity of the UE sends a setup message to its peer entity. This setup message is

- a SETUP message, if the call to be established is a basic call.

It then enters the "call initiated" state.

References

TS 24.008 clause 5.2.1.

10.1.2.2.2.3 Test purpose

To verify that a CC entity of the UE in CC-state U0.1, "MM connection pending", ~~upon the~~ [after completion of the security mode control procedure](#) ~~UE receiving a CM SERVICE ACCEPT message~~, sends a SETUP message specifying the Called party BCD number that was entered into the UE and then enters CC state U1, "Call initiated".

10.1.2.2.2.4 Method of test

Related ICS/IXIT statements

- supported MO circuit switched basic services.

Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

The UE is in MM-state "idle, updated" with valid TMSI and CKSN.

The UE is brought into the state U0.1 by using table 10.1.2/1.

Test procedure

An MO circuit switched basic service is selected that is supported by the UE; if the UE supports MO telephony, the selected basic service is telephony. If necessary, the UE is configured for that basic service. Then, the UE is made to initiate a call. When the UE is requesting a MM-connection, the SS ~~will~~ [performs authentication and starts integrity](#) ~~indicate acceptance by sending a CM-SERVICE-ACCEPT message~~. The UE shall respond with SETUP. Then the SS will check the state of the call control entity by STATUS ENQUIRY with the relevant transaction identifiers.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	<-		Void CM-SERVICE-ACCEPT	
1a	≤		AUTHENTICATION REQUEST	
1b	->		AUTHENTICATION RESPONSE	
1c				SS starts integrity
2	->		SETUP	with called party BCD number.
3	<-		STATUS ENQUIRY	
4	->		STATUS	cause shall be #30 (response to enq.) and state U1 call initiated.

Specific message contents:

None.

10.1.2.2.2.5 Test requirements

After step 1 the UE shall send a SETUP message specifying the Called party BCD number that was entered into the UE and then enter CC state U1, "Call initiated".

<End of modified section>

<Start of next modified section>**10.1.2.9.2 Outgoing call / U19 release request / 2nd timer T308 time-out****10.1.2.9.2.1 Definition**

The call control entity of the UE being in the state, U19, if no response is then received after timer T308 has expired two times in success at the UE.

10.1.2.9.2.2 Conformance requirement

At second expiry of timer T308, the call control entity of the UE shall: release the MM connection; and return to the "null" state.

References

TS 24.008 clause 5.4.4.1.3.1.

10.1.2.9.2.3 Test purpose

- 1) To verify that a CC-entity of the UE in CC-state U19, "Release Request", upon the 2nd expiry of the timer T308, enters the CC-state U0, "Null".
- 2) To verify that subsequently the UE proceeds with releasing the MM-connection and enters the idle mode with the CC entities relating to the seven mobile originating transaction identifiers in state U0, "Null".

10.1.2.9.2.4 Method of test**Related ICS/IXIT statements**

- supported MO circuit switched basic services.

Initial conditions**System Simulator:**

1 cell, default parameters.

User Equipment:

The UE is in MM-state "idle, updated" with valid TMSI and CKSN.

The UE is brought into the state U19 by using table 10.1.2/4.

Test procedure

An MO circuit switched basic service is selected that is supported by the UE; if the UE supports MO telephony, the selected basic service is telephony. If necessary, the UE is configured for that basic service. Then, the UE is made to initiate a call. The CC entity of the UE is brought to the state U19. The SS allows T308 expiry at the UE, and the UE shall repeat sending the RELEASE message and start timer T308 again. The SS allows again T308 expiry at the UE. The UE shall abort the RRC connection. The SS waits long enough to enable the UE to return to idle state listening to paging, and then pages UE to create RRC connection. [The SS performs authentication and starts integrity.](#) Finally, the SS will check the state of the UE by using STATUS ENQUIRY with the relevant transaction identifiers.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		SS waits until T308 expiry at the UE
2	->		RELEASE	
3	<-		STATUS ENQUIRY	
4	->		STATUS	cause #30, state U19
5		SS		SS waits until the second T308 expiry at the UE
6		SS		SS waits T3240 expiry at the UE
7		UE		The SS releases the RRC connection
8		SS		SS waits 10 s for the UE to return to listening to paging
9			Mobile terminated establishment of Radio Resource Connection	See TS34.108
9a	->		PAGING RESPONSE	
9b	<=		AUTHENTICATION REQUEST	
9c	->		AUTHENTICATION RESPONSE	
9d				SS starts integrity
10	<-		STATUS ENQUIRY	
11	->		RELEASE COMPLETE	cause #81 (invalid TI value)
12		SS		repeat steps 10-11 to cover all the transaction identifiers from 000...110
13				The SS releases the RRC connection.

Specific message contents:

None.

10.1.2.9.2.5 Test requirements

After step 5 upon the 2nd expiry of the timer T308 the UE shall enter the CC-state U0, "Null".

After step 10 CC entities relating to all mobile originating transaction identifiers shall send RELEASE COMPLETE messages with cause value #81 (invalid TI value).

<End of modified section>

CR-Form-v7
CHANGE REQUEST
34.123-1 CR 573 # rev - # Current version: 5.4.0

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] Package 2 GMM test case 12.4.2.2 Combined routing area updating / UE in CS operation at change of RA (Revision of T1-030994)		
Source:	# T1		
Work item code:	# TEI	Date:	# 31/07/03
Category:	# F	Release:	# REL-5

Reason for change:	# At step 9 of the test sequence the UE performs a routing area update which is of type 'RA updating' and the TMSI status has been set to 'no valid TMSI available'. However, this TMSI status only applies to a combined RA update procedure (see TS 24.008 clause 9.4.14.4).
Summary of change:	# At step 9 of the test sequence the requirement to check the TMSI status in the ROUTING AREA UPDATE REQUEST is removed. (Note: there is no specific requirement upon the UE, in the Core Specs, to omit this IE).
Consequences if not approved:	# The UE will not behave in the expected manner.

Clauses affected:	# 12.4.2.2						
Other specs Affected:	<table border="1" style="font-size: x-small;"> <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>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	#
	Y	N					
	<input type="checkbox"/>	<input checked="" type="checkbox"/>					
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	#				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	#				
Other comments:	# Affects R99, Rel-4 and Rel-5 test cases.						

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- 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

12.4.2.2 Combined routing area updating / UE in CS operation at change of RA

12.4.2.2.1 Definition

12.4.2.2.2 Conformance requirement

PS UE in UE operation mode A that is in an ongoing CS transaction at change of routing area shall initiate the normal routing area updating procedure.

Reference

3GPP TS 24.008 clause 4.7.5.2.

12.4.2.2.3 Test purpose

To test the behaviour of the UE if the routing area is changed during an ongoing circuit switched transmission.

12.4.2.2.4 Method of test

Initial condition

System Simulator:

One cell, cell A in MCC1/MNC1/LAC1/RAC1 (RAI-1) is operating in network operation mode I.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service Yes/No

UE operation mode A Yes/No

Switch off on button Yes/No

Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

A combined PS attach procedure is performed. The UE in UE operation mode A initiates a CS call. The routing area change. The UE will perform the normal routing area updating procedure during the ongoing circuit-switched transaction.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1				Set the cell type of cell A to the "Serving cell". (see note)
1a	UE			The UE is set in UE operation mode A (see ICS).
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
2a	SS			SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = IMSI TMSI status = no valid TMSI available
3a	<-		AUTHENTICATION AND CIPHERING REQUEST	
3b	->		AUTHENTICATION AND CIPHERING RESPONSE	
3c	SS			The SS starts integrity protection.
4	<-		ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-1
5	->		ATTACH COMPLETE	
5a	SS			The SS releases the RRC connection.
6	UE			A CS call is initiated.
7			Void	
8			Void	
8a	<-		UTRAN MOBILITY INFORMATION	The SS conveys updated CN system information for the PS domain to the UE in connected mode, including a new routing area code.
8b	->		UTRAN MOBILITY INFORMATION CONFIRM	
9	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
9a	SS			The SS starts integrity protection.
10	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Mobile identity = IMSI Routing area identity = RAI-4
11	->		ROUTING AREA UPDATE COMPLETE	
11a	SS			The SS releases the PS signalling connection, but keeps the RRC connection.
12	<-		PAGING TYPE2	Mobile identity = P-TMSI-1 Paging order is for PS services.
13	->		SERVICE REQUEST	service type = "paging response"
13a	SS			The SS starts integrity protection.
13b	SS			The SS releases the CS call.
14	SS			The SS initiates the RRC connection release.
14a	->		ROUTING AREA UPDATE REQUEST	Update type = "combined RA/LA updating", P-TMSI-1 signature, Routing area identity = RAI-4, TMSI status = no valid TMSI available
14b	SS			The SS starts integrity protection.
14c	<-		ROUTING AREA UPDATE ACCEPT	Update result = "combined RA/LA updated", No P-TMSI, P-TMSI-3 signature, Routing area identity = RAI-4
15	UE			The UE is switched off or power is removed (see ICS).

15a	SS		SS checks that the IE "Establishment cause" in any received RRC CONNECTION REQUEST message is set to "Detach".
16	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, combined PS / IMSI detach'
17	SS		If the power was not removed, the SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off .
NOTE: The definitions for "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

UTRAN MOBILITY INFORMATION (step 8a)

The contents of the UTRAN MOBILITY INFORMATION message in this test case is identical to the default message in TS 34.108, 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	Not Present
CN information info	
- PLMN identity	Not Present
- CN common GSM-MAP NAS system information	Not Present
- CN domain related information	
- CN domain identity	CS domain
- CN domain specific GSM-MAP NAS system info	
- T3212	30
- ATT	1
- CN domain specific DRX cycle length coefficient	7
- CN domain related information	
- CN domain identity	PS domain
- CN domain specific GSM-MAP NAS system info	
- RAC	RAC-2
- NMO	0 (Network Mode of Operation I)
- CN domain specific DRX cycle length coefficient	7

12.4.2.2.5 Test requirements

At step3, when the UE is powered up or switched on, UE shall:

- initiate the combined PS attach procedure with information elements specified in the above Expected Sequence.

At step9, when the UE has received the new RAI from the SS in the UTRAN MOBILITY INFORMATION message, the UE shall:

- initiate the normal routing area updating procedure.

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 574 ⌘ rev - ⌘ Current version: 5.4.0 ⌘

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 34.123-1 Rel-5: TC 12.8 Ready Timer in use		
Source:	⌘ T1		
Work item code:	⌘ TEI	Date:	⌘ 14/072003
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 READY timer is not applicable for UMTS. Ready timer handling is applicable only for terminals supporting GSM and UMTS systems. Test case 12.8 doesn't use given Ready Timer value. The only thing it tests is that terminal can receive value without reset. This CR introduces inter system cell re-selection to GPRS where value of Ready Timer is used and checked. Revision of T1-031038 after comments received in T1#20.
Summary of change:	⌘ There is no way to check by tester that mobile terminal has received and stored Ready Timer value. CR introduces cell reselection to GSM where value is used and checked.
Consequences if not approved:	⌘ The test case need to be removed from specification.

Clauses affected:	⌘ 12.8						
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> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	34.123-2
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> Test specifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

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.

- send the IDENTITY RESPONSE message with the Mobile identity = IMSI.

At step9, when the SS requests an IMEI with the IDENTITY REQUEST message, UE shall:

- send the IDENTITY RESPONSE message with the Mobile identity = IMEI.

At step11, when the SS requests an IMEISV with the IDENTITY REQUEST message, UE shall:

- send the IDENTITY RESPONSE message with the Mobile identity = IMEISV.

<START OF MODIFIED SECTION>

12.8 GMM READY timer handling

~~The READY timer is not applicable for UMTS.~~

12.8.1 Definition

12.8.2 Conformance requirement

If a READY timer value is received by an UE capable of both UMTS and GSM in the ATTACH ACCEPT or the ROUTING AREA UPDATE ACCEPT messages, then the received value shall be stored by the UE in order to be used at an intersystem change from UMTS to GSM.

Reference

3GPP TS 24.008 clause 4.7.2.1

12.8.3 Test purpose

To verify ~~the functionality of the~~that -READY timer value received in UTRA can be used in GSM.

12.8.4 Method of test

12.8.4.1 Test procedure~~4~~

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A (UTRAN) in MCC1/MNC1/LAC1/RAC1 (RAI-1), cell B (GSM) in MCC1/MNC1/LAC1/~~RAC1~~ RAC2 (RAI-4).

Cell B is in neighbour cell list of cell A.

Both cells are operating in network operation mode II.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

UE supports both GSM/GPRS and UTRAN Radio Access Technologies Yes/No

UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps

SRBs Yes/No

~~Support of PS service~~ Yes/No

UE operation mode A Yes/No

Switch off on button Yes/No

Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

An attach is performed.

T3314; set to 60 seconds

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		The following messages are sent and shall be received on cell A. Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Non-Suitable cell" is swithed off. (see note)
2	UE			The UE is set in UE operation mode A (see ICS). If UE operation mode A not supported set the UE in operation mode C. The UE is powered up or switched on and initiates an attach(see ICS).
2a		SS		SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3		->	ATTACH REQUEST	Attach type = 'PS attach' Mobile identity = IMSI
3a		<-	AUTHENTICATION AND CIPHERING REQUEST	
3b		->	AUTHENTICATION AND CIPHERING RESPONSE	
3c		SS		The SS starts integrity protection.
4		<-	ATTACH ACCEPT	Attach result = 'PS only attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-1 T3314 = 60 seconds <u>T3312=6 minutes</u>
5		->	ATTACH COMPLETE	The SS releases the RRC connection.
5a		SS		The UE is switched off or power is removed (see ICS). Set the cell type of cell A to the "Suitable neighbour cell". <u>Set the cell type of cell B to the "Serving cell".</u>
6		SS UE		
7		UE		UE establish cell reselection to GSM system The following messages are received on Cell B (GERAN)
6a8		SS->	ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' P-TMSI-2 signature Routing area identity = RAI-1 SS checks that the IE "Establishment cause" in any received RRC CONNECTION REQUEST message is set to "Detach".
97		<->	ROUTING AREA UPDATE ACCEPT DETACH REQUEST	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4 Message not sent if power is removed. Detach type = 'power switched off, PS detach'
10		->	ROUTING AREA UPDATE COMPLETE	
117a		SS		The SS verifies that the time between the <u>end of Step 10 and the periodic RA updating is Ready</u> <u>Timer Period (T3314) + Periodic Routing Area Updating timer (T3312) (+/- 10%)</u> If the power was not removed, the SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
12		->	ROUTING AREA UPDATE REQUEST	Update type = 'Periodic updating' Mobile identity=P-TMSI-1 P-TMSI-1 signature

13	<-	ROUTING AREA UPDATE ACCEPT	Routing area identity = RAI-4 Update type = 'RA updated'
14	UE		UE is swithed off or power is removed (see ICS)
15	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, GPRS detach'
NOTE: The definitions for "Non-Suitable cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

None.

12.8.5 Test requirements

At step4, when the UE receives the ATTACH ACCEPT or the ROUTING AREA UPDATE ACCEPT messages, UE shall:

- store the received READY timer value.

[At step12, UE shall establish periodic Routing Area Update after Timer Period \(T3314\) + Periodic Routing Area Updating timer \(T3312\) \(+/- 10%\)](#)

<END OF MODIFIED SECTION>

CHANGE REQUEST

34.123-1 CR 575 # rev **-** # Current version: **5.4.0**

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; Correction to package 1 GMM test case 12.3.1.2		
Source:	# T1		
Work item code:	# TEI	Date:	# 1/08/2003
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)

vReason for change:	# Conformance requirement for test case 12.3.1.2 need to be updated: <ul style="list-style-type: none"> Conformance requirement 1) does not reflect the wording of TS 24.008 clause 4.7.4.1. Conformance requirement 2) is incorrect. The P-TMSI signature shall not be deleted upon completion of service request procedure. Ref. TS 24.008 clause 4.7.1.3. <p style="background-color: yellow; padding: 2px;">Handling of P-TMSI signature is not verified.</p>
Summary of change:	# TC 12.3.1.2: <ul style="list-style-type: none"> Conformance requirement is updated. Reference to 24.008 for conformance requirement 1) refined. Checking of P-TMSI signature added in step 7 of expected sequence and in test requirement. Mobile identity added in comments column of expected sequence for step 7 and 15 as well as in test requirement.
Consequences if not approved:	# Conformance requirement inconsistent with core specifications

Clauses affected:	# 12.3.1.2				
Other specs	# <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"/>				

affected:	<input checked="" type="checkbox"/>	Test specifications
	<input checked="" type="checkbox"/>	O&M Specifications
Other comments:		
	⌘	Affects R99, REL-4 and REL-5 test cases.
		Revision of T1-031232, T1-031224, T1-021217 and T1-031050.
		Changes in blue was introduced in T1-031217.
		Changes in yellow was introduced in T1-031224 and T1-031232.
		Changes in green was introduced in T1-031244.

How to create CRs using this form:

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Below is a brief summary:

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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.

12.3.1.2 PS detach / accepted

12.3.1.2.1 Definition

12.3.1.2.2 Conformance requirement

- 1) ~~The UE detaches the IMSI for PS services if the UE is ordered to do so with MMI or AT commands.~~ The GPRS detach procedure is initiated by the UE by sending a DETACH REQUEST message. The detach type information element may indicate "GPRS detach with switching off", "GPRS detach without switching off", "IMSI detach", "GPRS/IMSI detach with switching off" or "GPRS/IMSI detach without switching off".

The UE shall include the P-TMSI in the DETACH REQUEST message. The UE shall also include a valid P-TMSI signature, if available.
- 2) Upon completion of the detach procedure, the used P-TMSI signature shall be deleted. ~~Upon completion of the subsequent attach, routing area update, service request or detach procedure the used P-TMSI signature shall be deleted.~~

Reference

3GPP TS 24.008 clause 4.7.4.1.1

3GPP TS 24.008 clause 4.7.1.3

12.3.1.2.3 Test purpose

To test the behaviour of the UE for the detach procedure, including treatment of P-TMSI signature.

12.3.1.2.4 Method of test

Initial condition

System Simulator:

One cell operating in network operation mode II.

The SIB1 IE "CN domain specific NAS system information", for the CS Domain, is set to value "00 00" (to prevent repeated CS domain registration and/or IMSI Detach by UEs in operation mode A).

User Equipment:

The UE has a valid P-TMSI-1 and RAI-1.

The UE has been registered in the CS domain.

Related ICS/IXIT statements

Support of PS service	Yes/No
UE operation mode C	Yes/No
UE operation mode A	Yes/No
Switch off on button	Yes/No
Automatic PS attach procedure at switch on or power on	Yes/No
UE PS Release	Yes/No

Test procedure

The UE performs a PS attach procedure.

The UE sends a DETACH REQUEST message to the SS.

The SS signal to the UE, but no response is received, as the signalling link is disconnected.

The UE performs a PS attach procedure.

The UE sends a DETACH REQUEST message to the SS.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The UE is set to attach to the PS services only (see ICS). If that is not supported by the UE, goto step 18.
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
2a	SS			SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3	->		ATTACH REQUEST	Attach type = 'PS attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
3a	<-		AUTHENTICATION AND CIPHERING REQUEST	
3b	->		AUTHENTICATION AND CIPHERING RESPONSE	
3c	SS			The SS starts integrity protection.
4	<-		ATTACH ACCEPT	Attach result = 'PS only attached' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1
5	->		ATTACH COMPLETE	
5a	SS		(void)	The SS releases the RRC connection.
5				
6	UE			The UE initiates a PS detach (without power off) by MMI or AT command.
6a	SS			SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Detach"
7	->		DETACH REQUEST	Detach type = 'normal detach, PS detach' <u>Mobile identity = P-TMSI-1</u> <u>P-TMSI-1 signature</u>
7a	SS			The SS starts integrity protection.
8	<-		DETACH ACCEPT	
8a	SS			The SS releases the RRC connection.
9	<-		PAGING TYPE1	Mobile identity = P-TMSI-1 Paging order is for PS services.
10	UE			No response from the UE to the request. This is checked for 10 seconds.
11	UE			The UE initiates an attach by MMI or AT commands
12	->		ATTACH REQUEST	Attach type = 'PS attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
13	<-		ATTACH ACCEPT	No new mobile identity assigned Attach result = 'PS only attached' Routing area identity = RAI-1
14	UE			The UE initiates a PS detach (without power off) by MMI or AT command.
15	->		DETACH REQUEST	Detach type = 'normal detach, PS detach' <u>Mobile identity = P-TMSI-1</u>
16	<-		DETACH ACCEPT	
17			(void)	
18	UE			The UE is set to attach to both PS and non-PS services (see ICS) and the test is repeated from step 2 to step 16.

Specific message contents

None.

12.3.1.2.5 Test requirements

At step 2a the UE shall send an RRC CONNECTION REQUEST message with the IE Establishment cause set to "Registration".

At step 6a the UE shall send an RRC CONNECTION REQUEST message with the IE Establishment cause set to "Detach".

At step3, when the UE is powered up or switched on, UE shall:

- initiate the PS attach procedure with the information elements specified in the above Expected Sequence.

At step7~~and 15~~, UE shall:

- send the DETACH REQUEST message (without power off) to SS with mobile identity P-TMSI-1 and P-TMSI-1 signature.

At step10, when the UE receives the paging message for PS domain, UE shall:

- not respond to the paging message for PS domain.

At step 12, UE shall

- initiate ATTACH REQUEST message without P-TMSI signature IE.

At step 15, UE shall:

- send the DETACH REQUEST message (without power off) to SS with mobile identity P-TMSI-1 and without P-TMSI-1 signature.

CR-Form-v7	
CHANGE REQUEST	
# 34.123-1 CR 576 # rev - #	Current version: 5.4.0 #

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:	# Corrections to low priority Multi RAB test cases		
Source:	# T1		
Work item code:	# TEI	Date:	# 15/08/2003
Category:	# F	Release:	# REL-5
	Use <i>one</i> of the following categories:		Use <i>one</i> 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:	# According to 25.331, section 8.6.2, restricted set of TFCI must comply with the minimum set.
Summary of change:	# Minimum set of TFCIs added to low priority RAB test cases involving DSCH
Consequences if not approved:	# Tests as specified not conformant to the core spec

Clauses affected:	# 14.3.5.1, 14.3.5.2, 14.3.6.1, 14.3.6.2		
Other specs affected:	#	#	# 34.123-3
	#	#	
	#	#	
Other comments:	# Affects R99, REL-4 and REL-5		

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.

14.3.5 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.3.5.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 10 ms TTI

14.3.5.1.1 Conformance requirement

See 14.2.4.1

14.3.5.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.5 for the downlink 10 ms TTI case.

14.3.5.1.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1)

DSCH downlink TFS:

	TFI	RB5 (384 kbps)
TFS	DSCH_TF0, bits	0x354
	DSCH_TF1, bits	1x354
	DSCH_TF2, bits	2x354
	DSCH_TF3, bits	4x354
	DSCH_TF4, bits	8x354
	DSCH_TF5, bits	12x354

DSCH downlink TFCs:

TFCI	RB8
DL_DSCH_TFC0	DSCH_TF0
DL_DSCH_TFC1	DSCH_TF1
DL_DSCH_TFC2	DSCH_TF2
DL_DSCH_TFC3	DSCH_TF3
DL_DSCH_TFC4	DSCH_TF4
DL_DSCH_TFC5	DSCH_TF5

Downlink TFS (For CS):

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)
TFS	TF0, bits	1x0	0x103	0x60
	TF1, bits	1x39	1x103	1x60
	TF2, bits	1x81	N/A	N/A
	TF3, bits	N/A	N/A	N/A
	TF4, bits	N/A	N/A	N/A
	TF5, bits	N/A	N/A	N/A

DCH downlink TFS:

	TFI	DCCH
TFS	DCH_TF0, bits	0x148
	DCH_TF1, bits	1x148

DCH downlink TFCS:

TFCI	DCCH
DL_DCH_TFC0	DCH_TF0
DL_DCH_TFC1	DCH_TF1

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, DCH_TF0)
DL_TFC1	(TF1, TF0, TF0, DCH_TF0)
DL_TFC2	(TF2, TF1, TF1, DCH_TF0)
DL_TFC3	(TF0, TF0, TF0, DCH_TF1)
DL_TFC4	(TF1, TF0, TF0, DCH_TF1)
DL_TFC5	(TF2, TF1, TF1, DCH_TF1)

[<Start of modified section>](#)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1, DL_TFC4,	UL_TFC1, UL_TFC16	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2 , UL_TFC3 , UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC5,	UL_TFC2, UL_TFC17	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2, UL_TFC3 , UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCSs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
3	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC3, UL_TFC18	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC4, UL_TFC19	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC4, UL_TFC15, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
6	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC6, UL_TFC21	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC7, UL_TFC22	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC7, UL_TFC15, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC2, DL_TFC5, DL_DSCH_TFC2	UL_TFC8, UL_TFC23	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC8, UL_TFC15, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC9, UL_TFC24	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
11	DL_TFC2, DL_TFC5, DL_DSCH_TFC3	UL_TFC11, UL_TFC26	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC12, UL_TFC27	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
13	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC2, DL_TFC5, DL_DSCH_TFC4	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC1, DL_TFC4, DL_DSCH_TFC5	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 3882
16	DL_TFC2, DL_TFC5, DL_DSCH_TFC5	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3882
<p>NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, and UL_TFC15 are part of minimum set of TFCIs.</p> <p>NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB8: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). The size of the uplink RLC SDU is set to the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

<End of modified section>

14.3.5.1.4 Test requirements

See 14.1.2a for definition of step B10 and step 15.

1. At step B10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15e and 15f the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15e and 15f the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB6, RB7 and RB8
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB8.

- for sub-test 3 and 6: an RLC SDU on RB8 having the same content as the DL RLC SDU sent by the SS; no data shall be received on RB5, RB6 and RB7.
- for sub-test 4 and 7: an RLC SDU on RB5 and RB8 having the same content as the DL RLC SDU sent by the SS.
- for sub-test 5 and 8: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as the DL RLC SDU sent by the SS.
- for sub-test 9: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 10: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 11: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 13 and 15: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 14 and 16: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
-

4. At step 15f UE shall send at least one MEASUREMENT REPORT message.

14.3.5.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

14.3.5.2.1 Conformance requirement

See 14.2.4.1

14.3.5.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.5 for the downlink 20 ms TTI case.

14.3.5.2.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A

Uplink TFCs:

TFC1	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1)

DSCH downlink TFS:

	TFI	RB5 (384 kbps)
TFS	DSCH_TF0, bits	0x354
	DSCH_TF1, bits	1x354
	DSCH_TF2, bits	2x354
	DSCH_TF3, bits	4x354
	DSCH_TF4, bits	8x354
	DSCH_TF5, bits	12x354
	DSCH_TF6, bits	16x354
	DSCH_TF7, bits	20x354
	DSCH_TF8, bits	24x354

DSCH downlink TFCS:

TFCI	RB8
DL_DSCH_TFC0	DSCH_TF0
DL_DSCH_TFC1	DSCH_TF1
DL_DSCH_TFC2	DSCH_TF2
DL_DSCH_TFC3	DSCH_TF3
DL_DSCH_TFC4	DSCH_TF4
DL_DSCH_TFC5	DSCH_TF5
DL_DSCH_TFC6	DSCH_TF6
DL_DSCH_TFC7	DSCH_TF7
DL_DSCH_TFC8	DSCH_TF8

Downlink TFS (For CS):

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)
TFS	TF0, bits	1x0	0x103	0x60
	TF1, bits	1x39	1x103	1x60
	TF2, bits	1x81	N/A	N/A
	TF3, bits	N/A	N/A	N/A
	TF4, bits	N/A	N/A	N/A
	TF5, bits	N/A	N/A	N/A

DCH downlink TFS:

	TFI	DCCH
TFS	DCH_TF0, bits	0x148
	DCH_TF1, bits	1x148

DCH downlink TFCS:

TFCI	DCCH
DL_DCH_TFC0	DCH_TF0
DL_DCH_TFC1	DCH_TF1

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, DCH_TF0)
DL_TFC1	(TF1, TF0, TF0, DCH_TF0)
DL_TFC2	(TF2, TF1, TF1, DCH_TF0)
DL_TFC3	(TF0, TF0, TF0, DCH_TF1)
DL_TFC4	(TF1, TF0, TF0, DCH_TF1)
DL_TFC5	(TF2, TF1, TF1, DCH_TF1)

[<Start of modified section>](#)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCSs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1, DL_TFC4,	UL_TFC1, UL_TFC16	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2 , UL_TFC3 , UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC5,	UL_TFC2, UL_TFC17	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2, UL_TFC3 , UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC3, UL_TFC18	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC4, UL_TFC19	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC4, UL_TFC15, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC2, DL_TFC5, DL_DSCH_TFC1	UL_TFC5, UL_TFC20	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC5, UL_TFC15, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC6, UL_TFC21	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
8	DL_TFC2, DL_TFC5, DL_DSCH_TFC2	UL_TFC8, UL_TFC23	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC8, UL_TFC15, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC9, UL_TFC24	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCSs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
10	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC10, UL_TFC25	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC10 UL_TFC15, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC2, DL_TFC5, DL_DSCH_TFC3	UL_TFC11, UL_TFC26	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC12, UL_TFC27	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC2, DL_TFC5, DL_DSCH_TFC4	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3,, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC1, DL_TFC4, DL_DSCH_TFC5	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3,, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 3882
16	DL_TFC2, DL_TFC5, DL_DSCH_TFC5	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3882
17	DL_TFC1, DL_TFC4, DL_DSCH_TFC6	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
18	DL_TFC2, DL_TFC5, DL_DSCH_TFC6	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
19	DL_TFC1, DL_TFC4, DL_DSCH_TFC7	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 6392
20	DL_TFC2, DL_TFC5, DL_DSCH_TFC7	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 6392
21	DL_TFC1, DL_TFC4, DL_DSCH_TFC8	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 7672
22	DL_TFC2, DL_TFC5, DL_DSCH_TFC8	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
<p>NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, and UL_TFC15 are part of minimum set of TFCs.</p> <p>NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB8: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

<End of modified section>

14.3.5.2.4 Test requirements

See 14.1.2a for definition of step B10 and step 15.

1. At step B10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15e and 15f the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15e and 15f the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB6, RB7 and RB8.
- for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB8.
- for sub-test 3 and 6: an RLC SDU on RB8 having the same content as the DL RLC SDU sent by the SS; no data shall be received on RB5, RB6 and RB7.
- for sub-test 4 and 7: an RLC SDU on RB5 and RB8 having the same content as the DL RLC SDU sent by the SS.
- for sub-test 5 and 8: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as the DL RLC SDU sent by the SS.
- for sub-test 9: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 10: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 11: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-tests 13, 15, 17, 19 and 21: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-tests 14, 16, 18, 20 and 22: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
-

4. At step 15f UE shall send at least one MEASUREMENT REPORT message.

**14.3.6 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:2048 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH**

**14.3.6.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH / 10 ms TTI**

14.3.6.1.1 Conformance requirement

See 14.2.4.1

14.3.6.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.6 for the downlink 10 ms TTI case.

14.3.6.1.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A

Uplink TFCs:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1)

DSCH downlink TFS:

	TFI	RB5 (2048 kbps)
TFS	DSCH_TF0, bits	0x674
	DSCH_TF1, bits	1x674
	DSCH_TF2, bits	2x674
	DSCH_TF3, bits	4x674
	DSCH_TF4, bits	8x674
	DSCH_TF5, bits	12x674
	DSCH_TF6, bits	16x674
	DSCH_TF7, bits	20x674
	DSCH_TF8, bits	24x674
	DSCH_TF9, bits	28x674
	DSCH_TF10, bits	32x674

DSCH downlink TFCS:

TFCI	RB8
DL_DSCH_TFC0	DSCH_TF0
DL_DSCH_TFC1	DSCH_TF1
DL_DSCH_TFC2	DSCH_TF2
DL_DSCH_TFC3	DSCH_TF3
DL_DSCH_TFC4	DSCH_TF4
DL_DSCH_TFC5	DSCH_TF5
DL_DSCH_TFC6	DSCH_TF6
DL_DSCH_TFC7	DSCH_TF7
DL_DSCH_TFC8	DSCH_TF8
DL_DSCH_TFC9	DSCH_TF9
DL_DSCH_TFC10	DSCH_TF10

Downlink TFS (For CS):

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)
TFS	TF0, bits	1x0	0x103	0x60
	TF1, bits	1x39	1x103	1x60
	TF2, bits	1x81	N/A	N/A
	TF3, bits	N/A	N/A	N/A
	TF4, bits	N/A	N/A	N/A
	TF5, bits	N/A	N/A	N/A

DCH downlink TFS:

	TFI	DCCH
TFS	DCH_TF0, bits	0x148
	DCH_TF1, bits	1x148

DCH downlink TFCS:

TFCI	DCCH
DL_DCH_TFC0	DCH_TF0
DL_DCH_TFC1	DCH_TF1

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, DCH_TF0)
DL_TFC1	(TF1, TF0, TF0, DCH_TF0)
DL_TFC2	(TF2, TF1, TF1, DCH_TF0)
DL_TFC3	(TF0, TF0, TF0, DCH_TF1)
DL_TFC4	(TF1, TF0, TF0, DCH_TF1)
DL_TFC5	(TF2, TF1, TF1, DCH_TF1)

[<Start of modified section>](#)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1, DL_TFC4,	UL_TFC1, UL_TFC16	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2 , UL_TFC3 , UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC5,	UL_TFC2, UL_TFC17	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2, UL_TFC3 , UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC3, UL_TFC18	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 632
4	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC4, UL_TFC19	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC4, UL_TFC15, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 632
5	DL_TFC2, DL_TFC5, DL_DSCH_TFC1	UL_TFC5, UL_TFC20	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC5, UL_TFC15, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632
6	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC6, UL_TFC21	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
7	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC7, UL_TFC22	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC7, UL_TFC15, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
8	DL_TFC2, DL_TFC5, DL_DSCH_TFC2	UL_TFC8, UL_TFC23	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC8, UL_TFC15, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
9	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC9, UL_TFC24	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 2552
10	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC10, UL_TFC25	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC10, UL_TFC15, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 2552
11	DL_TFC2, DL_TFC5, DL_DSCH_TFC3	UL_TFC11, UL_TFC26	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
12	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC12, UL_TFC27	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 5112
13	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112
14	DL_TFC2, DL_TFC5, DL_DSCH_TFC4	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
15	DL_TFC1, DL_TFC4, DL_DSCH_TFC5	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 7672
16	DL_TFC2, DL_TFC5, DL_DSCH_TFC5	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
17	DL_TFC1, DL_TFC4, DL_DSCH_TFC6	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 10232
18	DL_TFC2, DL_TFC5, DL_DSCH_TFC6	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 10232
19	DL_TFC1, DL_TFC4, DL_DSCH_TFC7	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 12792
20	DL_TFC2, DL_TFC5, DL_DSCH_TFC7	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 12792
21	DL_TFC1, DL_TFC4, DL_DSCH_TFC8	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 15352
22	DL_TFC2, DL_TFC5, DL_DSCH_TFC8	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 15352

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCIs (Note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
23	DL_TFC1, DL_TFC4, DL_DSCH_TFC9	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 17912
24	DL_TFC2, DL_TFC5, DL_DSCH_TFC9	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 17912
25	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 0	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 20472
26	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 0	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 20472
<p>NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, and UL_TFC15 are part of minimum set of TFCIs.</p> <p>NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB8: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). The size of the uplink RLC SDU has been set such that it will be transmitted over each TTI, i.e. the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

<End of modified section>

14.3.6.1.4 Test requirements

See 14.1.2a for definition of step B10 and step 15.

1. At step B10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15e and 15f the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15e and 15f the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB8.

- for sub-test 3: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 4: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 5: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 6: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 7: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 8: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 9: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 10: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 11: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-tests 13, 15, 17, 19, 21, 23 and 25: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-tests 14, 16, 18, 20, 22, 24 and 26: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15f UE shall send at least one MEASUREMENT REPORT message.

14.3.6.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH / 20 ms TTI

14.3.6.2.1 Conformance requirement

See 14.2.4.1

14.3.6.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.2.6 for the downlink 20 ms TTI case.

14.3.6.2.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A

Uplink TFCs:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1)

DSCH downlink TFS:

	TFI	RB5 (2048 kbps)
TFS	DSCH_TF0, bits	0x674
	DSCH_TF1, bits	1x674
	DSCH_TF2, bits	2x674
	DSCH_TF3, bits	4x674
	DSCH_TF4, bits	8x674
	DSCH_TF5, bits	12x674
	DSCH_TF6, bits	16x674
	DSCH_TF7, bits	20x674
	DSCH_TF8, bits	24x674
	DSCH_TF9, bits	28x674
	DSCH_TF10, bits	32x674
	DSCH_TF11, bits	36x674
	DSCH_TF12, bits	40x674
	DSCH_TF13, bits	44x674
	DSCH_TF14, bits	48x674
	DSCH_TF15, bits	52x674
	DSCH_TF16, bits	56x674
	DSCH_TF17, bits	60x674
	DSCH_TF18, bits	64x674

DSCH downlink TFCs:

TFCI	RB8
DL_DSCH_TFC0	DSCH_TF0
DL_DSCH_TFC1	DSCH_TF1
DL_DSCH_TFC2	DSCH_TF2
DL_DSCH_TFC3	DSCH_TF3
DL_DSCH_TFC4	DSCH_TF4
DL_DSCH_TFC5	DSCH_TF5
DL_DSCH_TFC6	DSCH_TF6
DL_DSCH_TFC7	DSCH_TF7
DL_DSCH_TFC8	DSCH_TF8
DL_DSCH_TFC9	DSCH_TF9
DL_DSCH_TFC10	DSCH_TF10
DL_DSCH_TFC11	DSCH_TF11
DL_DSCH_TFC12	DSCH_TF12
DL_DSCH_TFC13	DSCH_TF13
DL_DSCH_TFC14	DSCH_TF14
DL_DSCH_TFC15	DSCH_TF15
DL_DSCH_TFC16	DSCH_TF16
DL_DSCH_TFC17	DSCH_TF17
DL_DSCH_TFC18	DSCH_TF18

Downlink TFS (For CS):

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)
TFS	TF0, bits	1x0	0x103	0x60
	TF1, bits	1x39	1x103	1x60
	TF2, bits	1x81	N/A	N/A
	TF3, bits	N/A	N/A	N/A
	TF4, bits	N/A	N/A	N/A
	TF5, bits	N/A	N/A	N/A

DCH downlink TFS:

	TFI	DCCH
TFS	DCH_TF0, bits	0x148
	DCH_TF1, bits	1x148

DCH downlink TFCS:

TFCI	DCCH
DL_DCH_TFC0	DCH_TF0
DL_DCH_TFC1	DCH_TF1

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, DCH_TF0)
DL_TFC1	(TF1, TF0, TF0, DCH_TF0)
DL_TFC2	(TF2, TF1, TF1, DCH_TF0)
DL_TFC3	(TF0, TF0, TF0, DCH_TF1)
DL_TFC4	(TF1, TF0, TF0, DCH_TF1)
DL_TFC5	(TF2, TF1, TF1, DCH_TF1)

[<Start of modified section>](#)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1, DL_TFC4,	UL_TFC1, UL_TFC16	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2 , UL_TFC3 , UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC5,	UL_TFC2, UL_TFC17	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2, UL_TFC3 , UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC3, UL_TFC18	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 632
4	DL_TFC1, DL_TFC4, DL_DSCH_TFC1	UL_TFC4, UL_TFC19	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC4, UL_TFC15, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 632

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
5	DL_TFC2, DL_TFC5, DL_DSCH_TFC1	UL_TFC5, UL_TFC20	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC5, UL_TFC15, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632
6	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC6, UL_TFC21	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
7	DL_TFC1, DL_TFC4, DL_DSCH_TFC2	UL_TFC7, UL_TFC22	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC7, UL_TFC15, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
8	DL_TFC2, DL_TFC5, DL_DSCH_TFC2	UL_TFC8, UL_TFC23	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC8, UL_TFC15, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
9	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC9, UL_TFC24	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 2552
10	DL_TFC1, DL_TFC4, DL_DSCH_TFC3	UL_TFC10, UL_TFC25	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC10, UL_TFC15, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 2552
11	DL_TFC2, DL_TFC5, DL_DSCH_TFC3	UL_TFC11, UL_TFC26	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
12	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC12, UL_TFC27	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 5112

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
13	DL_TFC1, DL_TFC4, DL_DSCH_TFC4	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112
14	DL_TFC2, DL_TFC5, DL_DSCH_TFC4	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3,, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
15	DL_TFC1, DL_TFC4, DL_DSCH_TFC5	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3,, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 7672
16	DL_TFC2, DL_TFC5, DL_DSCH_TFC5	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
17	DL_TFC1, DL_TFC4, DL_DSCH_TFC6	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 10232
18	DL_TFC2, DL_TFC5, DL_DSCH_TFC6	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 10232
19	DL_TFC1, DL_TFC4, DL_DSCH_TFC7	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 12792
20	DL_TFC2, DL_TFC5, DL_DSCH_TFC7	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 12792

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
21	DL_TFC1, DL_TFC4, DL_DSCH_TFC8	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 15352
22	DL_TFC2, DL_TFC5, DL_DSCH_TFC8	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 15352
23	DL_TFC1, DL_TFC4, DL_DSCH_TFC9	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 17912
24	DL_TFC2, DL_TFC5, DL_DSCH_TFC9	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 17912
25	DL_TFC1, DL_TFC4, DL_DSCH_TFC10	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 20472
26	DL_TFC2, DL_TFC5, DL_DSCH_TFC10	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 20472
27	DL_TFC1, DL_TFC4, DL_DSCH_TFC11	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 23032
28	DL_TFC2, DL_TFC5, DL_DSCH_TFC11	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 23032

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCS (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
29	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 2	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 25592
30	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 2	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 25592
31	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 3	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 28152
32	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 3	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 28152
34	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 4	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 30712
35	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 5	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 33272
36	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 5	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 33272
37	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 6	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 35832

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
38	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 6	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 35832
39	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 7	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 38392
40	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 7	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 38392
41	DL_TFC1, DL_TFC4, DL_DSCH_TFC1 8	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 40952
42	DL_TFC2, DL_TFC5, DL_DSCH_TFC1 8	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1 , UL_TFC2 , UL_TFC3 , UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 40952
<p>NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, and UL_TFC15 are part of minimum set of TFCs.</p> <p>NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB8: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

[<End of modified section>](#)

14.3.6.2.4 Test requirements

See 14.1.2a for definition of step B10 and step 15.

1. At step B10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15e and 15f the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15e and 15f the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as the DL RLC SDU sent by the SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 6: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 7: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 8: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 9: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 10: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 11: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 12: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-tests 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39 and 41: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-tests 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40 and 42: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
4. At step 15f UE shall send at least one MEASUREMENT REPORT message.

CR-Form-v7	
CHANGE REQUEST	
# 34.123-1 CR 577 # rev - #	Current version: 5.4.0 #

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:	# Corrections to P3 Inter RAT measurement test case 8.4.1.31
Source:	# T1
Work item code:	# TEI Date: # 15-08-03
Category:	# F Release: # Rel-5
<p><i>Use one of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p><i>Use one of the following releases:</i></p> <p>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)</p>	

Reason for change:	# Compressed Mode parameters shall only be included in the Measurement Control message depending on UE Capability.
	As per latest 25.331 clause 8.6.7.5, even when "BSIC verification required" is set to "not required", a UE which do not require compressed mode parameters for Inter RAT, might have verified the BSIC and hence will include them as verified in Measurement Report.
Summary of change:	# Added comment to steps 4 and 7 of the expected sequence, compressed mode parameters shall be included only if UE requires them based on ICS/IXIT.
	In specific message contents of Measurement Control message, for IE DPCH compressed mode status info, remark added that this IE shall only be present if UE requires compressed mode.
	Added specific message contents for Measurement Report for UEs that do not require compressed mode to check verified BSIC is included.
Consequences if not approved:	# A good UE which does not require compressed mode for inter-RAT measurements will fail the test

Clauses affected:	# 8.4.1.31								
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 checked="" type="checkbox"/></td> <td style="text-align: center;"># <input 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 # 34.123-3 Test specifications O&M Specifications	Y	N	# <input type="checkbox"/>	# <input checked="" type="checkbox"/>	# <input checked="" type="checkbox"/>	# <input type="checkbox"/>	# <input type="checkbox"/>	# <input checked="" type="checkbox"/>
Y	N								
# <input type="checkbox"/>	# <input checked="" type="checkbox"/>								
# <input checked="" type="checkbox"/>	# <input type="checkbox"/>								
# <input type="checkbox"/>	# <input checked="" type="checkbox"/>								
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.

8.4.1.31 Measurement Control and Report: Inter-RAT measurement in CELL_DCH state.

8.4.1.31.1 Definition

8.4.1.31.2 Conformance requirement

A UE supporting both FDD and GSM shall be able to perform the GSM RSSI measurement and the GSM Initial BSIC identification measurement.

If, according to its capabilities, the UE requires compressed mode to perform GSM RSSI measurements, the UE shall perform GSM RSSI measurements in the gaps of a compressed mode pattern sequence specified for GSM RSSI measurement purpose.

If, according to its capabilities, the UE requires compressed mode to perform GSM Initial BSIC identification measurements, the UE shall perform GSM Initial BSIC identification in a compressed mode pattern sequence specified for Initial BSIC identification measurement purpose.

Reference

3GPP TS 25.133, clause 8.1.2.5; 3GPP TS 25.331, clauses 8.6.7.6, 14.3.2.

8.4.1.31.3 Test Purpose

Purpose of this test is to verify that UE is capable to perform GSM RSSI and GSM Initial BSIC identification measurements.

8.4.1.31.4 Method of test

Initial Condition

System Simulator: 1 UTRAN FDD cell and 2 GSM cells.

Parameter	Unit	Cell 1 (GSM)	Cell 2 (GSM)
Test Channel	#	1	2
RF Signal Level	dBm	-70	-85
BCCH ARFCN	#	1	7
CELL identity	#	0	1
BSIC	#	BSIC1	BSIC2

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

System Information Block type 11 nor 12 does not include Inter-RAT measurement system information.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. 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. Two 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.

The first RRC: MEASUREMENT CONTROL 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.

After two RRC: MEASUREMENT REPORT messages, the SS sends a second RRC: MEASUREMENT CONTROL message to start GSM Initial BSIC identification measurement. The UE replies similarly as in GSM RSSI measurement case but now with a period of 12000ms. The 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. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS provides GSM RSSI measurement control parameters to UE. If the UE requires compressed mode (refer ICS/IXIT), c Compressed mode for GSM RSSI measurement is started.
5		→	MEASUREMENT REPORT	UE reports measurement results of GSM RSSI measurement to SS.
6		→	MEASUREMENT REPORT	Next periodical measurement report.
7		←	MEASUREMENT CONTROL	SS provides GSM Initial BSIC identification measurement control parameters to UE. If the UE requires compressed mode (refer ICS/IXIT), c Compressed mode for GSM Initial BSIC identification measurement is started.
8		→	MEASUREMENT REPORT	UE reports measurement results of GSM Initial BSIC identification measurement to SS.
9		→	MEASUREMENT REPORT	Next periodical measurement report.
10		↔	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 as in TS 34.108 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	12
- 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	2.0
- DeltaSIRAfter1	1.0
- 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 Initial BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	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	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	128
- T Reconfirm abort	Not Present

MEASUREMENT CONTROL (Step 4)

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	
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	FALSE
reporting indicator	
- 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	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.
- 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, [if the UE requires compressed mode \(refer ICS/IXIT\)](#) (Step 5 and step 6)

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	Check to see if present
- GSM carrier RSSI	Non verified BSIC
CHOICE BSIC	Check that is set to "1"
- BCCH ARFCN	Check that not present
- Observed time difference to GSM cell	Check that measurement result is reasonable
- GSM carrier RSSI	Non verified BSIC
CHOICE BSIC	Check that is set to "7"
- BCCH ARFCN	Check that not present
- 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

MEASUREMENT REPORT, if the UE doesn't requires compressed mode (refer ICS/IXIT) (Step 5 and step 6)

<u>Information Element</u>	<u>Value/remark</u>
<u>Measurement identity</u>	<u>Check to see if set to 15</u>
<u>Measured Results</u>	
- 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	verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Non verified BSIC
- Inter-RAT cell id	Check that is set to "1"
- Observed time difference to GSM cell	Check that not present
<u>Measured results on RACH</u>	<u>Check that not present</u>
<u>Additional Measured results</u>	<u>Check that not present</u>
<u>Event results</u>	<u>Check that not present</u>

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	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	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	12000
Physical channel information elements	
- DPCH compressed mode status info	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.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 8 and 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-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	Verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "1"
- 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

8.4.1.31.5 Test Requirement

In step 5 and step 6 UE reports correctly GSM RSSI values.

In step 8 and step 9 UE reports correctly BSIC values.

Reporting period is the requested one.

CR-Form-v7	
CHANGE REQUEST	
# 34.123-1 CR 578 # rev - #	Current version: 5.4.0 #

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; Correction to Package 1 RRC test case 8.2.5.1		
Source:	# T1		
Work item code:	# TEI	Date:	# 26/08/2003
Category:	# F	Release:	# REL 5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	R96 (Release 1996)	2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R97 (Release 1997)	R96 (Release 1996)
	B (addition of feature),	R98 (Release 1998)	R97 (Release 1997)
	C (functional modification of feature)	R99 (Release 1999)	R98 (Release 1998)
	D (editorial modification)	Rel-4 (Release 4)	R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-5 (Release 5)	Rel-4 (Release 4)
		Rel-6 (Release 6)	Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# Remove the CS case within this test case because it is unrealistic and invalid as it was, so it was decided that this test case should become a PS only test case.
Summary of change:	# Updates to the Expected sequence and Test requirement Added authentication and security procedures to the expected sequence for the PS case Corrected comments in the expected sequence for steps 1 and 6 Final decision: Removed all references to CS in this test case and limit the test case to PS case only. Removed references to PS case Merged the PS paging sequence table into the Expected sequence table Added ICS/IXIT statement for "Support of PS service Yes/No". Changed reference in specific message content from Annex A to 34.018.
Consequences if not approved:	# Testing of an un-realistic scenario in CS path.

Clauses affected:	# 8.2.5.1								
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;">X</td> <td style="text-align: center;">#</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">#</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	X	#	X	#
Y	N								
#	X								
X	#								
X	#								
	# 34.123-2 (T1-031253)								

Other comments: ☼ Affects R99, REL-4 and REL-5 test cases.
Revision of T1-030987

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.

8.2.5.1 Transport format combination control in CELL_DCH: restriction

8.2.5.1.1 Definition

8.2.5.1.2 Conformance requirement

The UE shall change the subset of the allowed uplink transport format combination when the UE receives TRANSPORT FORMAT COMBINATION CONTROL message.

Reference

3GPP TS 25.331 clause 8.2.5.

8.2.5.1.3 Test purpose

To confirm that the UE does not transmit any data on the DCH for the user data radio bearer on the uplink, following the reception of TRANSPORT FORMAT COMBINATION CONTROL message sent from the SS, which is set to the value in IE "Restricted TrCH information".

8.2.5.1.4 Method of test

Initial Condition

System Simulator: 1 cell

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

PS case:

For the PS case the reference radio bearer configuration specified in TS 34.108, clause 6.10.3.4.1.26 (Interactive or background / UL:64 DL:64 kbps / PS RAB) is used.

RLC is configured for no discard. Timer_poll is set to a value of 1000 msec.

CS case:

For the CS case the reference radio bearer configuration specified in TS 34.108, clause 6.10.2.4.1.13 (UL:64 DL:64 kbps CS RAB, 20 ms TTI) is used.

RLC is configured for no segmentation and timer-based discard without explicit signalling with Timer_discard value set to 100ms.

[Related ICS/IXIT statements](#)

[Support of PS service Yes/No](#)

Test Procedure

- a. The UE is in CELL_DCH state.
- b. The SS close the UE test loop.
- c. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message using AM_RLC on the DCCH, which indicates that only TF0 is allowed on the uplink for DCH transport channel on the DTCH.
- d. The SS transmits data to the UE.
- e. The SS waits to check that no data is returned in uplink.
- f. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message using AM_RLC on the DCCH, which enables all transport formats on the uplink for DCH transport channel on the DTCH.

~~g. For the CS case the SS send data (the previous data should have been discarded by the TM RLC entity)~~

h. The SS checks that the sent data is returned from the UE.

Expected sequence

CS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1			SYSTEM INFORMATION (BCCH)	Broadcast
2			PAGING TYPE 1 (PCCH)	Paging (CS domain, TMSI)
3			RRC CONNECTION REQUEST (CCCH)	RRC
4			RRC CONNECTION SETUP (CCCH)	RRC
5			RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6			PAGING RESPONSE (DCCH)	RR
7			AUTHENTICATION REQUEST	MM
8			AUTHENTICATION RESPONSE	MM
9			SECURITY MODE COMMAND	RRC
10			SECURITY MODE COMPLETE	RRC

PS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1			SYSTEM INFORMATION (BCCH)	Broadcast
2			PAGING TYPE 1 (PCCH)	Paging (PS domain, P-TMSI)
3			RRC CONNECTION REQUEST (CCCH)	RRC
4			RRC CONNECTION SETUP (CCCH)	RRC
5			RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6a			SERVICE REQUEST (DCCH)	GMM
6b			SECURITY MODE COMMAND	RRC see note 1
6c			SECURITY MODE COMPLETE	RRC see note 1
NOTE — Step 6b and Step 6c are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.				

Step	Direction		Message	Comments
	UE	SS		
1		←	SYSTEM INFORMATION (BCCH) Paging	Broadcast Use the CS paging procedure for testing of CS and combined CS/PS reference radio bearer configurations. Use the PS paging procedure for testing of PS reference radio bearer configurations.
1a		←	PAGING TYPE 1 (PCCH)	Paging (PS domain, P-TMSI)
1b		→	RRC CONNECTION REQUEST (CCCH)	RRC
1c		←	RRC CONNECTION SETUP (CCCH)	RRC
1d		→	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
1e		→	SERVICE REQUEST (DCCH)	GMM
1f		←	AUTHENTICATION REQUEST	GMM
1g		→	AUTHENTICATION RESPONSE	GMM
1h		←	SECURITY MODE COMMAND	RRC
1i		→	SECURITY MODE COMPLETE	RRC
2		←	ACTIVATE RB TEST MODE (DCCH)	TC
3		→	ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
4		←	RADIO BEARER SETUP (DCCH)	RRC
5		→	RADIO BEARER SETUP COMPLETE (DCCH)	RRC
6		←	CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test. The RLC SDU size parameter is set to 312 bits (payload size minus size of 7 bit length indicator and expansion bit).
7		→	CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
8		←	TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to TF0 (no data)
9		←	PS case: 1 RLC SDU CS case: 2xRLC SDU	For the PS case one RLC SDU of size 312 bits is sent (payload size minus size of 7 bit length indicator and expansion bit). For the CS case two RLC SDUs of size 640 bits are sent.
10				SS waits 5 seconds to secure that no data is returned by the UE
11		←	TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC All transport format combinations are enabled
12			Void CS case- 2xRLC SDU	For the CS case two RLC SDUs of size 640 bits are sent.
13		→	PS case: 1 RLC SDU CS case: 2xRLC SDU	UE returns data
14		←	OPEN UE TEST LOOP (DCCH)	TC
15		→	OPEN UE TEST LOOP COMPLETE (DCCH)	TC
16			RB RELEASE (DCCH)	RRC Optional step
17		←	DEACTIVATE RB TEST MODE (DCCH)	TC Optional step
18		→	DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step

Specific Message Contents

TRANSPORT FORMAT COMBINATION CONTROL (step 8)

Use the same message sub-type titled "TRANSPORT FORMAT COMBINATION CONTROL" in [clause 9 of 34.108 Annex A](#) with following exceptions:

Information Element	Value/remark
TrCH information elements -DPCH/PUSCH TFCS uplink in uplink - Restricted TrCH information - Uplink transport channel type - Restricted UL TrCH identity - Allowed TFI	DCH 1 0

TRANSPORT FORMAT COMBINATION CONTROL (step 11)

Use the same message sub-type titled "TRANSPORT FORMAT COMBINATION CONTROL" in [clause 9 of 34.108 Annex A](#) with following exceptions:

Information Element	Value/remark
TrCH information elements -DPCH/PUSCH TFCS uplink in uplink - Restricted TrCH information - Uplink transport channel type - Restricted UL TrCH identity - Full transport format combination set	DCH 1 Null

8.2.5.1.5 Test requirement

1. At step 10 no data shall be sent by the UE.

2. At step 13:

~~For PS case: the SS shall receive one RLC SDU from the UE~~

~~For CS case: SS shall receive two RLC SDUs from the UE~~

CHANGE REQUEST

34.123-1 CR 579 # rev **-** # Current version: **5.4.0**

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; Correction to package 2 MAC test case 7.1.3.1		
Source:	# T1		
Work item code:	# TEI	Date:	# 19/08/2003
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: # The current test method specified in MAC test case 7.1.3.1 is based on the SS is checking the TFCI of received transport blocks and reports the TFCI to the TTCN. SS manufacturer have expressed that this would increase complexity and cost of test equipment and that an alternative test method is needed.

At the T1#19 meeting this issue was discussed and it was agreed that the most important is to verify that the UE is able to prioritise signaling compared to data transmission. It was agreed to apply a test method where UE is continuously is sending data and at the same time the UE is requested to transmit measuring reports. By restricting the uplink transport formats to only permit either signalling or data the UE priority handling of logical channels can be verified.

Summary of change: # TC 7.1.3.1:

- New test procedure proposed
- Expected sequence and test requirement updated according to new test procedure.

Changes introduced in T1-031246r1:

- In expected sequence TRANSPORT FORMAT COMBINATION CONTROL message moved from before activation of radio bearer test mode to after closing of UE test loop.
- Test procedure updated to be consistent with expected sequence.

Consequences if not approved: ⌘ No test case to verify UE handling of logical channel priority.

Clauses affected: ⌘ 7.1.3.1

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 REL-5 test cases.
Revision of T1-031246.

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.

7.1.3 Priority handling between data flows of one UE

7.1.3.1 Priority handling between data flows of one UE

7.1.3.1.1 Definition and applicability

7.1.3.1.2 Conformance requirement

When selecting between the Transport Format Combinations in the given Transport FormatCombination Set, priorities of the data flows to be mapped onto the corresponding Transport Channels can be taken into account.

The chosen TFC shall be selected from within the set of valid TFCs and shall satisfy the following criteria in the order in which they are listed below:

1. No other TFC shall allow the transmission of more highest priority data than the chosen TFC.
2. No other TFC shall allow the transmission of more data from the next lower priority logical channels. Apply this criterion recursively for the remaining priority levels.
3. No other TFC shall have a lower bit rate than the chosen TFC.

The above rules for TFC selection in the UE shall apply to DCH, and the same rules shall apply for TF selection on RACH and CPCH.

Reference(s)

TS 25.301 clause 5.3.1.2.

TS 25.321, clause 11.4.

7.1.3.1.3 Test purpose

To verify that [the UE prioritise signalling compared to data on a lower priority logical channel](#).~~the priority between data flows of one UE was correctly handled.~~

7.1.3.1.4 Method of test

Initial conditions

System Simulator:

- 1 cell, default parameters, Ciphering Off.

User Equipment:

- The UE shall operate under normal test conditions, Ciphering Off.
- The Test-USIM shall be inserted.

~~The UE is in Connected mode and a connection is established as described in the TS 34.123-1, 7.3.1.2.1.1 PDCP testing, clause "Setup a UE terminated PS session using IP Header compression in AM RLC (using Loop back test mode 1)", but for two Radio Bearer entities user (RAB#0 and RAB#1). Both user RABs shall be initially configured with a MAC logical priority of 3. The allowed TFCS shall be limited in the UE such that it's not possible to simultaneously transmit at the highest possible data rate on the DCH for each user RAB. Simultaneous transmission at lower data rates shall be possible.~~

~~The RABs are placed into loop back mode 1 each with the UL SDU size set to 39 bytes.~~

[The generic procedure for Radio Bearer establishment \(clause 7.1.3 of TS 34.108\) is executed, with all the parameters as specified in the procedure, with the exception that the default Radio Access Bearer is replaced with the RAB defined for AM 7-bit "Length Indicator" tests described in 3G TS 34.108 clause 6.11.3 is used.](#)

Let AM_7_PayloadSize denote the RAB payload size in octets.

Related ICS/IXIT Statement(s)

~~None TBD~~

~~Foreseen Final State of the UE~~

Test procedure

- a. The SS closes the test loop using UE test loop mode 1 with the UL SDU size set to (AM_7_PayloadSize * 50) - 1 bytes. See note 1.
- b. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message using AM_RLC on the DCCH, which indicates that only transport format minimum set is allowed on the uplink for DCH transport channel on the DTCH. I.e. the restricted uplink transport format set shall be (DCCH, AM_RLC 7 bit LI RB)=(TF0, TF0), (TF1, TF0) and (TF0, TF1).
- c. The SS transmits a MEASUREMENT CONTROL message requesting periodic reporting with a period of 250ms.
- d. The SS sends one RLC SDUs of size floor (AM_7_PayloadSize) - 1 bytes to the UE. The UE is expected to loop this data back in one RLC SDU, segmented into a total of 50 RLC PDUs.
- e. The SS waits until data is returned in uplink.
- f. The SS checks that the UE transmits alternating measurement reports and data.

Note 1. Having UE to return 50 PDUs corresponds to $50 * TTI (20 \text{ ms}) = 1 \text{ second}$ of continuous data transmission. As the periodic measurement interval is 250ms this will guarantee that data transmission will be interrupted by transmission of measurement reports in uplink.

- ~~a) The SS simultaneously sends 40 RLC SDUs of size 9 bytes each on each user RAB. The SDUs are concatenated, 4 to each PDU.~~
- ~~b) After having received the PDUs via configured mapped channels, the UE forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its MAC configuration to the SS.~~
- ~~c) The SS receives the returned data and reads each TFCl which indicates the Transport Format.~~
- ~~d) The SS checks, that high data rate RBs have a high bit rate Transport Format.~~
- ~~e) Repeat step a) to d) with different MAC logical channel priority (MAC priority of RAB#0 set as 3, MAC priority of RAB#1 set as 1).~~

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
4				SS sends CRLC_CONFIG_REQ with RLC mode as "Transparent Mode".
2		←	DATA BLOCKS (Simultaneous PDUs on RAB#0 and RAB#1)	
3		→	LOOP BACK DATA BLOCKS (Order of received PDUs on RAB#0 and RAB#1 depends on configured MAC Logical Priority)	Read the Transfer Format of loop back data blocks, the high bit transfer format apply to the Radio Bearer with high MAC logical channel priority.
4				The step 1 to 3 shall be repeated with different MAC logical channel priority.
1		←	ACTIVATE RB TEST MODE (DCCH)	TC
2		→	ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
3		←	RADIO BEARER SETUP (DCCH)	RRC
4		→	RADIO BEARER SETUP COMPLETE (DCCH)	RRC
5		←	CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 with UL RLC SDU size parameter set to achieve UE to transmit 50 PDUs in uplink.
6		→	CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
7		←	TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to transport format minimum set (DCCH, AM RLC 7 bit LI RB)=(TF0, TF0), (TF1, TF0) and (TF0, TF1).
8		←	MEASUREMENT CONTROL (DCCH)	SS sends a MEASUREMENT CONTROL message requesting periodic reporting at 250 ms interval.
9		←	Downlink RLC PDU	SS sends a SDU fit into one PDU.
10		→	Uplink RLC PDUs	SS starts receiving RLC PDUs from the UE on the AM RLC RB
11		→	MEASUREMENT REPORT (DCCH)	SS checks that at least one MEASUREMENT REPORT message is received within 500 ms (=2 x reporting interval)
12		→	Uplink RLC PDUs	SS checks that UE resumes returning RLC PDUs from the UE on the AM RLC RB

7.1.3.1.5 Test requirements

1. After step 10 the UE shall transmit a MEASUREMENT REPORT message within 500 ms.
2. After step 11 the UE shall resume data transmission.

Iteration1:

The high bit rate TF is applied to the high MAC logical channel priority Radio Bearer. That is, the bit rate of TF used in user RAB#1 should be the same as that used in user RAB#0. Note: UE and SS timing issues may produce a slightly biased result.

NOTE:—Measurements shall be taken over the 5th to 35th RLC PDUs received.

Iteration2:

The high bit rate TF is applied to the high MAC logical channel priority Radio Bearer. That is, the bit rate of TF used in user RAB#1 should be not less than that used in user RAB#0.

~~NOTE: Measurements shall be taken over the 5th to 35th RLC PDUs received.~~

CR-Form-v7
CHANGE REQUEST
34.123-1 CR 580 # rev - # Current version: 5.4.0

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:	#	Introduction of new test cases for a routing area updating procedure due to a change of DRX parameter IE	
Source:	#	T1	
Work item code:	#	TEI	Date: # 28/07/2003
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:	#	It is necessary to introduce new test cases in order to keep consistency with the change of the core specification.
Summary of change:	#	- New test cases to verify the behaviour of the UE when the UE initiates a routing area updating procedure due to a change of DRX parameter IE are introduced - The subclause number of test cases is modified due to the introduction.
Consequences if not approved:	#	The test specification does not cover the requirements in the core specification.

Clauses affected:	#	12.4.1.1c, 12.4.2.3								
Other specs Affected:	#	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; 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;">X</td> <td style="text-align: center;">#</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									
	#	TS34.123-2								
Other comments:	#									

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.

<Start of modification>

12.4.1.1c Routing Area Updating / accepted / change of DRX parameter IE12.4.1.1c.1 Definition12.4.1.1c.2 Conformance requirement

The routing area updating procedure is used for updating the network with a new DRX parameter IE when the content of the IE has changed.

NOTE 1: Such changes can be used e.g. when the UE activates a PDP context with service requirements that cannot be met with the current DRX parameter. As PDP context(s) are activated and deactivated, the GMM context will be updated with an appropriate DRX parameter;

If the ROUTING AREA UPDATE REQUEST message was used to update a network with the new DRX parameter IE, the UE shall start using the new DRX parameter upon receipt of the ROUTING AREA UPDATE ACCEPT message.

Reference:

3GPP TS 24.008 subclause 4.7.5.1

12.4.1.1c.3 Test purpose

To test the behaviour of the UE when the UE enters a cell with a different value of DRX parameter.

12.4.1.1c.4 Method of testInitial conditionsSystem Simulator:

Two cells are set to the same RAI (RAI-1).

Cell A: the value of the DRX parameter "CN domain specific DRX cycle length coefficient" is set to 8.

Cell B: the value of the DRX parameter "CN domain specific DRX cycle length coefficient" is set to 7.

Both two cells are operating in network operation mode II.

User Equipment:

The UE has a valid TMSI-1, P-TMSI-1 and RAI-1.

Related ICS/IXIT statement(s)

- Support of PS service Yes/No.
- UE operation mode A Yes/No
- UE operation mode C Yes/No (only if mode A not supported.)
- Switch off on button Yes/No.
- Automatic PS attach procedure at switch on or power on Yes/No.

Test procedure

Two cells are configured.

Cell A is set to the "Serving cell" in order that the UE initiates an attach procedure to cell A.

The SS verifies that the UE performs a PS attach procedure.

Cell B is set to the "Serving cell" and cell A is set to the "Suitable neighbour cell".

The SS verifies that the UE performs a routing area updating procedure when cell B with the different value of DRX parameter is entered.

The SS verifies that the UE responds to a paging for PS domain.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
		SS		The following messages are sent and shall be received on cell A.
1	UE			The UE is set in UE operation mode A or C (see ICS).
2	SS			Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell".
3	UE			The UE is powered up or switched on and initiates an attach (see ICS). Cell A is preferred by the UE.
4	SS			The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
5	->		ATTACH REQUEST	Attach type = 'PS attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
6	<-		AUTHENTICATION AND CIPHERING REQUEST	
7	->		AUTHENTICATION AND CIPHERING RESPONSE	
8	SS			The SS starts integrity protection.
9	<-		ATTACH ACCEPT	Attach result = 'PS only attached' No new mobile identity assigned. P-TMSI and P-TMSI signature not included. Routing area identity = RAI-1
10	SS			The SS releases the RRC connection
11	SS			The following messages are sent and shall be received on CellB. Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
12	SS			The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
13	->		ROUTING AREA UPDATE REQUEST	Update type = 'RA updating' P-TMSI-1 signature Routing area identity = RAI-1 CN domain specific DRX cycle length coefficient = 7
14	SS			The SS starts integrity protection.
15	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' No new mobile identity assigned. P-TMSI and P-TMSI signature not included. Routing area identity = RAI-1
16	SS			The SS releases the RRC connection.
17	<-		PAGING TYPE1	Mobile identity = P-TMSI-1 Paging order is for PS services.
18	SS			SS verifies that the UE transmits an RRC CONNECTION REQUEST message. SS will reject this request. The IE "Establishment cause" is not checked.
19	UE			The UE is switched off or power is removed (see ICS).
20	SS			The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Detach".
21	->		DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
22	SS			The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.

NOTE: The definitions for "Suitable neighbour cell", "Non-suitable cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".

Specific message contents

System Information Block type 1 (cell A)

- <u>CN domain system information</u>	PS
- <u>CN domain identity</u>	GSM-MAP
- <u>CHOICE CN Type</u>	
- <u>CN domain specific NAS system information</u>	
- <u>GSM-MAP NAS system information</u>	05 00H
- <u>CN domain specific DRX cycle length coefficient</u>	8

System Information Block type 1 (cell B)

- <u>CN domain system information</u>	PS
- <u>CN domain identity</u>	GSM-MAP
- <u>CHOICE CN Type</u>	
- <u>CN domain specific NAS system information</u>	
- <u>GSM-MAP NAS system information</u>	05 00H
- <u>CN domain specific DRX cycle length coefficient</u>	7

12.4.1.1c.5 Test Requirement

At step5, when the UE is powered up or switched on, the UE shall:

- initiate the PS attach procedure with the information elements specified in the above Expected Sequence.

At step13, the UE shall:

- initiate the routing area updating procedure with the new value of DRX parameter.

At step 18, the SS sends the paging message for PS domain, the UE shall

- respond to the paging message for PS domain.

<End of Modification>

<Start of next modification>

12.4.2.3a Combined routing area updating / RA only accepted

12.4.2.3a.1 Definition

12.4.2.3a.2 Conformance requirement

- 1) If the network accepts the combined PS attach procedure, but GMM cause code 'IMSI unknown in HLR' is sent to the UE the User Equipment shall delete the stored TMSI, LAI and CKSN. The User Equipment shall consider USIM invalid for non-PS services until power is switched off or USIM is removed.
- 2) If the network accepts the combined PS attach procedure, but GMM cause code 'MSC temporarily not reachable', 'Network failure' or 'Congestion' is sent to the UE, an UE operation mode A UE may perform an MM IMSI attach procedure.

Reference

3GPP TS 24.008 clause 4.7.5.2.

12.4.2.3a.3 Test purpose

Test purpose1

To test the behaviour of the UE if the network accepts the routing area updating procedure with indication RA only, GMM cause 'IMSI unknown in HLR'.

Test porpose2

To test the behaviour of the UE if the network accepts the routing area updating procedure with indication RA only, GMM cause 'MSC temporarily not reachable', 'Network failure' or 'Congestion'.

12.4.2.3a.4 Method of test

Test Procedure1

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1 (RAI-1), cell B in MCC1/MNC1/LAC1/RAC2 (RAI-4).
Both cells operating in network operation mode I.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

Support of PS service Yes/No
UE operation mode A Yes/No
Switch off on button Yes/No
Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

After attach, the UE sends an ROUTING AREA UPDATE REQUEST message. The SS allocates a P-TMSI and returns ROUTING AREA UPDATE ACCEPT message with a P-TMSI. GMM cause 'IMSI unknown in HLR' is indicated from SS. Further communication UE - SS is performed by the P-TMSI. CS services are not possible.

Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Non-Suitable cell". (see note)
1a	UE			The UE is set in UE operation mode A (see ICS).
2	UE			The UE is powered up or switched on and initiates an attach (see ICS).
3	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = IMSI TMSI status = no valid TMSI available
3a	<-		AUTHENTICATION AND CIPHERING REQUEST	
3b	->		AUTHENTICATION AND CIPHERING RESPONSE	
3c	SS			The SS starts integrity protection.
4	<-		ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-1
5	->		ATTACH COMPLETE	
6		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
7	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating' P-TMSI-2 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
8	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4 GMM cause = 'IMSI unknown in HLR'
9	->		ROUTING AREA UPDATE COMPLETE	
10	<-		PAGING TYPE1	Mobile identity = P-TMSI-1 Paging order is for PS services.
10a	->		RRC CONNECTION REQUEST	
10b	<-		RRC CONNECTION SETUP	
10c	->		RRC CONNECTION SETUP COMPLETE	
11	->		SERVICE REQUEST	service type = "paging response"
11a	<-		RRC CONNECTION RELEASE	
11b	->		RRC CONNECTION RELEASE COMPLETE	
12	<-		PAGING TYPE1	Mobile identity = IMSI Paging order is for CS services.
13	UE			The UE shall not initiate an RRC connection. This is checked during 3 seconds.
14	UE			The UE is switched off or power is removed (see ICS).
15	->		DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
16		SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
NOTE: The definitions for "Non-Suitable cell", "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Test Procedure2

Initial condition

System Simulator:

Two cells (not simultaneously activated), cell A in MCC1/MNC1/LAC1/RAC1 (RAI-1), cell B in MCC1/MNC1/LAC1/RAC2 (RAI-4).
Both cells operating in network operation mode I. T3212 is set to 6 minutes.

User Equipment:

The UE has a valid IMSI.

Related ICS/IXIT statements

- Support of PS service Yes/No
- UE operation mode A Yes/No
- Automatic MM IMSI attach procedure for UE operation mode A UE Yes/No
- Switch off on button Yes/No
- Automatic PS attach procedure at switch on or power on Yes/No

Test procedure

After attach, the UE sends an ROUTING AREA UPDATE REQUEST message . The SS allocates a new P-TMSI signature and returns ROUTING AREA UPDATE ACCEPT message. GMM cause 'MSC temporarily not reachable', 'Network failure' or 'Congestion' is indicated from SS. The cause code is arbitrarily chosen. This procedure is repeated until the routing area updating attempt counter is equal to five. An UE operation mode A UE may perform an MM IMSI attach procedure (according to the ICS statement). Further communication UE - SS is performed by the P-TMSI. The existence of a signalling channel is verified by a request for mobile identity. It is further verified that the UE after a successful IMSI attach procedure can perform CS services.

Expected Sequence

Dependent whether the option 'Automatic MM IMSI attach procedure for UE operation mode A UE' is not supported or not, the steps 1-13 or 14-35 apply depending on manufacturer (see ICS).

Step	Direction		Message	Comments
	UE	SS		
1		SS		The following messages are sent and shall be received on cell A Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Non-Suitable cell". (see note) The UE is set in UE operation mode A and no automatic MM IMSI attach procedure is indicated (see ICS). The UE is powered up or switched on and initiates an attach (see ICS).
1a	UE			
2	UE			
3		->	ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' or 'PS attach while IMSI attached' Mobile identity =IMSI TMSI status = no valid TMSI available The SS starts integrity protection.
3a		<-	AUTHENTICATION AND CIPHERING REQUEST	
3b		->	AUTHENTICATION AND CIPHERING RESPONSE	
3c	SS			

Step	Direction		Message	Comments
	UE	SS		
4	<-		ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-1
5	->		ATTACH COMPLETE	
6		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
7	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating' P-TMSI-2 signature Routing area identity = RAI-1
8	<-		ROUTING AREA UPDATE ACCEPT	TMSI status = no valid TMSI available Update result = 'RA updated' Mobile identity = P-TMSI-1P-TMSI-1 signature Routing area identity = RAI-4 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
9	->		ROUTING AREA UPDATE COMPLETE	
10				The routing area updating attempt counter =1. The combined routing area updating procedure is reinitialised at the expiry of T3311
11	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-4
12	<-		ROUTING AREA UPDATE ACCEPT	TMSI status = no valid TMSI available Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
13	->		ROUTING AREA UPDATE COMPLETE	
14				The routing area updating attempt counter =2. The combined routing area updating procedure is reinitialised at the expiry of T3311
15	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-4
16	<-		ROUTING AREA UPDATE ACCEPT	TMSI status = no valid TMSI available Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
17	->		ROUTING AREA UPDATE COMPLETE	
18				The routing area updating attempt counter =3. The combined routing area updating procedure is reinitialised at the expiry of T3311
19	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-4 TMSI status = no valid TMSI available

Step	Direction		Message	Comments
	UE	SS		
20	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
21	->		ROUTING AREA UPDATE COMPLETE	
22				The routing area updating attempt counter =4. The combined routing area updating procedure is reinitialised at the expiry of T3311
23	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-4 TMSI status = no valid TMSI available
24	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-4 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
25	->		ROUTING AREA UPDATE COMPLETE	
26				The routing area updating attempt counter =5. The combined routing area updating procedure is reinitialised at the expiry of T3311
27	UE			The UE is switched off or power is removed (see ICS).
28	->		DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach' Stop the sequence.
28a	SS			The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
				The following messages are sent and shall be received on cell B
29	UE			The UE is set in UE operation mode A and automatic MM IMSI attach procedure is indicated (see ICS).
30	UE			The UE is powered up or switched on and initiates an attach (see ICS).
31	->		ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' or 'PS attach while IMSI attached' Mobile identity = IMSI TMSI status = no valid TMSI available
31a	<-		AUTHENTICATION AND CIPHERING REQUEST	
31b	->		AUTHENTICATION AND CIPHERING RESPONSE	
31c	SS			The SS starts integrity protection.
32	<-		ATTACH ACCEPT	Attach result = 'Combined PS / IMSI attached' Mobile identity = P-TMSI-2 P-TMSI-2 signature Routing area identity = RAI-4
33	->		ATTACH COMPLETE	
				The following messages are sent and shall be received on cell A.

Step	Direction		Message	Comments
	UE	SS		
34		SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
35	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating' P-TMSI-2 signature Routing area identity = RAI-4 TMSI status = no valid TMSI available
36	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
37	->		ROUTING AREA UPDATE COMPLETE	
38				The routing area updating attempt counter =1. The combined routing area updating procedure is reinitialised at the expiry of T3311
39	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
40	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
41	->		ROUTING AREA UPDATE COMPLETE	
42				The routing area updating attempt counter =2. The combined routing area updating procedure is reinitialised at the expiry of T3311
43	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
44	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
45	->		ROUTING AREA UPDATE COMPLETE	
46				The routing area updating attempt counter =3. The combined routing area updating procedure is reinitialised at the expiry of T3311
47	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
48	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)

Step	Direction		Message	Comments
	UE	SS		
49	->		ROUTING AREA UPDATE COMPLETE	
50				The routing area updating attempt counter =4. The combined routing area updating procedure is reinitialised at the expiry of T3311
51	->		ROUTING AREA UPDATE REQUEST	Update type = 'Combined RA/LA updating with IMSI attach' P-TMSI-1 signature Routing area identity = RAI-1 TMSI status = no valid TMSI available
52	<-		ROUTING AREA UPDATE ACCEPT	Update result = 'RA updated' Mobile identity = P-TMSI-1 P-TMSI-1 signature Routing area identity = RAI-1 GMM cause = 'MSC temporarily not reachable', 'Network failure' or 'Congestion' (arbitrarily chosen)
53	->		ROUTING AREA UPDATE COMPLETE	
54				The routing area updating attempt counter =5. Optional step. See TS 34.108
55	UE		Registration on CS	This is applied only for UE in UE operation mode A. Parameter mobile identity is TMSI-1. Steps 56 - 62 are only performed if the UE has performed the Registration Procedure in step 55.
56	<-		PAGING TYPE1	Mobile identity = TMSI-1 Paging order is for CS services.
57	->		RRC CONNECTION REQUEST	
58	<-		RRC CONNECTION SETUP	
59	->		RRC CONNECTION SETUP COMPLETE	
60	->		PAGING RESPONSE	Mobile identity = TMSI-1
61	<-		RRC CONNECTION RELEASE	After sending of this message, the SS waits for disconnection of the CS signalling link.
62	->		RRC CONNECTION RELEASE COMPLETE	
63	UE			The UE is switched off or power is removed (see ICS).
64	->		DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
65		SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
NOTE: The definitions for "Non-Suitable cell", "Suitable neighbour cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Specific message contents

None.

12.4.2.3a.5 Test requirements

Test requirements for Test Procedure1

At step3, when the UE is powered up or switched on, UE shall:

- initiate the combined PS attach procedure with information elements specified in the above Expected Sequence.

At step7, when the RF level of the attached cell is lower than the RF level of the new cell, UE shall:

- initiate the combined routing area updating procedure.

At step9, UE shall:

- acknowledge the new P-TMSI by sending the ROUTING AREA UPDATE COMPLETE message.

At step11, when the UE receives the paging message for PS domain, UE shall:

- respond to the paging message for PS domain by sending the SERVICE REQUEST message.

At step13, when the UE receives the paging message for CS domain, UE shall:

- not respond to the paging message for CS domain.

Test requirements for Test Procedure2

At step3 and 31, when the UE is powered up or switched on, UE shall:

- initiate the combined PS attach procedure with information elements specified in the above Expected Sequence.

At step6 and 35, when the RF level of the attached cell is lower than the RF level of the new cell, UE shall:

- initiate the combined routing area updating procedure.

At step11, 15, 19 and 23, UE shall:

- re-initiate the combined routing area updating procedure.

At step39, 43, 47 and 51, UE shall:

- re-initiate the combined routing area updating procedure.

At step55, UE shall:

- perform MM location updating procedure.

At step60, when the UE receives the paging message for CS domain, UE shall:

- not respond to the paging message for CS domain.

<End of Modification>

<Start of next modification>

[12.4.2.3b Combined routing Area Updating / accepted / change of DRX parameter IE](#)

[12.4.2.3b.1 Definition](#)

[12.4.2.3b.2 Conformance requirement](#)

[The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the UE is in state GMM-REGISTERED and MM-IDLE, if the network operates in network operation mode I and when a GPRS MS needs to update the network with a new DRX parameter IE.](#)

[Reference:](#)

[3GPP TS 24.008 subclause 4.7.5.2](#)

12.4.2.3b.3 Test purpose

To test the behaviour of the UE when the UE enters a cell with a different value of the DRX parameter.

12.4.2.3b.4 Method of test

Initial conditions

System Simulator:

Two cells are set to the same RAI (RAI-1).
Cell A: the value of the DRX parameter "CN domain specific DRX cycle length coefficient" is set to 8.
Cell B: the value of the DRX parameter "CN domain specific DRX cycle length coefficient" is set to 7.
Both two cells are operating in network operation mode I.

User Equipment:

The UE has a valid TMSI-1, P-TMSI-1 and RAI-1.

Related ICS/IXIT statement(s)

- Support of PS service Yes/No.
- UE operation mode A Yes/No
- Switch off on button Yes/No.
- Automatic PS attach procedure at switch on or power on Yes/No.

Test procedure

Two cells are configured.
Cell A is set to the "Serving cell" in order that the UE initiates an attach procedure to cell A.
The SS verifies that the UE performs a combined PS attach procedure.
Cell B is set to the "Serving cell" and cell A is set to the "Suitable neighbour cell".
The SS verifies that the UE performs the combined routing area updating procedure when cell B with the different value of DRX parameter is entered.
The SS verifies that the UE responds to a paging for PS domain.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
1		<u>SS</u>		<u>The following messages are sent and shall be received on cell A.</u> <u>Set the cell type of cell A to the "Serving cell".</u> <u>Set the cell type of cell B to the " Suitable neighbour cell "</u>
2	<u>UE</u>			<u>The UE is powered up or switched on and initiates an attach (see ICS). Cell A is preferred by the UE.</u>
3		<u>SS</u>		<u>The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".</u>

4	->	ATTACH REQUEST	Attach type = 'Combined PS / IMSI attach' Mobile identity = P-TMSI-1 Routing area identity = RAI-1
5	<-	AUTHENTICATION AND CIPHERING REQUEST	
6	->	AUTHENTICATION AND CIPHERING RESPONSE	
7	SS		The SS starts integrity protection.
8	<-	ATTACH ACCEPT	Attach result = ' Combined PS / IMSI attached' No new mobile identity assigned. P-TMSI and P-TMSI signature not included. Routing area identity = RAI-1
9	SS		The SS releases the RRC connection The following messages are sent and shall be received on CellB.
10	SS		Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the "Serving cell". (see note)
11	SS		The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
12	->	ROUTING AREA UPDATE REQUEST	Update type = ' Combined RA/LA updating ' P-TMSI-1 signature Routing area identity = RAI-1 CN domain specific DRX cycle length coefficient = 7
13	SS		The SS starts integrity protection.
14	<-	ROUTING AREA UPDATE ACCEPT	Update result = ' Combined RA/LA updated' No new mobile identity assigned. P-TMSI and P-TMSI signature not included. Routing area identity = RAI-1
15	SS		The SS releases the RRC connection.
16	<-	PAGING TYPE1	Mobile identity = P-TMSI-1 Paging order is for PS services.
17	SS		SS verifies that the UE transmits an RRC CONNECTION REQUEST message. SS will reject this request. The IE "Establishment cause" is not checked.
18	UE		The UE is switched off or power is removed (see ICS).
19	SS		The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Detach".
20	->	DETACH REQUEST	Message not sent if power is removed. Detach type = 'power switched off, PS detach'
21	SS		The SS releases the RRC connection. If no RRC CONNECTION RELEASE COMPLETE message have been received within 1 second then the SS shall consider the UE as switched off.
NOTE: The definitions for "Suitable neighbour cell", "Non-suitable cell" and "Serving cell" are specified in TS34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

[Specific message contents](#)

[System Information Block type 1 \(cell A\)](#)

- CN domain system information - CN domain identity - CHOICE CN Type - CN domain specific NAS system information - GSM-MAP NAS system information - CN domain specific DRX cycle length coefficient	PS GSM-MAP 05 00H 8
--	--

System Information Block type 1 (cell B)

- <u>CN domain system information</u>	<u>PS</u>
- <u>CN domain identity</u>	<u>GSM-MAP</u>
- <u>CHOICE CN Type</u>	
- <u>CN domain specific NAS system information</u>	
- <u>GSM-MAP NAS system information</u>	<u>05 00H</u>
- <u>CN domain specific DRX cycle length coefficient</u>	<u>7</u>

12.4.2.3b.5 Test Requirement

At step4, when the UE is powered up or switched on, the UE shall:

- initiate the combined PS attach procedure with the information elements specified in the above Expected Sequence.

At step12, the UE shall:

- initiate the combined routing area updating procedure with the new value of DRX parameter.

At step 17, the SS sends the paging message for PS domain, the UE shall

- respond to the paging message for PS domain.

<End of Modification>

CHANGE REQUEST

34.123-1 CR 581 # rev **-** # Current version: **5.4.0**

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 34.123-1 Rel-5: TC 9.4.2.3 doesn't correspond to conformance claim		
Source:	# T1		
Work item code:	# TEI	Date:	# 14/07/2003
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: # 24.008 chapter 4.4.4.7 Location updating not accepted by the network does say "
 # 12: (Location Area not allowed);

The mobile station shall delete any LAI, TMSI and ciphering key sequence number stored in the SIM, reset the attempt counter, set the update status to ROAMING NOT ALLOWED (and store it in the SIM according to subclause 4.1.2.2).

The mobile station shall store the LAI in the list of "forbidden location areas for regional provision of service".

The MS shall perform a cell selection when back to the MM IDLE state according to 3GPP TS 43.022 and 3GPP TS 25.304.

Sentence in read means that cell **reselection** continues when back to the MM IDLE mode. **Idea of Location Area not allowed is**. Some terminals does have restricted service inside loaction area. Cells (Location areas) are selected based on normal cell reselection criteria.

Please see 24.008 Annex G (informative):
 UMTS specific cause values for mobility management

G.2 Cause related to subscription options

Cause value = 12 Location Area not allowed

This cause is sent to the MS if it requests location updating in a location area where the MS, by subscription, is not allowed to operate.

NOTE: Cause #15 and cause #12 differ in the fact that cause #12 does not trigger the MS to search for another allowed location area on the same PLMN.

Summary of change: ⌘ Change of cell is done based on cell reselection. Switching of the cell is not testing Location Area not allowed cause value.

Consequences if not approved: ⌘ Test case does work and is in line with core specifications but it doesn't test Regional Provision of service feature.

Clauses affected: ⌘ 9.4.2.3

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

Other comments: ⌘

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.

Specific message contents

None.

9.4.2.2.5 Test requirement

- 1) 1.1 At step 12 in test 1 the UE shall not perform periodic updating.
 - 1.2 At step 14 in test 1 the UE shall not initiate an RRC connection establishment (IMSI detach).
 - 1.3 At step 16 in test 1 the UE shall not initiate an RRC connection establishment (IMSI attach).
 - 1.4 At step 16 in test 1 the UE shall not perform normal location updating.
 - 1.5 At step 30 in test 1 the UE shall reject a MO CM connection.
- 2) 2.1 At step 37 in test 1 the UE shall perform normal location updating.
 - 2.2 At step 20 in test 1 the UE shall accept a request for an emergency call with the establishment cause set to "Emergency call".
- 3) At step 11 in test 2 the UE is made to search for PLMNs and the PLMN indicated by the SS is manually selected, and at step 15 the UE shall perform a normal location updating procedure.
- 4) At step 37 in test 1 the UE shall send a LOCATION UPDATING REQUEST message with Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and LAI IE set to "deleted LAI" on cell C.

<START OF MODIFIED SECTION>

9.4.2.3 Location updating / rejected / location area not allowed

9.4.2.3.1 Definition

9.4.2.3.2 Conformance requirement

- 1) If the network rejects a location updating from the UE with the cause "Location Area not allowed" the UE shall:
 - 1.1 not perform periodic updating;
 - 1.2 not respond to paging with TMSI;
 - 1.3 reject any request from CM entity for MM connection other than for emergency call;
 - 1.4 not perform IMSI detach.
 - 1.5 not delete the list of "equivalent PLMNs".
- 2) If the network rejects a location updating from the UE with the cause "Location Area not allowed" the UE shall:
 - 2.1 perform normal location updating when a new location area is entered;
 - 2.2 accept a request for an emergency call, if it supports speech, by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call";
 - 2.3 delete the list of forbidden LAs after switch off (power off).
- 3) If the network rejects a location updating from the UE with the cause "Location Area not allowed" the UE shall delete the stored LAI, CKSN and TMSI.

Reference(s)

TS 24.008 clause 4.4.4.7.

9.4.2.3.3 Test purpose

To test the behaviour of the UE if the network rejects the location updating of the UE with the cause "Location Area not allowed".

To test that the UE deletes the list of forbidden LAs after switch off (power off).

9.4.2.3.4 Method of test

Initial conditions

- System Simulator:
 - three cells: A, B and C, belonging to different location areas a, b and c. Cell A and B belongs to PLMN1. Cell C belongs to PLMN2.
 - IMSI attach/detach is allowed in both cells;
 - the T3212 time-out value is 1/10 hour in both cells.
- User Equipment:
 - the UE has a valid TMSI(= TMSI1) and CKSN(= CKSN1). It is "idle updated" on cell A.
 - the UE has a list of "equivalent PLMNs" containing PLMN1 and PLMN2.

Related ICS/IXIT statement(s)

Switch off on button Yes/No.

Support for speech Yes/No.

Method to clear the list of forbidden location areas periodically.

Test Procedure

The SS rejects a normal location updating with the cause value "Location Area not allowed". The RRC CONNECTION is released. The SS checks that the UE does not perform periodic updating, does not respond to paging with TMSI, rejects any requests from CM entities for MM-connections except emergency calls, does not perform IMSI detach, does not delete the list of "equivalent PLMNs", performs normal location updating when a new location area is entered, deletes the list of forbidden LAs when switched off and deletes the stored LAI, CKSN and TMSI.

Different types of UE may use different methods to periodically clear the list of forbidden location areas (e.g. every day at 12am). If the list is cleared while the test is being run, it may be necessary to re-run the test.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		

1	SS		The following messages are sent and shall be received on cell B. Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the " Suitable neighbour cell non-suitable cell ". Set the cell type of cell C to the " Suitable neighbour cell non-suitable cell ". (see note).
2	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3		Void	
4		Void	
5	→	LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = CKSN1, "LAI" = a, "Mobile Identity" = TMSI1
6	←	LOCATION UPDATING REJECT	"Reject cause" = "Location Area not allowed".
7	SS		After the sending of this message, the SS waits for the disconnection of the mainsignalling link. The SS releases the RRC connection.
8		Void	
9	SS		SS waits for a possible location updating for 7 minutes.
10	UE		The UE shall not initiate an RRC-connection establishment either on cell A, C or cell B.
11	←	PAGING TYPE 1	The UE is paged in cell B. "UE identity" = TMSI. Paging Cause: Terminating Conversational Call.
12	UE		The UE shall ignore this message. This is checked during 3 s.
13	UE		A MO CM connection is attempted.
14	UE		The UE shall not initiate an RRC connection establishment on cell A, C or cell B. This is checked during 3 s.
15	UE		If the UE supports speech (see ICS), it is made to perform an emergency call.
16	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Emergency call".
17		Void	
18		Void	
19	→	CM SERVICE REQUEST	"CM service type": Emergency call establishment.
20	←	CM SERVICE ACCEPT	
21	→	EMERGENCY SETUP	
22	←	RELEASE COMPLETE	Cause: "unassigned number".
23	SS		The SS releases the RRC connection.
24		Void	
25	UE		If possible (see ICS) switch off is performed. Otherwise the power is removed.
26	UE		The UE shall not initiate an RRC connection establishment on cell A, C or on cell B (check for IMSI detach) This is checked during 3 s.
27	UE		Depending on what has been performed in step 25 the UE is brought back to operation.
28	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
29		Void	
30		Void	
31	→	LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = no key available, "LAI" = deleted LAI, "mobile identity" = IMSI (This checks the deletion of the forbidden lists)
32	←	LOCATION UPDATING REJECT	"Reject cause" = "Location Area not allowed".
33	SS		The SS releases the RRC connection.
34		Void	
The following messages are sent and shall be received on cell C.			
35	SS		Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the " non-suitable cell Suitable neighbour cell ". Set the cell type of cell C to the "Serving cell". (see note).

36	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
37		Void	The SS starts integrity protection. Mobile identity = TMSI.
38		Void	
39	→	LOCATION UPDATING REQUEST	
40	←	AUTHENTICATION REQUEST	
41	→	AUTHENTICATION RESPONSE	
41a	SS		
42	←	LOCATION UPDATING ACCEPT	
43	→	TMSI REALLOCATION COMPLETE	
44	SS		
45		Void	
NOTE: The definitions for "Serving cell", "Suitable neighbour cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

None.

9.4.2.3.5 Test requirement

- 1) 1.1 At step 10 the UE shall not perform periodic updating.
- 1.2 At step 12 the UE shall not respond to paging with TMSI.
- 1.3 At step 14 the UE shall not initiate an RRC connection establishment.
- 1.4 At step 26 the UE shall not initiate an RRC connection establishment (IMSI detach).
- 1.5 At step 39 the UE shall perform normal location updating on cell C.
- 2) 2.1 At step 39 the UE shall perform normal location updating.
- 2.2 At step 16 the UE shall accept a request for an emergency call.
- 2.3 At step 31 the UE shall send a LOCATION UPDATING REQUEST message on cell B.
- 3) At step 31 the UE shall send a LOCATION UPDATING REQUEST message with Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and LAI IE set to "deleted LAI" on cell B.

<END OF MODIFIED SECTION>

CHANGE REQUEST

№ **TS 34.123-1 CR 582** № rev **-** № Current version: **5.4.0** №

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:	№ Corrections to 34.123-1 v5.4.0 low priority test case (8.2.3.26)		
Source:	№ T1		
Work item code:	№ TEI	Date:	№ 23/07/2003
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:	№ 1. Currently in TC 8.2.3.26, both IE “Frequency Info” and IE “Primary CPICH Info” are omitted in the RADIO BEARER RELEASE message. For state transition into CELL_PCH, the UE behaviour is not specified. Refer to TS25.331v3e0 clause 8.2.2.3. It is proposed to test the specified UE behaviour, with IE “Frequency Info” omitted, and IE “Primary CPICH Info” set to value different from the intended cell. Under such circumstances, the UE shall perform cell-reselection, after state transition to CELL_PCH and transmission of RADIO BEARER RELEASE COMPLETE message. 2. Editorial.
Summary of change:	№ 1. <u>TC 8.2.3.26</u> <ul style="list-style-type: none"> • IE “Primary CPICH Info” is set to that of cell 6 and the frequency info is set to that of cell 6. • SS changes the transmission power after the acknowledgement of RADIO BEARER RELEASE COMPLETE message. • The initial condition has been revised to reduce the number of test steps.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.2.3.26						
Other specs	№ <table border="1" style="display: inline-table; vertical-align: middle;"> <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> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	№	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						

affected:	<input checked="" type="checkbox"/>	Test specifications	
	<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 Modifications>**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: PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) or PS+CS-DCCH+DTCH_DCH (state 6-14) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the 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 shall transmits a RADIO BEARER RELEASE message on downlink DCCH using UM RLC, with IE "Frequency info" and IE "Primary CPICH info" omitted. The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC. The SS shall acknowledge the RADIO BEARER RELEASE COMPLETE message and then switches its downlink transmission power settings to columns "T1". and enter CELL_PCH state. Upon completion of the procedure, the SS waits for 5 seconds and calls for generic procedure C.4 in cell 6 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			Void	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. Void	
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108. Void	
4	↔		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108. Void	
5			Void	The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.26.
6		←	RADIO BEARER RELEASE	This message is sent on RB 1. IE "Frequency info" and IE "Primary CPICH info" set to that of cell 6 are omitted.
7		→	RADIO BEARER RELEASE COMPLETE	After SS acknowledges this message, SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.26. UE transmit this message on the common physical channel in cell 4
8				The SS waits for 5 s.
9		↔	CALL C.4	(In cell 6) 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
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
- UARFCN downlink (Nd)	Set to the frequency of cell 6
Downlink information for each radio link	Not present
- Primary CPICH Info	
- Primary scrambling code	Set to same code as used for cell 6

8.2.3.26.5 Test requirement

[After step 6, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 1.](#)

~~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~~8 the UE shall be in CELL_PCH state in cell 6.

<End of Modifications>

CHANGE REQUEST

34.123-1 CR 583 # rev **-** # Current version: **5.4.0**

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 34.123-1 Rel-5: Automatic MO SMS repeat at TP layer		
Source:	# T1		
Work item code:	# TEI	Date:	# 05/09/2003
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: # From 23.040 chap. 9.2.3.6 TP-Message-Reference (TP-MR)

In the case where no response or an RP-ERROR with an appropriate cause value (see 3GPP TS 24.011 [13]) is received in response to an SMS-SUBMIT or SMS-COMMAND, then the MS shall automatically repeat the SMS-SUBMIT or SMS-COMMAND but must use the same TP-MR value and set the TP-RD bit to 1 (see clause 9.2.3.25). The number of times the MS automatically repeats the SMS-SUBMIT or SMS-COMMAND shall be in the range 1 to 3 but the precise number is an implementation matter. The automatic repeat mechanism should be capable of being disabled through MMI.

Revision of T1-031040 after comments received in T1#20.

Summary of change: # Test case does not take into account chapters above.

In test cases 16.1.2 SMS mobile originated (CS mode) and 16.2.2 SMS mobile originated (PS mode):

- 1) Test Procedure steps e) and i) updated.
- 2) Expected Sequence updated, steps 30b, 58 and 64a in 16.1.2 and 30a and 63a in 16.2.2 further clarified.
- 3) Test procedure further updated to be in line with the Expected Sequence.

If CP-ERROR cause is "Network Failure", the UE will enter idle mode and will not try to send any more CP-DATA.

The SS initiates channel release in TC 16.2.1 Test procedure step e).

Steps 56b – 56e added in TC 16.2.2 Expected Sequence.

Clarified that CP-DATA retransmissions use the same RRC connection.

Consequences if not approved: ⌘ Test cases are against 3GPP TS 23.040

Clauses affected: ⌘ 16.1.2 & 16.2.2

Other specs affected:

	Y	N		
⌘	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	

Other comments: ⌘

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>

16.1.2 SMS mobile originated

16.1.2.1 Definition

16.1.2.2 Conformance requirements

An active UE shall be able to submit short message TPDU (SMS-SUBMIT) at any time, independently of whether or not there is a speech or data call in progress.

Reference

3GPP TS 23.040 clause 3.1.

16.1.2.3 Test purpose

To verify that the UE is able to correctly send a short message where the SMS is provided for the point to point service.

16.1.2.4 Method of test

Initial Conditions

- System simulator:
 - 1 cell, default parameters.
- User Equipment:
 - the UE shall be in MM-state "Idle, updated";
 - the SMS message storage shall be empty.

Related ICS/IXIT Statements

Support for Short message MO/PP.

Support for state U10 of call control.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Maximum length (characters) of a mobile originated short message.

Maximum number of retransmissions of an unacknowledged CP-DATA message.

Test procedure

- a) The UE shall be set up to send an SM to the SS. The UE establishes successfully an RRC connection.
- b) The SS performs authentication and after that, the SS starts integrity protection.
- c) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message.
- d) The SS sends a channel release message to the UE.
- e) Steps a) and b) are repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. **After a duration of TC1M + 5 s after the last CP-DATA retransmission the**

- ~~SS initiates channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions. Depending on the maximum number of automatic repeat, MO SMS sending may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1. After a duration of TC1M + 5 s after the last CP-DATA retransmission the UE initiates channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions.~~
- f) Steps a) and b) are repeated. On receipt of the CP-DATA from the UE the SS sends a CP-ERROR message within TC1M containing a "Network Failure" cause. Then the SS initiates channel release.
- g) A data or speech call is established with the SS and the state U10 of call control is entered. The UE is set up to send an SM to the SS. After the reception of the CM SERVICE REQUEST, the SS sends a CM SERVICE ACCEPT message.
- h) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message. Then the SS sends a channel release message to the UE.
- i) Step g) is repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. ~~After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions (during a call in progress). Depending on the maximum number of automatic repeat, MO SMS sending may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions (during a call in progress).~~
- j) (void)
- k) The UE is set up to send an SM to the SS. On receipt of the CM SERVICE REQUEST the SS sends a CM SERVICE REJECT message with the reject cause set to "Service Option not supported" or "Service Option temporarily out of order". After 5 s the SS initiates channel release.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The UE is set up to send an SM
2		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
3	<--		Void	
4	-->		Void	
5	-->		CM SERVICE REQUEST	CM service type set to "short message transfer"
6	<--		AUTHENTICATION REQUEST	
7	-->		AUTHENTICATION RESPONSE	
8		SS		The SS starts integrity protection
9			Void	
10	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
11	<--		CP-ACK	Sent within TC1M after step 10
12	<--		CP-DATA	Contains RP-ACK RPDU
13		SS		Waits max 25 s for CP-ACK
14	-->		CP-ACK	
15		SS		The SS releases the RRC connection.
16		UE		The UE is set up to send an SM
17		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
18			Void	
19			Void	
20			Void	
21			(void)	
22	-->		CM SERVICE REQUEST	CM service type set to "short message transfer"
23	<--		AUTHENTICATION REQUEST	
24	-->		AUTHENTICATION RESPONSE	

Step	Direction		Message	Comments
	UE	SS		
25	<--		SECURITY MODE COMMAND	
26	-->		SECURITY MODE COMPLETE	
27	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
28	SS			SS configured not to send CP-ACK
29	-->		CP-DATA	Retransmitted CP-DATA message within twice TC1M after step 27
30	UE			Depending on the maximum number of CP-DATA retransmissions implemented, step 29 may be repeated. The maximum number of retransmissions may however not exceed three. The same RRC connection shall be used for CP-DATA retransmissions.
30a	SS			The SS releases the RRC connection
30b	UE			Depending on the maximum number of automatic repeat, steps 17 – 30a may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1.
31			(void)	
32	UE			The UE is set up to send an SM
33	SS			The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
34			(void)	
35			(void)	
36			(void)	
37	-->		CM SERVICE REQUEST	CM service type set to "short message transfer"
38	<--		AUTHENTICATION REQUEST	
39	-->		AUTHENTICATION RESPONSE	
40	SS			The SS starts integrity protection
41			(void)	
42	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
43	<--		CP-ERROR	Sent within TC1M containing "Network Failure" cause.
44	SS			The SS releases the RRC connection.
45			(void)	
46	SS			A data or speech call is established on a DTCH and the state U10 of call control is entered.
47	UE			The UE is set up to send an SM
48	-->		CM SERVICE REQUEST	CM service type set to "short message "
49	<--		CM SERVICE ACCEPT	
50	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
51	<--		CP-ACK	Sent within TC1M after step 50
52	<--		CP-DATA	Contains RP-ACK RPDU
53	SS			Waits max 25 s for CP-ACK
54	-->		CP-ACK	
55	SS			The SS releases the RRC connection.
56			(void)	
57	SS			A data or speech call is established on a DTCH and the state U10 of call control is entered.
57a	UE			The UE is set up to send an SM
58	-->		CM SERVICE REQUEST	CM service type set to "short message transfer" upon CP-DATA retransmission new RRC connection has to be established, see step 64a
59	<--		CM SERVICE ACCEPT	
60	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
61	SS			SS configured not to send CP-ACK
62	-->		CP-DATA	Transmitted CP-DATA message within twice TC1M after step 60
63	UE			Depending on the maximum number of CP-DATA retransmissions implemented, step 62 may be repeated. The maximum number of retransmissions may however not exceed three. The same RRC connection shall be used for CP-DATA retransmissions.
64	SS			The SS releases the RRC connection. The RRC connection is released after a duration of TC1m + 15 s after the last CP-DATA retransmission.

Step	Direction		Message	Comments
	UE	SS		
64a	UE			Depending on the maximum number of automatic repeat, steps 58 – 64 may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1
65			(void)	
66-78			(void)	
79	UE			The UE is set up to send an SM
80	SS			The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
81			(void)	
82	-->		CM SERVICE REQUEST	. CM service type set to "short message transfer"
83	<--		CM SERVICE REJECT	Reject cause set to "Service Option not supported" or "Service Option temporarily out of order"
84			(void)	
85	SS			The SS releases the RRC connection. 5 s after CM SERVICE REJECT
86			(void)	

NOTE: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.

Specific Message Contents

SMS SUBMIT TPDU

Information element	Comment Value
TP-UDL	as applicable
TP-UD (140 octets max)	maximum number of characters (text of message) as defined by the manufacturer (see ICS/IXIT)

16.1.2.5 Test requirements

After step 10 UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 27 UE shall retransmit a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 50 UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 62 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 85 UE shall not send any CP-DATA.

<END OF MODIFIED SECTION>

After step 30 UE shall indicate that an SM has arrived.

After step 43 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 48 UE shall indicate that an SM has arrived.

After step 51 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

After step 59 UE shall indicate that an SM has arrived.

After step 69 UE shall retransmit CP-DATA containing RP-ACK within twice TC1M.

After step 74 UE shall indicate that an SM has arrived.

After step 84 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 89 UE shall indicate that an SM has arrived.

After step 94 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

After step 101 UE shall indicate that an SM has arrived.

After step 106 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

After step 113 UE shall indicate that an SM has arrived.

<START OF MODIFIED SECTION>

16.2.2 SMS mobile originated

16.2.2.1 Definition

16.2.2.2 Conformance requirements

An active UE shall be able to submit short message TPDU (SMS-SUBMIT) at any time, independently of whether or not there is a PDP context in progress.

References

3GPP TS 23.040 clause 3.1, 9.2.3.16.

16.2.2.3 Test purpose

To verify that the UE is able to correctly send a short message where the SMS is provided for the point to point service.

16.2.2.4 Method of test

Initial Conditions

- System simulator:
 - 1 cell, default parameters.
- User Equipment:
 - the UE shall be in GMM-state "GMM-REGISTERED";
 - the SMS message storage shall be empty.

Related ICS/IXIT Statements

Support for Short message MO/PP.

Support for state PDP-ACTIVE of session management.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Maximum length (characters) of a mobile originated short message.

Maximum number of retransmissions of an unacknowledged CP-DATA message.

Test procedure

- a) The UE shall be set up to send an SM to the SS. The UE establishes successfully an RRC connection.
- b) The SS performs authentication and after that, the SS starts integrity protection.
- c) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message.
- d) The SS sends a channel release message to the UE.
- e) Steps a) and b) are repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 5 s after the last CP-DATA retransmission the SS initiates channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions. Depending on the maximum number of automatic repeat, MO SMS sending may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1. After a duration of TC1M + 5 s after the last CP-DATA retransmission the SS initiates channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions.
- f) Steps a) and b) are repeated. On receipt of the CP-DATA from the UE the SS sends a CP-ERROR message within TC1M containing a "Network Failure" cause. Then the SS initiates channel release.
- g) A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM to the SS.
- h) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message. Then the SS sends a channel release message to the UE.
- i) Step g) is repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions (during a PDP context in progress). Depending on the maximum number of automatic repeat, MO SMS sending may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions (during a PDP context in progress).
- j) (void)
- k) The UE is set up to send an SM to the SS. On receipt of the SERVICE REQUEST the SS sends a SERVICE REJECT message with the reject cause set to "GPRS services not allowed". After 5 s the SS initiates channel release.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The UE is set up to send an SM
2		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
3			(void)	
4			(void)	
5	-->		SERVICE REQUEST	
6	<--		AUTHENTICATION AND CIPHERING REQUEST	
7	-->		AUTHENTICATION AND CIPHERING RESPONSE	
8		SS		The SS starts integrity protection
9			(void)	
10	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
11	<--		CP-ACK	Sent within TC1M after step 10
12	<--		CP-DATA	Contains RP-ACK RPDU
13		SS		Waits max 25 s for CP-ACK
14	-->		CP-ACK	
15		SS		The SS releases the RRC connection
16			(void)	
17	UE			The UE is set up to send an SM
18		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
19			(void)	
20			(void)	
21	-->		SERVICE REQUEST	
22	<--		AUTHENTICATION AND CIPHERING REQUEST	
23	-->		AUTHENTICATION AND CIPHERING RESPONSE	
24		SS		The SS starts integrity protection
25			(void)	
26	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
27		SS		SS configured not to send CP-ACK
28	-->		CP-DATA	Retransmitted CP-DATA message within twice TC1M after step 26
29	UE			Depending on the maximum number of CP-DATA retransmissions implemented, step 28 may be repeated. The maximum number of retransmissions may however not exceed three. The same RRC connection shall be used for CP-DATA retransmissions.
30		SS		The SS releases the RRC connection. The RRC connection is released after a duration of TC1M + 5 s after the last CP-DATA retransmission.
30a	UE			Depending on the maximum number of automatic repeat steps 18 – 30 may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1
31			(void)	
32	UE			The UE is set up to send an SM
33		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
34			(void)	
35			(void)	
36	-->		SERVICE REQUEST	
37	<--		AUTHENTICATION AND CIPHERING REQUEST	
38	-->		AUTHENTICATION AND CIPHERING RESPONSE	
39		SS		The SS starts integrity protection
40			(void)	

Step	Direction		Message	Comments
	UE	SS		
41	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU) Sent within TC1M containing "Network Failure" cause. The SS releases the RRC connection.
42	<--		CP-ERROR	
43		SS		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM
44			(void)	
45		UE		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM
46		UE		
47			(void)	Contains RP-DATA RPDU (SMS SUBMIT TPDU) Sent within TC1M after step 49
48			(void)	
49	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU) Sent within TC1M after step 49
50	<--		CP-ACK	
51	<--		CP-DATA	Contains RP-ACK RPDU
52		SS		Waits max 25 s for CP-ACK
53	-->		CP-ACK	The SS releases the RRC connection.
54		SS		
55			(void)	A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM
56		UE		
56a		UE		Continue at step 59 (signalling connection already established in step 56).
56b	-->		SERVICE REQUEST	Steps 56b to 56e are only performed upon CP-DATA retransmission, see step 63a
56c	<--		AUTHENTICATION AND CIPHERING REQUEST	
56d	-->		AUTHENTICATION AND CIPHERING RESPONSE	
56e		SS		
57			(void)	Contains RP-DATA RPDU (SMS SUBMIT TPDU) SS configured not to send CP-ACK
58			(void)	
59	-->		CP-DATA	Transmitted CP-DATA message within twice TC1M after step 59
60		SS		
61	-->		CP-DATA	Depending on the maximum number of CP-DATA retransmissions implemented, step 61 may be repeated. The maximum number of retransmissions may however not exceed three. The same RRC connection shall be used for CP-DATA retransmissions.
62		UE		
63		SS		The SS releases the RRC connection. The RRC connection is released after a duration of TC1m + 15 s after the last CP-DATA retransmission.
63a		UE		Depending on the maximum number of automatic repeat steps 56b – 63 may be repeated. The maximum number of automatic retransmissions may however not exceed three. In automatic repeat UE must use the same TP-MR value and set the TP-RD bit to 1
64			(void)	The UE is set up to send an SM
65-77			(void)	
78		UE		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
79		SS		
80			(void)	Reject cause set to "GPRS services not allowed"
81	-->		SERVICE REQUEST	
82	<--		SERVICE REJECT	The SS releases the RRC connection. The RRC connection is releases 5 s after SERVICE REJECT
83		SS		
NOTE: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.				

Specific Message Contents

SMS SUBMIT TPDU

Information element	Comment Value
TP-UDL TP-UD (140 octets max)	as applicable maximum number of characters (text of message) as defined by the manufacturer (see ICS/IXIT)

16.2.2.5 Test requirements

After step 10 UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 26 UE shall retransmit a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 49 UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 61 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 82 UE shall not send CP-DATA.

<END OF MODIFIED SECTION>