Source: **T1**

Title: **CR's to TS 34.123-1 v5.2.0 related to Idle mode, Layer 2, RABs and TDD test cases**

Agenda item: **5.1.3**

Document for: **Approval**

This document contains 20 CRs to TS 34.123-1 v5.2.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

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

CR related to corrections to idle mode test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	412	-	Rel-5	Corrections to package 4 idle mode test case 6.1.2.9	F	5.2.0	5.3.0	T1-030064	TEI	R99, Rel-4, Rel-5
34.123-1	413	-	Rel-5	Alignement of cell numbering for inter-RAT idle mode test case	F	5.2.0	5.3.0	T1-030065	TEI	R99, Rel-4, Rel-5

CR related to corrections to Layer 2 test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	410	-	Rel-5	Clause 7.2.3.24 Polling for status / Operation of timer Timer_Poll_Prohibit (Package 1)	F	5.2.0	5.3.0	T1-030034	TEI	R99, Rel-4, Rel-5
34.123-1	414	-	Rel-5	Correction to package 1 RLC test case 7.2.3.18	F	5.2.0	5.3.0	T1-030066	TEI	R99, Rel-4, Rel-5
34.123-1	415	-	Rel-5	Correction to low prio RLC test cases 7.2.2.11, 7.2.3.31 and 7.2.3.32	F	5.2.0	5.3.0	T1-030067	TEI	R99, Rel-4, Rel-5
34.123-1	416	-	Rel-5	Clause 7.2.3.21 Polling for status / Operation of Timer_Poll timer / Timer expiry (Package 1)	F	5.2.0	5.3.0	T1-030068	TEI	R99, Rel-4, Rel-5
34.123-1	417	-	Rel-5	Correction to low prio PDCP test cases 7.3.2.1.2, 7.3.2.2.2, 7.3.2.2.4 and 7.3.2.2.5	F	5.2.0	5.3.0	T1-030069	TEI	R99, Rel-4, Rel-5

CR related to corrections to RABs test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	455	-	Rel-5	Corrections to generic setup procedure for radio bearer testing	F	5.2.0	5.3.0	T1-030108	TEI	R99, Rel-4, Rel-5
34.123-1	456	-	Rel-5	Corrections to add minimum set of TFCIs to package 1 RB test cases	F	5.2.0	5.3.0	T1-030109	TEI	R99, Rel-4, Rel-5
34.123-1	457	-	Rel-5	Corrections to add minimum set of TFCIs to	F	5.2.0	5.3.0	T1-030110	TEI	R99, Rel-

				package 2 RB test cases						4, Rel-5
34.123-1	458	-	Rel-5	Corrections to add minimum set of TFCIs to package 3 RB test cases	F	5.2.0	5.3.0	T1-030111	TEI	R99, Rel-4, Rel-5
34.123-1	459	-	Rel-5	Generic procedure for radio bearer testing using the DSCH	F	5.2.0	5.3.0	T1-030112	TEI	R99, Rel-4, Rel-5
34.123-1	460	-	Rel-5	Prose for the MultiRAB DSCH Radio bearers test cases	F	5.2.0	5.3.0	T1-030113	TEI	R99, Rel-4, Rel-5

CR related to corrections to TDD test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	463	-	Rel-5	Inclusion of new test cases for intrafrequency Measurement Control and Report TDD	F	5.2.0	5.3.0	T1-030211	TEI, LCRTDD	R99, Rel-4, Rel-5
34.123-1	464	-	Rel-5	Inclusion of test case for events 1H and 1I (TDD)	F	5.2.0	5.3.0	T1-030212	TEI, LCRTDD	R99, Rel-4, Rel-5
34.123-1	465	-	Rel-5	Addition of test cases for RBs for Interactive or background service based on 34.108	F	5.2.0	5.3.0	T1-030214	LCRTDD	Rel-4, Rel-5
34.123-1	466	-	Rel-5	Addition of test cases for RBs for conversational/speech and interactive or background service based on 34.108	F	5.2.0	5.3.0	T1-030215	LCRTDD	Rel-4, Rel-5
34.123-1	467	-	Rel-5	Addition of test cases for RBs for conversational/speech and streaming/unknown or conversational/Unknown service based on 34.108	F	5.2.0	5.3.0	T1-030216	LCRTDD	Rel-4, Rel-5
34.123-1	468	-	Rel-5	Addition of test cases for RBs for conversational/unknown and Interactive or background service based on 34.108	F	5.2.0	5.3.0	T1-030217	LCRTDD	Rel-4, Rel-5
34.123-1	469	-	Rel-5	Addition of test case for RB for Interactive or/background and streaming/unknown service and test case for RB for combinations on S-CCPCH based on 34.108	F	5.2.0	5.3.0	T1-030218	LCRTDD	Rel-4, Rel-5

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

Tdoc ⌘T1-030034

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

Tdoc ⌘T1S-030014

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **410** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to RLC Package1 test case 7.2.3.24
Source:	⌘	Motorola
Work item code:	⌘	TEI
Date:	⌘	10/1/03
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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 purpose is to test the operation of Timer_Poll_Prohibit. To test this with enough confidence, impetus should be on creating more and more poll triggers. Hence the RLC parameter Poll_PDU must be updated to increase the frequency of poll.
Summary of change:	⌘	In clause 7.2.3.24 Changed Poll_PDU parameter from 4 to 2
Consequences if not approved:	⌘	The test prose cannot test the UE behaviour adequately.

Clauses affected:	⌘	7.2.3.24

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.

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	42
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*Poll_PDU) + ceil(T / 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 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*Poll_PDU)+ ceil(T/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 + ceil(T/TTI) - 1, Poll: Note T_2
12a	→		…	SS continues to receive RLC PDUs
13			RB RELEASE	Optional step
NOTE: The Expected Sequence shown is infomative. 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 #18 ***Tdoc ⌘T1-030064***
San Antonio, US, 10th – 14th February 2003

3GPP TSG-T1 SIG Meeting #27 ***Tdoc ⌘T1S030079***
San Antonio, US, 10th – 14th February 2003

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-1** **CR** **412** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 Rel 5; Corrections to package 4 idle mode test case 6.1.2.9.
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	22/01/2003
Category:	⌘	**F**
Release:	⌘	Rel 5

Use one 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 one 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:	⌘	Editorial change to align with core specification. Modifications to test requirements.
Summary of change:	⌘	1. Section 6.1.2.9.2, Conformance requirement: a. Layout of text modified to align with core specification. 2. Section 6.1.2.9.5, Test requirement: a. Updated test requirement to add SS starting point for supervising the Tbarred timer.
Consequences if not approved:	⌘	If this CR is not approved, the errors indicated above will remain in the test specification.

Clauses affected:	⌘	6.1.2.9			
Other specs Affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	Affects both Rel 99, Rel 4 and Rel 5 UEs.			

How to create CRs using this form:

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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.

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.[EDITOR'S NOTE: Changed indentation]

       - 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. [EDITOR'S NOTE: Changed indentation]

       - 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. [EDITOR'S NOTE: Changed indentation]

     - 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.[EDITOR'S NOTE: Changed indentation]

       - 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. [EDITOR'S NOTE: Changed indentation]

   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).

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

Tdoc ⌘T1-030065

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

Tdoc ⌘T1S030125

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-1** **CR** **413** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Alignement of cell numbering for inter-RAT idle mode test cases
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	22/01/2003
Category:	⌘	**F**
Release:	⌘	Rel 5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
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Use one of the following releases:

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R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	To align inter-RAT cell selection and re-selection test cases with the default cell numbering as introduced in CR T1S030077 (R99) and T1S030078 (Rel-4) to 34.108. Editorial corrections
Summary of change:	⌘	1. Clause 6: Added information that default cell numbering as defined in TS 34.108 clause 6.1 have been used for cell selection and re-selection test cases. 2. TC 6.1.13: Corrected title of 6.1.1.3.4. 3. Aligned cell numbering to default cell numbering scheme for the following test cases: 6.2.2.1, 6.2.2.2, 6.2.2.3
Consequences if not approved:	⌘	Cell numbering not aligned with default cell numbering

Clauses affected:	⌘	6, 6.1.13, 6.2.2.1, 6.2.2.2, 6.2.2.3

		Y	N			
Other specs	⌘		X	Other core specifications	⌘	

affected:		X	Test specifications
		X	O&M Specifications
Other comments:	⌘	Affects Rel 99, Rel 4 and Rel 5 UEs.	

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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.

<Start of modified section>

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 Squal>0 (FDD only) and Srxlev>0 while applying Qqualmin (FDD only) and Qrxlevmin 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 $T_{identify\ intra}$ 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 $T_{identify\ intra}$ 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

	Band I		Band II		Band III	
Test Channel	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)

	Band a		Band b		Band c	
Test Channel	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)

	Band a		Band b		Band c	
Test Channel	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

	GSM 900		DCS 1 800	
Test Channel	level dBµVemf( ) / dBm	BCCH ARFCN	level dBµVemf( ) / 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		

	GSM 450		DCS 480	
Test Channel	level dBµVemf( ) / dBm	BCCH ARFCN	level dBµVemf( ) / 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

	Multiband 900/1800		PCS 1900	
Test Channel	level dBµVemf( ) / dBm	BCCH ARFCN	level dBmVemf( ) / 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		

	Multiband 450/900		Multiband 480/900	
Test Channel	level dBµVemf( ) / dBm	BCCH ARFCN	level dBµVemf( ) / 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

	Multiband 450/1800		Multiband 480/1800	
Test Channel	level dBµVemf( ) / dBm	BCCH ARFCN	level dBµVemf( ) / 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).

<End of modified section>

<Start of next modified section>

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 prefered PLMN.

6.1.1.3.4 Method of test~~investigation~~

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

Step g-h:

CPICH_Ec	dBm/3.84 MHz	OFF	-70	OFF -> -60

Step i-l:

CPICH_Ec	dBm/3.84 MHz	OFF	-70 -> OFF	-60

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

Step g-h:

P-CCPCH RSCP		OFF	-74	OFF -> -69

Step k-l:

P-CCPCH RSCP		OFF	-74 -> OFF	-69

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

USIM field	Priority	PLMN
EF_{LOCI}		
$EF_{HPLMNwAcT}$	1st	PLMN 1
$EF_{PLMNwAcT}$	1st	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 l), there shall be no response from the UE within 2 min.

<End of modified section>

<Start of next modified section>

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 Qmeas,n and Qmeas,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 $Qoffset1_{s,n}$ is used for $Qoffset_{s,n}$ to calculate R_n, the hysteresis $Qhyst1_s$ is used for $Qhyst_s$ 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 Treselection.

   - 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 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 92 (GSM) and Cell 103 (GSM).

The 3G Neighbour Cell Description of Cell 92 (GSM) and Cell 103 (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 92 (GSM)	Cell 103 (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, 92, and 103. The SS monitors cells 1, 92 and 103 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), Qrxlevmin 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 92.

3) In step g), the UE shall respond on Cell 92 after Qrxlevmin 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 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 91 (GSM) refers Cell 12 (UTRAN) and Cell 23 (UTRAN).

The Inter-RAT Cell Info List of Cell 12 (UTRAN) and Cell 23 (UTRAN) refers to Cell 91 (GSM).

Step a-c:

Parameter	Unit	Cell 91 (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 91 (GSM)
CELL_BAR_ACCESS		Not barred -> Barred

Step f-g:

Parameter	Unit	Cell 91 (GSM)
RF Signal Level	dBm	-50 -> -80 (4sec) -> -50
C1*	dBm	20 -> -10 (4sec) -> 20

Step h:

Parameter	Unit	Cell 91 (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 93. The SS monitors cells 1, 2 and 93 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~~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), the SS reduces signal level on Cell 9~~1~~ 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~~1~~ to –80 dBm.

6.2.2.2.5 Test Requirements

1) In step c), after the UE has responded on Cell 9~~1~~, it shall not respond on any other cell within 1 min.

2) In step e), the UE shall respond on Cell 1~~2~~.

3) In step g), there shall be no access on Cell 1~~2~~ within 30 s, after having reduced the signal level on Cell 9~~1~~.

4) In step h), the UE shall respond on Cell 1~~2~~.

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 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~~1~~ (GSM) and Cell 10 (GSM) refers Cell 1~~2~~ (UTRAN) ~~and Cell 3 (UTRAN)~~.

The Inter-RAT Cell Info List of Cell 1~~2~~ (UTRAN) ~~and Cell 3 (UTRAN)~~ refers to Cell 9~~1~~ (GSM) and Cell 10 (GSM).

Step a-c:

Parameter	Unit	Cell 9~~1~~ (GSM)	Cell 10~~2~~ (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~~3~~ (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~~1~~ (GSM)	Cell 10~~2~~ (GSM)
RF Signal Level	dBm	-70 -> -82 (4 s) -> -70	OFF

Step h-j:

Parameter	Unit	Cell 9~~1~~ (GSM)	Cell 10~~2~~ (GSM)
RF Signal Level	dBm	-82 -> -70	OFF

Step k-m:

Parameter	Unit	Cell 91 (GSM)	Cell 102 (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 91 and 13 for 20 s. The SS monitors cells 91 and 13 for random access requests from the UE.

d) Cell 102 is switched off. The SS stops paging on the cells and waits for 20 s. (The UE should revert to Cell 91 due to cell reselection).

e) The SS starts paging continuously on Cell 13.

f) The SS decreases the transmit level of Cell 91 to –82 dBm for a period of 4 s (RSCP will then exceed RLA_C value of Cell 91 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 13.

h) The SS stops paging on all cells and sets the transmit level of Cell 91 to –82 dBm.

i) The SS waits 20 s and then starts paging continously on Cell 91. (The UE should revert to Cell 13 due to cell reselection).

j) The SS increases the transmit level of Cell 91 to –70 dBm and waits for the UE to access on Cell 91. The SS records the time t from the increase in the level of Cell 91 to the first response from the UE.

k) The SS stops paging on all cells and sets the transmit level of Cell 91 back to –82 dBm.

l) The SS waits 20 s (The UE should revert to Cell 13 due to cell reselection).

m) The SS increases the transmit level of Cell 91 to –70 dBm. After t+2 s (i.e. 2 s after reselection to Cell 91), the SS starts paging continuously on Cell 13, changes the level of Cell 91 back to –82 dBm and waits to see if there is any random access request on Cell 13. (Within 15 sec after reselection to GSM, the level of Cell 91 is -82 + 10 dBm=-72 dBm. After the 15 s period, the level of Cell 91 is –82 + 5 dBm=-77 dBm. The level of Cell 13 is –74 dBm, thus leading to reselection to Cell 13 after 15 s).

6.2.2.3.5 Test Requirements

1) In step c), after the UE has reselected Cell 91 from Cell 13 as indicated by random access requests, any random access requests on Cell 13 shall not occur within 4,5 s of the last random access request on Cell 91.

2) In step g), there shall be no access on Cell 13 within 34 s of decreasing the level of Cell 91.

3) In step j), the UE shall respond on Cell 91.

4) In step m), there shall be no response on Cell 13 within 11 s after the level of Cell 91 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 91. A further 2 s are subtracted to cover for any uncertainty introduced by the random access process occurring after step g).

<End of modified section>

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

Tdoc ⌘T1-030066

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

Tdoc ⌘T1S030133

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.123-1** **CR** **414** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Correction to package 1 RLC test case 7.2.3.18
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	02/02/2003
Category:	⌘	**F**
Release:	⌘	Rel 5

Use one 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 one 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: ⌘ Currently the AM RLC test case 7.2.3.18 for the second run is defined that SS shall send upto 128 AMD SDUs which is expanded in uplink by UE test loop function by a factor of 4 to 512 AMD PDUs. The uplink transmission window size is currently set to 256 and thus there is a risk that the UE AM RLC buffer becomes full as the UE will not send poll until AMD PDU#255. To avoid UE AM RLC buffer overflow with current definition of the test case would require uplink transmission window size to be 512.

As increasing the uplink transmission window size to 512 would cause the required total AM RLC buffer size to increase the following changes are proposed to reduce the requirement on total AM RLC buffer size:

- Reduce the expansion in UE test loop function from 4 to 2. The test purpose to verify Poll_SDU will still be met by having each SDU being segmented into 2 AMD PDUs instead of 4; and
- Change Poll_SDU from 64 to 16 for the second run

With these changes the requirement on uplink transmission window size is reduced from 512 to 64.

Summary of change: ⌘ To remove risk of UE AM RLC buffer overflow the test case have been modified accordingly:

1. The expansion of SDU size is reduced from 4 to 2

		2. The Poll_SDU for the second run have been reduced from 64 to 16. 3. The test procedure, expected sequence, and test requirement have been modified accordingly.
Consequences if not approved:	⌘	Good UE will fail

Clauses affected:	⌘	7.2.3.18			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	Affects Rel 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.

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 of this SDU 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 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 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 (~~4~~ 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.~~64 and the txWindow Size set to 256.~~

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~~4~~ *
6	→		UPLINK RLC PDU	AM_7_PayloadSize) - 1 bytes by test function
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~~4~~ *
11	→		UPLINK RLC PDU	AM_7_PayloadSize) - 1 bytes by test function
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 infomative. 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~~4~~ * P – 1 and 4~~8~~ * P – 1. No other PDUs shall poll for status.

3GPP TSG- T1 Meeting #18 ***Tdoc ⌘T1-030067***
San Antonio, US, 10th – 14th February 2003

3GPP TSG- T1 SIG Meeting #27 ***Tdoc ⌘T1S030134***
San Antonio, US, 10th – 14th February 2003

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **415** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Correction to low prio RLC test cases 7.2.2.11, 7.2.3.31 and 7.2.3.32
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	dd/mm/yyyy
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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)*
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Use one of the following releases:

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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: ⌘ Update of test cases 7.2.2.11, 7.2.3.31 and 7.2.3.32 to 25.322 V3.13.0 (Dec-02)

Correction of test procedure and test requirement for TC 7.2.3.32. When the criteria VT(DAT)=MaxDAT is reached the AMD PDU which triggered the criteria will be discarded (as part of "SDU discard with explicit signalling" procedure).

Summary of change: ⌘

1. TC 7.2.2.11:
   a. Updated of conformance requirement
2. TC 7.2.3.31:
   a. Updated of conformance requirement
3. TC 7.2.3.32:
   a. Updated of conformance requirement
   b. Removed steps 13 and 14.
   c. Corrected test requirement (the AMD PDU shall only be retransmitted twice)

Consequences if not approved: ⌘ Test cases not aligned to latest core specifications

Clauses affected:	⌘	7.2.2.11, 7.2.3.31, 7.2.3.32			
		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.			

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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 modified section>

7.2.2.11 Reassembly / 15-bit "Length Indicators" / Invalid LI value

7.2.2.11.1 Definition

The RLC segments and concatenates SDUs into UMD PDUs according to the PDU size requested by MAC. "Length Indicators" are added to allow correct reconstruction of SDUs. The behaviour of the RLC on reception of an invalid "Length Indicator" value has been specified. Incorrect operation of segmentation, concatenation, or coding of "Length Indicator" will result in failure of the UE to communicate.

7.2.2.11.2 Conformance requirement

Upon delivery by the lower layer of an UMD PDU that contains a "Length Indicator" value specified to be reserved for UMD PDUs in this version of the protocol, the Receiver shall:

- ignore that UMD PDU.;~~Upon reception of an UMD PDU that contains "Length Indicator" value 111111111111110 ("piggybacked STATUS PDU") the receiver shall discard that UMD PDU.~~

Length: 15bits

Bit	Description
111111111111110	AMD PDU: The rest of the RLC PDU includes a piggybacked STATUS PDU. UMD PDU: Reserved (PDUs with this coding will be discarded by this version of the protocol).

Reference(s)

TS 25.322 clause 11.2.4.1, 9.2.2.8.

7.2.2.11.3 Test purpose

To test that PDUs with invalid "Length Indicators" are discarded by the receiving RLC.

7.2.2.11.4 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 UM 15-bit "Length Indicator" tests in clause 7.2.2.1.

These settings apply to both the uplink and downlink DTCH.

The radio bearer is placed into loop-back mode 1 with the UL SDU size set to UM_15_PayloadSize + 1 bytes.

Test procedure

a) The SS transmits two RLC SDUs of size UM_15_PayloadSize + 1 bytes. In the third PDU for transmission, the SS sets the value of the second (padding) LI to 111111111111110.

b) The SS checks the "Length Indicator" sizes and values of any RLC PDUs returned on the uplink, and checks for the presence of any received RLC SDUs.

c) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			RB ESTABLISHMENT	See generic procedures
2	←		DOWNLINK RLC PDU	SDU 1
3	←		DOWNLINK RLC PDU	SDU 1 & SDU 2
4	←		DOWNLINK RLC PDU	SDU 2 and invalid LI (=111111111111110)
5	→		UPLINK RLC PDU	SDU 1
6	→		UPLINK RLC PDU	SDU 1: Check Lis and re-assembled SDU
7			RB RELEASE	Optional step
NOTE 1: The Expected Sequence shown is infomative. 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.				

7.2.2.11.5 Test requirements

The UE shall return two RLC PDUs. The first shall not include any "Length Indicators". The second shall have a "Length Indicator" indicating the end of the SDU, and a padding "Length Indicator".

The length and data content of the received SDU shall be the same as the first transmitted SDU. The second SDU shall not be returned.

<End of modified section>

<Start of next modified section>

7.2.3.31 Timer based discard, with explicit signalling / Failure of MRW procedure

7.2.3.31.1 Definition

This case tests that if a failure occurs during the signalling of an SDU discard to the receiver, the retransmission protocol operates correctly. SDU discard is used to keep network delays within limits, and incorrect operation will effect the quality of service.

7.2.3.31.2 Conformance requirement

If VT(MRW) = MaxMRW, the Sender shall:

- terminate the SDU discard with explicit signalling procedure;
- stop the timer Timer_MRW if it was started;
- initiate the RLC RESET procedure (see clause 11.4).~~If the number of retransmission of a MRW command (i.e. VT(MRW)) reaches MaxMRW, an error indication shall be passed to RRC and RESET procedure shall be performed.~~

If Timer_MRW expires before the discard procedure is terminated, the Sender shall:

- increment VT(MRW) by one;
- if VT(MRW)<MaxMRW:
  - set the MRW SUFI as previously transmitted (even if additional SDUs were discarded in the mean-time);
  - include the MRW SUFI in a new status report (if other SUFIs are included, their contents shall be updated);
  - transmit the status report by either including it in a STATUS PDU or piggybacked in an AMD PDU;
  - restart Timer_MRW for this discard procedure;
- else (if VT(MRW) = MaxMRW):
  - perform the actions specified in subclause 11.6.4a.

Reference

TS 25.322 clause 11.6.4a~~6.2.~~, 11.6.5

7.2.3.31.3 Test purpose

1. To verify that when the number of retransmissions of a MRW command reaches MaxMRW, an error indication is passed to RRC and RESET procedure is initiated.

7.2.3.31.4 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	
Transmission RLC discard	
Timer based with explicit signalling	
Timer_MRW	500
Timer_Discard	500
Max_MRW	4
Polling info	
Poll_PDU	2

These settings apply to both the uplink and downlink DTCH.

The Radio Bearer is placed in UE test loop mode 1with the UL SDU size set to (2 * AM_7_PayloadSize) – 1bytes.

Test procedure

a) The SS sends 4 RLC SDUs of size (2 * AM_7_PayloadSize) – 1bytes.

b) The SS checks the RLC PDUs received on the uplink and responds to all poll requests as follows: While the VR(H) is 4 or less, with a STATUS PDU, negatively acknowledging the RLC PDU with sequence number 0, and positively acknowledging all other RLC PDUs received. While the VR(H) is greater than 4, a STATUS PDU negatively acknowledging RLC PDUs with sequence numbers 0 and 4, and positively acknowledging all others.

c) The SS monitors received STATUS PDUs for the presence of an MRW SUFI, noting the time it was received. This time will be recorded as T_1.

d) The SS makes no response, but monitors for the next STATUS PDU containing an MRW SUFI, noting the time it was received. This time will be recorded as T_2.

e) The SS sends a STATUS PDU with an MRW_ACK indicating the discard of SDU 1 moving VR(R) to 4.

f) The SS monitors for further STATUS PDUs containing an MRW SUFI, or for a RESET PDU. The SS records the number of STATUS PDUs it received with MRW SUFI before it received the RESET PDU.

g) The SS checks any RLC SDUs reassembled from the uplink.

h) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		DOWNLINK RLC PDU	SDU 1
2	←		DOWNLINK RLC PDU	SDU 1
3	←		DOWNLINK RLC PDU	SDU 2
4	←		…	SS continues to send RLC PDUs
5	←		DOWNLINK RLC PDU	SDU 4
6	→		UPLINK RLC PDU	SDU 1
7	→		…	SS continues to receive RLC PDUs
8	→		UPLINK RLC PDU	Poll
9	←		STATUS PDU	NAK SN=0
10	→		…	SS continues to receive RLC PDUs
11	→		UPLINK RLC PDU	Poll
12	←		STATUS PDU	NAK SN=0, 4
13	→		…	SS continues to receive RLC PDUs
14	→		STATUS PDU	MRW Command: Note T_1
15	→		STATUS PDU	MRW Command: Note T_2
16	←		STATUS PDU	MRW_ACK indicating VR(R) = 4
17	→		STATUS PDU	MRW Command, discard SDU 3
18	→		STATUS PDU	MRW Command
19	→		STATUS PDU	MRW Command
20	→		STATUS PDU	MRW Command
21	→		RESET PDU	
22	←		RESET ACK PDU	
23			RB RELEASE	Optional step
NOTE 1: The Expected Sequence shown is infomative. 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.				

7.2.3.31.5 Test requirements

The measured time $T_2 - T_1$ shall be 500 ms.

After step 17, the SS shall detect 3 repeats of the MRW command sent in step 17 before a RESET PDU is sent.

7.2.3.32 SDU discard after MaxDAT number of retransmissions

7.2.3.32.1 Definition

This case tests that if a PDU is unsuccessfully transmitted MaxDAT times, the SDU it carries, and therefore all other associated PDUs, are discarded by the transmitter and receiver. This mode of SDU discard is used to minimize data loss, and incorrect operation will effect the quality of service.

7.2.3.32.2 Conformance requirement

1. There shall be one VT(DAT) for each PDU and each shall be incremented every time the corresponding AMD PDU is scheduled to be transmitted.~~There is one VT(DAT) for each PDU and it is incremented each time the PDU is transmitted.~~ The initial value of this variable is 0.

2. If the number of times an AMD PDU is scheduled for transmission reaches MaxDAT, the Sender shall:

   - discard all SDUs segments of which are contained in the AMD PDU; and

- utilise explicit signalling to inform the Receiver according to clause 11.6.

3. If VT(DAT) = MaxDAT, the Sender shall:

- if "No_discard after MaxDAT number of transmissions" is configured:

….

- if "SDU discard after MaxDAT number of transmissions" is configured:

- initiate the "SDU discard with explicit signalling" procedure for the corresponding SDU, see subclause 11.6.

4. Upon initiation of the SDU discard with explicit signalling procedure, the Sender shall:

…..

- if "SDU discard after MaxDAT number of retransmissions" is configured:

- discard all SDUs that have segments in AMD PDUs with "Sequence Number" SN inside the interval VT(A) ≤ SN ≤ X, where X is the value of the "Sequence Number" of the AMD PDU with VT(DAT) ≥ MaxDAT.

- discard all AMD PDUs including segments of the discarded SDUs, unless they also carry a segment of a SDU whose timer has not expired;

- if more than 15 discarded SDUs are to be informed to the Receiver (see subclause 11.6.2.2):

….

- otherwise (less than or equal to 15 discarded SDUs are to be informed to the Receiver):

- assemble an MRW SUFI with the discard information of the SDUs.

- schedule and submit to lower layer a STATUS PDU/piggybacked STATUS PDU containing the MRW SUFI;

….

~~If SDU discard after MaxDAT number of retransmission is used and VT(DAT) ≥ MaxDAT for any PDU, the sender shall initiate the SDU discard with explicit signalling procedure for the SDUs to which the PDU with VT(DAT) ≥MaxDAT belongs.~~

Reference

TS 25.322 clauses 9.4, 9.7.3.3, ~~and~~ 11.3.3a~~4.4~~ and 11.6.

7.2.3.32.3 Test purpose

1. To verify that if VT(DAT) ~~=~~≥ MaxDAT for any PDU the sender initiates the SDU discard with explicit signalling procedure.

7.2.3.32.4 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.

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.

Test procedure

a) The SS sends 2 RLC SDUs of size (2 * AM_7_PayloadSize) – 1 bytes.

b) The SS checks the RLC PDUs received on the uplink and responds to all poll requests with a STATUS PDU negatively acknowledging the RLC PDU with sequence number 0, and positively acknowledging all other RLC PDUs received.

c) The SS monitors received STATUS PDUs for the presence of an MRW SUFI.

d) The SS responds with a STATUS PDU containing a valid MRW_ACK SUFI.

e) The SS checks any RLC SDUs reassembled from the uplink.

f) The SS may optionally release the radio bearer.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	←		DOWNLINK RLC PDU	SDU 1
2	←		DOWNLINK RLC PDU	SDU 1
3	←		DOWNLINK RLC PDU	SDU 2
4	←		DOWNLINK RLC PDU	SDU 2
5	→		UPLINK RLC PDU	SDU 1
6	→		…	SS continues to receive RLC PDUs
7	→		UPLINK RLC PDU	SDU 2, Poll
8	←		STATUS PDU	NAK SN=0
9	→		UPLINK RLC PDU	Retransmit SN=0, Poll
10	←		STATUS PDU	NAK SN=0
11	→		UPLINK RLC PDU	Retransmit SN=0, Poll
12	←		STATUS PDU	NAK SN=0
13	~~→~~		~~UPLINK RLC PDU~~Void	~~Retransmit SN=0, Poll~~
14	~~←~~		~~STATUS PDU~~Void	~~NAK SN=0~~
15	→		STATUS PDU	MRW Command
16	←		STATUS PDU	MRW_ACK
17			RB RELEASE	Optional step
NOTE 1: The Expected Sequence shown is infomative. 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.				

7.2.3.32.5 Test requirements

The uplink RLC PDU with sequence number 0 shall be retransmitted twice~~three times~~, then the SS shall detect a STATUS PDU with an MRW command.

<End of modified section>

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San Antonio, Texas, Feb 10th –13th 2003

Tdoc ⌘T1-030068

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

Tdoc ⌘T1S-030013

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **416** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Correction to RLC Package 1 test case 7.2.3.21
Source:	⌘	Motorola
Work item code:	⌘	TEI
Date:	⌘	10/1/03
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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 choice of specific RLC Timer values to be tested, which is of a similar order of magnitude to the TTI of the transport channels used, does not permit the timer maintenance behaviour of the UE to be tested with sufficient confidence.
Summary of change:	⌘	In clause 7.2.3.21 Changed Timer_Poll in first run from 500 to 600 ms
Consequences if not approved:	⌘	The test prose cannot test the UE behaviour adequately.

Clauses affected:	⌘	7.2.3.21			
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.

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	First run	Second run
Polling info		
Last transmission PDU poll	FALSE	FALSE
Timer_poll	~~500~~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 1with 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 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 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 = ceil(T/TTI), Poll: Note T_1
8	→		UPLINK RLC PDU	SN = ceil(T/TTI)+1
9	→		…	SS continues to receive RLC PDUs
10	→		UPLINK RLC PDU	Poll: Note T_2
11			RB RELEASE	Optional step
NOTE: The Expected Sequence shown is infomative. 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.				

7.2.3.21.5 Test requirements

For the first run, the measured time $T_2 - T_1$ shall be 6~~5~~00 ms.
For the second run, the measured time $T_2 - T_1$ shall be 1000 ms.

3GPP TSG- T1 Meeting #18 ***Tdoc ⌘T1-030069***
San Antonio, US, 10th – 14th February 2003

3GPP TSG- T1 SIG Meeting #26 ***Tdoc ⌘T1S030207***
San Antonio, US, 10th – 14th February 2003

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **417** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Correction to low prio PDCP test cases 7.3.2.1.2, 7.3.2.2.2, 7.3.2.2.4 and 7.3.2.2.5
Source:	⌘	Ericsson, Cetecom
Work item code:	⌘	TEI
Date:	⌘	02/02/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘

1. TC 7.3.2.1.2 and TC 7.3.2.2.2: Incorrect comments in specific message content for PDCP data PDUs.
2. TC 7.3.2.2.4: Inconsistency between test procedure and expected sequence
3. TC 7.3.2.2.5: Misleading conformance requirement. Clarification of usage of PID=1 as invalid PID value.

Summary of change: ⌘

4. TC 7.3.2.1.2, TC 7.3.2.2.2 TC 7.3.2.2.4 and TC 7.3.2.2.5:
   a. Corrected comments to “Data” in specific message contents of PDCP PDU for step 3, step 5, step 9 and step 11.
5. TC 7.3.2.2.4:
   a. The note regarding SS configuration in clause Test purpose have been added moved to clause to Initial condition.
   b. Editorial corrections
   c. Added missing step in test procedure (SS sending TCP/IP packets)
6. TC 7.3.2.2.5:

		a. Updated conformance requirement and references. b. Added note to test procedure step e) clarifying why PID=1 is used. c. Added comment in specific message content of PDCP PDU (step 3) that PID=1 represent invalid PID value. d. Updated test requirement.
Consequences if not approved:	⌘	Inconsistent test case specification

Clauses affected:	⌘	7.3.2.1.2, 7.3.2.2.2, 7.3.2.2.4 and 7.3.2.2.5			
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			

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1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

<Start of modified text>

7.3.2.1.2 Transmission of compressed Header

7.3.2.1.2.1 Definition and applicability

Applicable for all UEs supporting RLC AM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP and UDP/IP data packets and furthermore to establish a PDCP entity which applies IP header compression protocol RFC 2507.

7.3.2.1.2.2 Conformance requirement

1. The Packet Data Convergence Protocol shall perform the following functions:

   - transfer of user data. This function is used for conveyance of data between users of PDCP services.

2. Depending on the configuration by upper layers (i.e. PDCP PDU type to be used and header compressor protocol), the PDCP sublayer shall be able to:

   - identify the correct header compression protocol; and
   - distinguish different types of header compression packets within a header compression protocol.

Reference(s)

TS 25.323 clause 5.

TS 25.323 clause 5.1.1.

7.3.2.1.2.3 Test purpose

1. To verify, that the UE transmits and receives in acknowledged mode (RLC AM) TCP/IP and UDP/IP data packets by using IP header compression protocol as described in RFC2507 as configured by higher layers.
2. To verify, that the PID assignment rules are correctly applied by the UE. The UE as shall use the correct PID value for the applied optimisation method for transmitting and receiving TCP/IP and UDP/IP data packets.

7.3.2.1.2.4 Method of test

Initial conditions

UE is in Idle mode. Usage of "PDCP Data" PDU and IP header compression is configured.

Related ICS/IXIT Statement(s)

Support of IP header compression protocol RFC 2507 - YES/NO.

Support of PS – Yes/No

PIXIT: Test_PDCP_TCP/IP_Packet1

PIXIT: Test_PDCP_TCP/IP_Packet2

PIXIT: Test_PDCP_UDP/IP_Packet1

PIXIT: Test_PDCP_UDP/IP_Packet2

Test procedure

a) The SS setups a packet switched session including radio bearer and UE test loop mode 1 in RLC AM using Common test procedures for mobile terminated PS switched sessions. Usage of "PDCP Data" PDU has been configured by higher layers.

b) The SS sends a "normal" 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 with the correct decompression protocol. Then, 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 sends a TCP/IP data packet with packet type: Full_Header, PID=1.

NOTE: According to the compression protocol RFC 2507, this is necessary to transmit the created CONTEXT and the assigned CID.

f) 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 with the correct decompression protocol. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.

g) 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.

h) The SS sends a TCP/IP data packet with packet type: Compressed_TCP, PID=2.

i) 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 with the correct decompression protocol. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.

j) 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.

k) Step b) to d) is repeated for a "normal" UDP/IP data packet, PID=0.

l) Step e) to g) is repeated for a UDP/IP data packet with packet type: Full_Header, PID=1.

m) The SS sends a UDP/IP data packet with packet type: Compressed_non_TCP, PID=4.

n) 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 with the correct decompression protocol. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.

o) The SS receives and decodes the UDP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.

p) The SS deactivates the UE tests loop mode 1 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)				
1	←		PDCP Data	The SS creates a TCP/IP packet without IP header compression. 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 After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression) Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
2	→		PDCP Data	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 to 3 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.
3	←		PDCP Data	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 = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 1 applied for this TCP/IP data packet and decompresses it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.

Step	Direction		Message	Comments
	UE	SS		
4	→		PDCP Data	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 to 3 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.
5	←		PDCP Data	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 = 2 (Compressed_TCP packet type) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 2 applied for this TCP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
6	→		PDCP Data	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 to 3 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.
7	←		PDCP Data	The SS creates a UDP/IP packet without compressed IP header compression. 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 UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes with PID value = 0, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.

Step	Direction		Message	Comments
	UE	SS		
8	→		PDCP Data	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 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: previously received UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.

Step	Direction		Message	Comments
	UE	SS		
9	←		PDCP Data	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 = 1 (Full_Header packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 1 applied for this UDP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
10	→		PDCP Data	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 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: previously received UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
11	←		PDCP Data	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 = 4 (Compressed _non-TCP packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 4 applied for this UDP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
12	→		PDCP Data	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 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: previously received UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
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 identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) 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 identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for AM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	 No. # 23 as described in TS 34.108, Table 6.10.2.1.1 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 Residual BER as described in TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108)
- CN domain identity	PS domain
- RB information to setup - RB identity - PDCP info	 20
- Support of lossless SRNS relocation	False (IE "Support of lossless SRNS relocation" only present, if RLC "In-sequence delivery" is TRUE and in AM)
- PDCP PDU header - Header compression information CHOICE *algorithm type* - RFC2507 - F_MAX_PERIOD - F_MAX_TIME - MAX_HEADER - TCP_SPACE - NON_TCP_SPACE - EXPECT_REORDERING	present 1 256 (Default) 5 (Default) 168 (Default) 15 (Default) 15 (Default) reordering not expected (Default)
- RLC info - Downlink RLC mode - Uplink RLC mode	 (AM RLC) (AM RLC)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) 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 Data PDU (Step 3)

Information Element	Value/remark
PDU type PID Data	000 00001 (Full_Header, PID = 1) PDCP test data type #1: TCP/IP data packet with full TCP/IP~~out IP~~ header ~~compression~~ with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 5)

Information Element	Value/remark
PDU type PID Data	000 00010 (Compressed_TCP, PID = 2) PDCP test data type #1: TCP/IP data packet ~~without IP header compression~~ with a compressed header with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 7)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 9)

Information Element	Value/remark
PDU type PID Data	000 00001 (Full_Header, PID = 1) PDCP test data type #2: UDP/IP data packet with full UDP/IP~~out IP~~ header ~~compression~~ with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 11)

Information Element	Value/remark
PDU type PID Data	000 00100 (Compressed_non-TCP, PID = 4) PDCP test data type #2: UDP/IP data packet ~~without IP header compression~~ with a compressed header with any data content. The data shall be limited to 1500 bytes.

7.3.2.1.2.5 Test requirements

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the previous packets have been received and handled with the correct compression protocol. This verifies, that the PDCP configuration on UE side works as negotiated by the RRC. An invalid PDU type as well as unconfigured PID values shall not be received by SS.

<End of modified text>

<Start of next modified text>

7.3.2.2.2 Transmission of compressed Header

7.3.2.2.2.1 Definition and applicability

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP and UDP/IP data packets and furthermore to establish a PDCP entity which applies IP header compression protocol RFC 2507.

7.3.2.2.2.2 Conformance requirement

1. The Packet Data Convergence Protocol shall perform the following functions:
   - transfer of user data. This function is used for conveyance of data between users of PDCP services.
2. Depending on the configuration by upper layers (i.e. PDCP PDU type to be used and header compressor protocol), the PDCP sublayer shall be able to:
   - identify the correct header compression protocol; and
   - distinguish different types of header compression packets within a header compression protocol.

Reference(s)

TS 25.323 clause 5.

TS 25.323 clause 5.1.1.

7.3.2.2.2.3 Test purpose

1. To verify, that the UE transmits and receives in unacknowledged mode (RLC UM) TCP/IP and UDP/IP data packets by using IP header compression protocol as described in RFC2507 as configured by higher layers.
2. To verify, that the PID assignment rules are correctly applied by the UE. The UE as shall use the correct PID value for the applied optimisation method for transmitting and receiving TCP/IP and UDP/IP data packets.

7.3.2.2.2.4 Method of test

Initial conditions

UE is in Idle mode. Usage of "PDCP Data" PDU and no IP header compression is configured.

Related ICS/IXIT Statement(s)

Support of IP header compression protocol RFC 2507 - YES/NO

Support of PS – Yes/No

PIXIT: Test_PDCP_TCP/IP_Packet1

PIXIT: Test_PDCP_TCP/IP_Packet2

PIXIT: Test_PDCP_UDP/IP_Packet1

PIXIT: Test_PDCP_UDP/IP_Packet2

Test procedure

a) The SS setups a packet switched session including radio bearer and UE test loop mode 1 in RLC UM using Common test procedures for mobile terminated PS switched sessions. Usage of "PDCP Data" PDU has been configured by higher layers.

b) The SS sends a "normal" 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 with the correct decompression protocol. Then, 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 sends a TCP/IP data packet with packet type: Full_Header, PID=1.

NOTE: According to the compression protocol RFC 2507, this is necessary to transmit the created CONTEXT and the assigned CID.

f) 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 with the correct decompression protocol. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.

g) 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.

h) The SS sends a TCP/IP data packet with packet type: Compressed_TCP, PID=2.

i) 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 with the correct decompression protocol. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.

j) 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.

k) Step b) to d) is repeated for a "normal" UDP/IP data packet, PID=0.

l) Step e) to g) is repeated for a UDP/IP data packet with packet type: Full_Header, PID=1.

m) The SS sends a UDP/IP data packet with packet type: Compressed_non_TCP, PID=4.

n) 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 with the correct decompression protocol. Then, it forwards the data to its Radio Bearer Loop Back entity. The received data shall be returned by the UE via its PDCP configuration.

o) The SS receives and decodes the UDP/IP data packet according to the inserted PID. The decoded data packet shall be identical with the data as sent before.

p) The SS deactivates the UE test loop test mode and terminates the connection.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE terminated PS session using IP Header compression in UM RLC (using UE test loop mode 1)				
				The SS creates a TCP/IP packet without IP header compression.
1	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-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 After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression) Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
2	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 3 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.
3	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 1 applied for this TCP/IP data packet and decompresses it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity.

Step	Direction		Message	Comments
	UE	SS		
				The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
4	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 3 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.
5	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 2 (Compressed_TCP packet type) data: below described TCP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU, recognizes PID value = 2 applied for this TCP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
6	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 3 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.
7	←		PDCP Data	The SS creates a UDP/IP packet without compressed IP header compression. The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes with PID value = 0, there was no IP header compression applied for the UDP/IP packet. Therefore, no IP header decompression is applied for this packet. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.

Step	Direction		Message	Comments
	UE	SS		
8	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: previously received UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
9	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 1 applied for this UDP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
10	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: below described UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
11	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 4 (Compressed _non-TCP packet type) data: below described UDP/IP packet After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 1 applied for this UDP/IP data packet and decompress it with the appropriate method. The data packet is forwarded via PDCP-SAP to the Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.

Step	Direction		Message	Comments
	UE	SS		
12	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (Data PDU with Header) PID value = 0,1 or 4 (depending on which UDP/IP header format is used by the UE) data: previously received UDP/IP packet After reception of this UDP/IP data packet, the SS applies the appropriate decoding function depending on the assigned PID.
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 UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) 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 UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	 No. # 23 as described in TS 34.108, Table 6.10.2.1.1 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 UM RLC Residual BER as described in TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108)
- CN domain identity	PS domain
- RB information to setup - RB identity	 21
- PDCP info	False
- PDCP PDU header	present
- Header compression information	1
CHOICE *algorithm type*	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering not expected (Default)
- RLC info - Downlink RLC mode	 (UM RLC)
- Uplink RLC mode	(UM RLC)

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 Data PDU (Step 3)

Information Element	Value/remark
PDU type	000
PID	00001 (Full_Header, PID = 1)
Data	PDCP test data type #1: TCP/IP data packet with full TCP/IP~~out IP~~ header ~~compression~~ with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 5)

Information Element	Value/remark
PDU type PID Data	000 00010 (Compressed_TCP, PID = 2) PDCP test data type #1: TCP/IP data packet ~~without IP header compression~~ with a compressed header with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 7)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) PDCP test data type #2: UDP/IP data packet without IP header compression with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 9)

Information Element	Value/remark
PDU type PID Data	000 00001 (Full_Header, PID = 1) PDCP test data type #2: UDP/IP data packet with full UDP/IP~~out IP~~ header ~~compression~~ with any data content. The data shall be limited to 1500 bytes.

Content of PDCP Data PDU (Step 11)

Information Element	Value/remark
PDU type PID Data	000 00100 (Compressed_non-TCP, PID = 4) PDCP test data type #2: UDP/IP data packet ~~without IP header compression~~ with a compressed header with any data content. The data shall be limited to 1500 bytes.

7.3.2.2.2.5 Test requirements

The UE shall return the TCP/IP and UDP/IP data packets as indication, that the previous packets have been received and handled with the correct compression method. This verifies, that the PDCP configuration on UE side works as negotiated by the RRC. An invalid PDU type as well as unconfigured PID values shall not be received by SS.

<End of modified text>

<Start of next modified text>

7.3.2.2.4 Compression type used for different entities

7.3.2.2.4.1 Definition and applicability

Applicable only for an UE supporting the establishment of more than one PDCP entity in parallel, i.e. it shall be possible to configure more than one Radio Bearer Loop Back entities (each PDCP entity are assigned via PDCP-SAP to its own Radio Bearer Loop Back entity).

Applicable for all UEs supporting two Radio Bearers in RLC UM and RLC AM as described in this test case, clause 7.3.2.2.4.6 Combined PDCP Acknowledged and Unacknowledged mode configuration.

The UE shall be capable to deal with compressed TCP/IP data packets and furthermore it shall apply IP header compression protocol RFC 2507.

7.3.2.2.4.2 Conformance requirement

1. The Packet Data Convergence Protocol shall perform the following functions:

- transfer of user data. This function is used for conveyance of data between users of PDCP services.

2. Depending on the configuration by upper layers (i.e. PDCP PDU type to be used and header compressor protocol), the PDCP sublayer shall be able to:

   - identify the correct header compression protocol; and

   - distinguish different types of header compression packets within a header compression protocol.

3. The mapping of the PID values shall follow the general rules listed below:

   - PID values shall be mapped to the different packet types independently at each PDCP entity;

Several PDCP entities may be defined for a UE with each using the same or different protocol type. In this version of the specification, only one header compression protocol type, RFC 2507 [6], is supported.

Reference(s)

TS 25.323 clause 5.

TS 25.323 clause 5.1.1.

TS 25.323 clause 4.2.

7.3.2.2.4.3 Test purpose

~~NOTE: For this test case, the SS shall be configured to handle more than one received PDCP messages.~~

1. To verify, that a configured IP header compression protocol are applied to compress and decompress TCP/IP data packets by several PDCP entities in parallel, if more than one entities are established, i.e. the UE uses the same PID to transmit two TCP/IP data packets with the same content in parallel using two Radio Bearer configurations.

7.3.2.2.4.4 Method of test

NOTE: For this test case, the SS shall be configured to handle more than one received PDCP messages.

Initial conditions

UE is in Idle mode. Usage of "PDCP Data" PDU and IP header compression is configured for both PDCP entities.

Related ICS/IXIT Statement(s)

Establishment of more than one PDCP entities - YES/NO.

Support of IP header compression protocol RFC 2507 - YES/NO

Support of UM RB and AM RB

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 two radio bearer configurations in parallel in UE test loop mode 1 and in RLC UM and RLC UM using Common test procedures for mobile terminated PS switched sessions. Usage of IP header compression protocol RFC 2507 has been configured by higher layers.

b) The SS sends two successive ~~a~~ "normal" TCP/IP data packet, PID=0 via both PDCP configurations to their peer entities.

c) After having received the TCP/IP data packets, the PDCP entities of the UE shall recognize the PID value and shall handle the received data packet independent of the used PID with the correct decompression method. Then they forward the data to their Radio Bearer Loop Back entity. Both received data shall be returned by each Radio Bearer Loop Back entity.

d) 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.

e) The SS sends two successive TCP/IP data packets with full header (PID=1) via both PDCP configurations to their peer entities.

f~~e~~) After having received the TCP/IP data packets, the PDCP entities of the UE shall recognize the PID value and shall handle the received data packets independent of the used PID with the correct decompression method. Then they forward the data to their Radio Bearer Loop Back entity. Both received data shall be returned by each Radio Bearer Loop Back entity.

g~~f~~) 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.

h~~g~~) 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 UM RLC (using UE test loop mode 1)				
1	←		PDCP Data	The SS sends two successive ~~a~~ PDCP Data PDUs using the RLC-UM-Data-Request Primitive via both PDCP entities with the following contents to the UE: PDU type = 000 (PDCP Data PDU) PID = 0 (uncompressed IP header) data: below described TCP/IP packet After having received both PDCP Data PDUs, the UE decodes each PDU and recognizes PID value = 0 (no IP header compression applied for both TCP/IP data packets). Although the same PID is used for both PDUs, the UE shall handle they with the correct method and it forwards both data packets via PDCP-SAPs to their Radio Bearer Loop Back (RB LB) entities. The RB LB entities in UE test loop mode 1 return the received data packets and send they back to their PDCP entities.

Step	Direction		Message	Comments
	UE	SS		
2	→		PDCP Data	The UE sends back for each PDCP configuration a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 3 data: previously received TCP/IP packet After reception of TCP/IP data packets, the SS applies the appropriate decoding function for both received messages depending on which PID was assigned to the received data
3	←		PDCP Data	The SS sends two successive ~~a~~ PDCP Data PDUs using the RLC-UM-Data-Request Primitive via both PDCP entities with the following contents to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet After having received both PDCP Data PDUs, the UE decodes each PDU and recognizes PID value = 1 (Full_Header packet type applied for both TCP/IP data packets). Although the same PID is used for both PDUs, the UE shall handle they with the correct method and it forwards both data packets via PDCP-SAPs to their Radio Bearer Loop Back (RB LB) entities. The RB LB entities in UE test loop mode 1 return the received data packets and send they back to their PDCP entities.
4	→		PDCP Data	The UE sends back for each PDCP configuration a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content back to the SS: PDU type = 000 (PDCP Data PDU) PID value = 0 to 3 data: previously received TCP/IP packet After reception of TCP/IP data packets, the SS applies the appropriate decoding function for both received messages depending on which PID was assigned to the received data
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 UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) 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 UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup	
- RAB info	
- RAB identity	No. # 23 as described in TS 34.108, Table 6.10.2.1.1 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 UM RLC configuration for UM RLC Residual BER as described in TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108)
- CN domain identity	PS domain
- RB information to setup	
- RB identity	20
- PDCP info	
- PDCP PDU header	present
- Header compression information	1
CHOICE *algorithm type*	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering not expected (Default)
- RLC info	
- Downlink RLC mode	(AM RLC)
- Uplink RLC mode	(AM RLC)
- RB information to setup	(NOTE: for RB ID 21, the same RAB configurations are used (No. # 23 as described in TS 34.108) as described for RB ID 20)
- RB identity	21
- PDCP info	
- PDCP PDU header	present
- Header compression information	1
CHOICE *algorithm type*	
- RFC2507	
- F_MAX_PERIOD	256 (Default)
- F_MAX_TIME	5 (Default)
- MAX_HEADER	168 (Default)
- TCP_SPACE	15 (Default)
- NON_TCP_SPACE	15 (Default)
- EXPECT_REORDERING	reordering not expected (Default)
- RLC info	
- Downlink RLC mode	(UM RLC)
- Uplink RLC mode	(UM RLC)

Content of both PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) 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 both PDCP Data PDU (Step 3)

Information Element	Value/remark
PDU type PID Data	000 00001 (Full_Header, PID = 1) PDCP test data type #1: TCP/IP data packet with~~out~~ full TCP/IP header compression with any data content. The data shall be limited to 1500 bytes.

7.3.2.2.4.5 Test requirements

The UE shall return both TCP/IP data packets as indication that the previous received data packets associated with the same PID value are handled in parallel with the same decompression protocol. This verifies, that more than one PDCP configuration on UE side using the same compression protocol is able to apply it in parallel. An invalid PDU type as well as unconfigured PID values shall not be received by SS.

7.3.2.2.4.6 Combined PDCP Acknowledged and Unacknowledged mode configuration

This configuration is based on the interactive or background / UL:64 DL 64 kbps / PS RAB. The SRB configurations are UL:3.4 DL:3.4 kbps for DCCH aligned to this combined RABs are described for SRB DL 3.4 kbps in TS 34.108, clause 6.10.2.4.1.2.2 and for SRB DL 3.4 kbps in TS 34.108, clause 6.10.2.4.1.2.1. The TFCS refer to TS34.108, clause 6.10.2.4.1.24.1.1.3 for UL and clause 6.10.2.4.1.25.2.1.3 for DL, the Physical channel parameters refer to TS 34.108, clause 6.10.2.4.1.24.1.2 for UL clause 6.10.2.4.1.25.2.2 and for DL accordingly. The configuration is applied to PDCP test cases using both the acknowledged and unacknowledged mode.

Table 7.3.2.2.4/1: Uplink Transport channel parameter for combined RABs PS AM_UM

Higher layer	RAB/Signalling RB		RAB #20	RAB #21
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	UM
	Payload sizes, bit		316	324
	Max data rate, bps		63200	64800
	TrD PDU header, bit		16	8
MAC	MAC header, bit		4	
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		336	
	TFS	TF0, bits	0x336	
		TF1, bits	1x336	
		TF2, bits	2x336	
		TF3, bits	3x336	
		TF4, bits	4x336	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4236	
	Uplink: Max number of bits/radio frame before rate matching		2118	
	RM attribute		130-170	

Table 7.3.2.2.4/2: Downlink Transport channel parameter for combined RABs PS AM_UM

Higher layer	RAB/Signalling RB		RAB #20	RAB #21
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	UM
	Payload sizes, bit		316	324
	Max data rate, bps		63200	64800
	TrD PDU header, bit		16	8
MAC	MAC header, bit		4	
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		336	
	TFS	TF0, bits	0x336	
		TF1, bits	1x336	
		TF2, bits	2x336	
		TF3, bits	3x336	
		TF4, bits	4x336	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4236	
	RM attribute		130-170	

7.3.2.2.5 Reception of not defined PID values

7.3.2.2.5.1 Definition and applicability

Applicable for all UEs supporting RLC UM and a Radio Bearer as described in the Common Test Sequences.

The UE shall be capable to deal with compressed TCP/IP data packets and furthermore to establish a PDCP entity, which applies PDCP Data PDU if no IP header compression protocol, is negotiated.

The UE shall not forward invalid PDCP PDU data contents to its Radio Bearer.

7.3.2.2.5.2 Conformance requirement

1. Depending on the configuration by upper layers (i.e. PDCP PDU type to be used and header compressor protocol), the PDCP sublayer shall be able to:

   - identify the correct header compression protocol; and

   - distinguish different types of header compression packets within a header compression protocol.

2. If a PDCP entity receives a PDCP PDU with a PID value that is not mapped with a valid packet type (see TS 25.323 subclause 5.1.1), it shall:

   - discard the PDCP PDU.

~~2. If a PDCP entity receives a PDCP PDU with a PDU Type set to Reserved (...), it shall:~~

~~- discard the PDCP PDU.~~

~~PDU Type~~

~~Reserved (PDUs with this encoding are invalid for this version of the protocol)~~

Reference(s)

TS 25.323 clause 5.1.1.

TS 25.323 clause 9.2~~1 and 8.3.1~~.

7.3.2.2.5.3 Test purpose

1. To verify, that a UE considers a received PDCP PDU message with not defined PID value as invalid, i.e. such an invalid PDCP PDU is not forwarded to the Radio Bearer entity on UE side. Therefore the UE using test loop mode 1 does not return such data packet to the SS.

7.3.2.2.5.4 Method of test

Initial conditions

UE is in Idle mode. Usage of "PDCP Data" PDU and no IP header compression is configured.

Related ICS/IXIT Statement(s)

Support of IP header compression protocol RFC 2507 - 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 UM using Common test procedures for mobile terminated PS switched sessions. Usage of "PDCP Data PDU" and no PDCP IP header compression protocol has been configured by higher layers.

b) The SS sends a "normal" 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 with the correct decoding method. 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 TCP/IP data packets according to the inserted PID. The decoded data packets shall be identical with the data as sent before.

e) The SS sends a TCP/IP data packet with ~~packet type: Full_Header,~~ PID=1. See note 1.

f) 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 with the correct decoding method.

g) The SS waits an amount of time to make sure, that no returned data packet was sent by UE.

h) The SS deactivates the UE test loop mode and terminates the connection.

NOTE 1 As no PDCP IP header compression protocol has been configured only PID=0 shall be recognised by the UE and PID=1 shall be considered as invalid PID value by the UE).

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
Setup a UE terminated PS session using IP Header compression in UM RLC (using UE test loop mode 1)				
1	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-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 After having received the PDCP Data PDU, the UE decodes the PDU and recognizes PID value = 0 (no IP header compression) Therefore, no IP header decompression shall be applied for this packet. The data packet is forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. The RB LB entity in UE test loop mode 1 returns the received data packet and sends it back to its PDCP entity.
2	→		PDCP Data	The UE sends a PDCP Data PDU using the RLC-UM-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.
3	←		PDCP Data	The SS sends a PDCP Data PDU using the RLC-UM-Data-Request Primitive with the following content to the UE: PDU type = 000 (PDCP Data PDU) PID = 1 (Full_Header packet type [TCP/IP]) data: below described TCP/IP packet. After having received the PDCP Data PDU, the UE shall recognize, that a not defined PID value (as configured by higher layers) is inserted in the PDCP PDU. The UE shall consider this PDU as invalid, i.e. the data packet is not forwarded via PDCP-SAP to its Radio Bearer Loop Back (RB LB) entity. Therefore this data packet is not returned to the SS.
4				The SS waits a amount of time to make sure, that the previously sent data packet is not returned to the SS.
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 UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) 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 UM RLC" of this test case is identical to those of the default contents of layer 3 messages for RRC tests [TS 34.123-1] (PS connection for UM) which fit to the here described parameters with the following exceptions:

Information Element	Value/remark
RAB information for setup - RAB info - RAB identity	 No. # 23 as described in TS 34.108, Table 6.10.2.1.1 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 UM RLC Residual BER as described in TS 34.108, clause: 6.10 Related Signalling RB UL: 3.4 kbps, DL: 3.4 kbps DCCH, No. #2 (as described in TS 34.108)
- CN domain identity	PS domain
- RB information to setup - RB identity	 21
- PDCP info - PDCP PDU header	 present
- RLC info - Downlink RLC mode	 (UM RLC)
- Uplink RLC mode	(UM RLC)

Content of PDCP Data PDU (Step 1)

Information Element	Value/remark
PDU type PID Data	000 00000 (No header compression, PID = 0) 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 Data PDU (Step 3)

Information Element	Value/remark
PDU type PID Data	000 00001 (~~Full_Header~~Invalid PID value, PID = 1) PDCP test data type #1: TCP/IP data packet with~~out~~ full TCP/IP header compression with any data content. The data shall be limited to 1500 bytes.

7.3.2.2.5.5 Test requirements

The UE shall return the received TCP/IP data packet using the PDCP Data PDU with PID = 0. ~~as indication, that the UE works as configured. An invalid PDU type as well as unconfigured PID values shall not be received by SS.~~

The UE shall not return the TCP/IP data packet using the PDCP Data PDU with PID = 1. ~~as indication, that this PDU was considered as invalid by the UE. This verifies, that the PDCP configuration on UE side has considered this PDU as invalid.~~

<End of modified text>

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

Tdoc ⌘T1-030108

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

Tdoc ⌘T1S-030037

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **455** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Corrections to generic setup procedure for radio bearer testing
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	22/01/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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: ⌘ Missing authentication procedure and security mode procedure for CS paging case.

Missing second security mode procedure for the combined CS + PS radio bearer case before PS radio bearer setup procedure is performed. Separate security mode procedure is needed to enable testing of ciphering on the PS radio bearer(s).

Summary of change: ⌘

1. 14.1.1:
   a. Added security mode procedure to the sequence table for CS paging.
   b. Clarified note 1
2. 14.1.2:
   a. Added authentication procedure and security mode procedure to the sequence table for CS paging.
   b. Clarified note 1
   c. Splitted up sequence for CS or PS only case; and CS+PS case.

		d. Added second security mode procedure to the CS+PS case
Consequences if not approved:	⌘	Good UE will fail

Clauses affected:	⌘	14.1.1, 14.1.2			
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			

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.

14 Interoperability Radio Bearer Tests

14.1 General information for interoperability radio bearer tests

The purpose of the interoperability radio bearer test cases are to ensure interoperability of UE's in different regions and networks. For this purpose representative radio bearer configurations that will be used in real network implementations have been defined in TS 34.108 [9], clause 6.10.

The applicability of radio bearer tests is dependent on the UE uplink and downlink radio access capabilities and UE support tele- and bearer-services. See TS 34.123-2, annex B for applicability of the specific test cases.

14.1.1 Generic radio bearer test procedure for single RB configurations

This procedure is used to test single radio bearer configurations and speech only radio bearers. For testing of multiple radio bearer combinations as well as for testing simultaneous transmission and reception of user data and signalling data then the procedure as specified in 14.1.2 should be used.

Initial conditions

UE in idle mode

Test procedure

a) The SS establish setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10 for the actual radio bearer test.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. See note 1.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

d) The SS transmits, for all radio bearers under test, one or more RLC SDUs having the size equal to the "Test data size" as specified for the sub-test of the actual radio bearer test. See note 3.

e) The SS checks that, for all radio bearers under test, the content of the received RLC SDU has the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loopback of RLC SDUs.

f) The SS opens the UE test loop.

g) Steps b) to f) are repeated for all sub-tests

h) The SS may optionally release the radio bearer.

i) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signaling radio bearers as well as the possible UE processing delays shall be taken into consideration.

NOTE 2: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode then the UL RLC SDU size parameter shall be selected to achieve loop back of all test data received in the DL RLC SDU, i.e. the UL RLC SDU size is set to the nearest multiple of the payload size of the UL TF under test minus the size of the length indicator and expansion bit which is equal or bigger than the test data size. For some reference radio bearer configurations this may cause the UE to return the UL RLC SDU in more than one TTI, i.e. in case no UL TF is available to cover the UL RLC SDU size. However, as the test procedure only send downlink test data once there is no risk for the UE transmission buffer to become full even if the returned RLC SDUs need to be tranmitted in more than one TTI.

NOTE 3: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

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
6a		<--	AUTHENTICATION REQUEST	
6b		-->	AUTHENTICATION RESPONSE	
6c		<--	SECURITY MODE COMMAND	
6d		-->	SECURITY MODE COMPLETE	

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 1 In addition to activate integrity protection 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..6	<-- -->		Paging	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.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
9	<--		RADIO BEARER SETUP (DCCH)	RRC
10	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test
12	<--		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.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14	<--		DOWNLINK RLC SDU	Send test data using the downlink transport format combination under test
15	-->		UPLINK RLC SDU	
16	<--		OPEN UE TEST LOOP (DCCH)	TC
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every sub-test.	
19			RB RELEASE	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE	TC Optional step
21	-->		DEACTIVATE RB TEST MODE COMPLETE	TC Optional step

14.1.2 Generic test procedure for testing multi-RB combinations and simultaneous signalling

This procedure is used to test multiple radio bearer combinations. This procedure is also used to verify simultaneous transmission and reception of user data and signalling data.

Initial conditions

UE in idle mode

Test procedure

a) The SS establish the reference radio bearer configuration as specified in TS 34.108, clause 6.10 for the actual radio bearer test. For the case when the reference radio bearer configuration includes radio bearers for both CS and PS domain then the radio bearer setup procedure has to be performed once per domain. The first radio bearer setup procedure shall perform configuration of the physical channel for the radio bearer combination under test as well as the transport channels for the CS radio bearer(s),also the transport format combination set for only CS radio bearers has to provided. The second radio bearer procedure shall perform the configuration for the transport channel for the PS radio bearers . The Physical channel configuration shall be done for both CS and PS radio bearers combined. Here the transport format combination set for both CS and PS radio bearers shall be provided.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. See note 1.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

d) The SS starts transmitting continous test data for all radio bearers under test. The number of RLC SDUs to transmit every TTI and the size "Test data size" is specified for each sub-test of the actual radio bearer test. See note 3.

e) The SS waits the time T1 equal to 12 times the largest TTI. See note 4

f) SS transmit a MEASUREMENT CONTROL message requesting periodic reporting with a period of T2.

g) SS waits the time equal to 2 times T2

h) During step e) to g) the SS checks that, for all radio bearers under test, the content of the received RLC SDUs have the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loopback of RLC SDUs.

i) The SS opens the UE test loop.

j) Steps b) to i) are repeated for all sub-tests

h) The SS may optionally release the radio bearer.

i) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signaling radio bearers as well as the possible UE processing delays shall be taken into consideration.

NOTE 2: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode then, as the test procedure is based on continous downlink transmission of test data in sub-sequent TTIs, the UL RLC SDU size parameter shall be selected to adopt to the uplink data rate and to the uplink/downlink TTI ratio. Selection of UL RLC SDU size for the different radio bearers under test should be such that the UE returns data in sub-sequent TTIs without causing the UE transmission buffer to become full. To achieve this the UL RLC SDU size shall be set to UL TF payload size under test, minus the size of length indicator and expansion bit, and divided by the ratio between downlink and uplink TTI. E.g. for a AM radio bearer having the the uplink RLC payload size equal to 320, the downlink TTI equal to 10 ms, and the uplink TTI equal to 20 ms, then for the transport format 4x336 (TF payload size = 4x320=1280 bits) the UL RLC SDU size parameter should be set to 632 bits (=1280bits/(20ms/10ms)- 8 bits).

NOTE 3: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

NOTE 4: [10] TS 34.109 clause 5.3.2.9 defines the loopback delay requirement for UE test loop mode 1 to be max 10 times actual TTI of a radio bearer when RLC and MAC is operated in transparent mode. As RLC/MAC may be operated in non-transparent modes depending on the actual reference radio bearer configuration to be tested an additional 2 TTI have been added to secure that UE starts transmitting data in uplink before SS transmit the MEASUREMENT CONTROL message.

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
6a	<--		AUTHENTICATION REQUEST	
6b	-->		AUTHENTICATION RESPONSE	
6c	<--		SECURITY MODE COMMAND	
6d	-->		SECURITY MODE COMPLETE	

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 1 In addition to activate integrity protection 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..6	<-- -->		Paging	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.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
Case A: CS or PS radio bearers only				
A9	<--		RADIO BEARER SETUP (DCCH)	RRC ~~In case the reference radio bearer configuration includes radio bearers for both PS and CS domain then the CS radio bearer(s) are configured in the first RADIO BEARER SETUP message. PS radio bearer(s) are configured in a second RADIO BEARER SETUP message, see step 10a.~~
A10	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
Case B: CS + PS radio bearers				
B9	<--		RADIO BEARER SETUP (DCCH)	RRC CS radio bearer(s) are configured
B10	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
B10a	<--		SECURITY MODE COMMAND	See Note~~In case the reference radio bearer configuration includes radio bearers for both PS and CS domain then repeat steps 9 and 10 to configure the PS radio bearer(s)~~
B10b	-->		SECURITY MODE COMPLETE	
B10c	<--		RADIO BEARER SETUP (DCCH)	RRC PS radio bearer(s) are configured
B10d	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test
12	<--		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.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14a	<-- -->		Test data	SS sends continues test data in every TTI using the downlink transport format combination under test. The number of RLC SDUs and their sizes are specified in the actual test case. SS checks returned data
14b			Wait T1	SS continue to send data every TTI and check the returned data for time T1 T1 = 12 times the max TTI in the actual radio bearer combination under test
15a	<-- --> <--		Test data (DTCH) + MEASUREMENT CONTROL (DCCH)	SS continues sending test data in every TTI. SS sends a MEASUREMENT CONTROL message simultaneously to the test data requesting periodic reporting at interval T2
15b	<-- --> -->		Test data (DTCH) + MEASUREMENT REPORT (DCCH)	SS continue to send data in every TTI and check the returned data for time 2xT2 SS checks that at least one MEASUREMENT REPORT message is received
16	<--		OPEN UE TEST LOOP (DCCH)	TC

Step	Direction		Message	Comments
	UE	SS		
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every sub-test.	
19			RB RELEASE (DCCH)	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE (DCCH)	TC Optional step
21	-->		DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step
Note. For case B (CS+PS radio bearers) the second security mode procedure is needed to enable testing of ciphering on the PS radio bearers. For the CS domain the security mode procedure is performed as part of the CS paging procedure.				

3GPP TSG- T1 Meeting #18 ***Tdoc ⌘T1-030109***
San Antonio, US, 10th – 14th February 2003

3GPP TSG- T1 SIG Meeting #26 ***Tdoc ⌘T1S030101***
San Antonio, US, 10th – 14th February 2003

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **456** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Corrections to add minimum set of TFCIs to package 1 RB test cases
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	02/02/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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: ⌘ Current RB test cases does not include the minimum set of TFCIs in the restricted uplink TFCIs. The restricted set of TFCI must comply with the minimum set as specified in TS 25.331, clause 8.6.5.2.

Summary of change: ⌘

1. Clause 14.1.1 and 14.2.1, Note 1:
   a. Added information that the restricted set of TFCIs must comply with the minimum set of TFCIs.
2. TC 14.2.4, 14.2.26 and 14.2.40:
   a. Added minimum set of TFCIs
   b. Added note in sub-test table stating which TFCIs are included in the mini9mu set of TFCIs.
   c. Updated test requirement (only 14.2.26)

Consequences if not approved: ⌘ Test cases not consistent with core specification

Clauses affected:	⌘	14.1.1, 14.1.2, 14.2.4, 14.2.26 and 14.2.40			
		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			

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>

14 Interoperability Radio Bearer Tests

14.1 General information for interoperability radio bearer tests

The purpose of the interoperability radio bearer test cases are to ensure interoperability of UE's in different regions and networks. For this purpose representative radio bearer configurations that will be used in real network implementations have been defined in TS 34.108 [9], clause 6.10.

The applicability of radio bearer tests is dependent on the UE uplink and downlink radio access capabilities and UE support tele- and bearer-services. See TS 34.123-2, annex B for applicability of the specific test cases.

14.1.1 Generic radio bearer test procedure for single RB configurations

This procedure is used to test single radio bearer configurations and speech only radio bearers. For testing of multiple radio bearer combinations as well as for testing simultaneous transmission and reception of user data and signalling data then the procedure as specified in 14.1.2 should be used.

Initial conditions

UE in idle mode

Test procedure

a) The SS establish setup the reference radio bearer configuration as specified in TS 34.108, clause 6.10 for the actual radio bearer test.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. See note 1.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

d) The SS transmits, for all radio bearers under test, one or more RLC SDUs having the size equal to the "Test data size" as specified for the sub-test of the actual radio bearer test. See note 3.

e) The SS checks that, for all radio bearers under test, the content of the received RLC SDU has the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loopback of RLC SDUs.

f) The SS opens the UE test loop.

g) Steps b) to f) are repeated for all sub-tests

h) The SS may optionally release the radio bearer.

i) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signaling radio bearers as well as the possible UE processing delays shall be taken into consideration. The restricted set of TFCIs must comply with the minimum set of TFCIs as specified in TS 25.331, clause 8.6.5.2.

NOTE 2: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode then the UL RLC SDU size parameter shall be selected to achieve loop back of all test data received in the DL RLC SDU, i.e. the UL RLC SDU size is set to the nearest multiple of the payload size of the UL TF under test minus the size of the length indicator and expansion bit which is equal or bigger than the test data size. For some reference radio bearer configurations this may cause the UE to return the UL RLC SDU in more than one TTI, i.e. in case no UL TF is available to cover the UL RLC SDU size. However, as the test procedure only send downlink test data once there is no risk for the UE transmission buffer to become full even if the returned RLC SDUs need to be tranmitted in more than one TTI.

NOTE 3: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

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

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 1 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..6	<-- -->		Paging	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.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
9	<--		RADIO BEARER SETUP (DCCH)	RRC
10	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test
12	<--		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.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14	<--		DOWNLINK RLC SDU	Send test data using the downlink transport format combination under test
15	-->		UPLINK RLC SDU	
16	<--		OPEN UE TEST LOOP (DCCH)	TC
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every sub-test.	
19			RB RELEASE	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE	TC Optional step
21	-->		DEACTIVATE RB TEST MODE COMPLETE	TC Optional step

14.1.2 Generic test procedure for testing multi-RB combinations and simultaneous signalling

This procedure is used to test multiple radio bearer combinations. This procedure is also used to verify simultaneous transmission and reception of user data and signalling data.

Initial conditions

UE in idle mode

Test procedure

a) The SS establish the reference radio bearer configuration as specified in TS 34.108, clause 6.10 for the actual radio bearer test. For the case when the reference radio bearer configuration includes radio bearers for both CS and PS domain then the radio bearer setup procedure has to be performed once per domain. The first radio bearer setup procedure shall perform configuration of the physical channel for the radio bearer combination under test as well as the transport channels for the CS radio bearer(s),also the transport format combination set for only CS radio bearers has to provided. The second radio bearer procedure shall perform the configuration for the transport channel for the PS radio bearers . The Physical channel configuration shall be done for both CS and PS radio bearers combined. Here the transport format combination set for both CS and PS radio bearers shall be provided.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. See note 1.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

d) The SS starts transmitting continous test data for all radio bearers under test. The number of RLC SDUs to transmit every TTI and the size "Test data size" is specified for each sub-test of the actual radio bearer test. See note 3.

e) The SS waits the time T1 equal to 12 times the largest TTI. See note 4

f) SS transmit a MEASUREMENT CONTROL message requesting periodic reporting with a period of T2.

g) SS waits the time equal to 2 times T2

h) During step e) to g) the SS checks that, for all radio bearers under test, the content of the received RLC SDUs have the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loopback of RLC SDUs.

i) The SS opens the UE test loop.

j) Steps b) to i) are repeated for all sub-tests

h) The SS may optionally release the radio bearer.

i) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signaling radio bearers as well as the possible UE processing delays shall be taken into consideration. The restricted set of TFCIs must comply with the minimum set of TFCIs as specified in TS 25.331, clause 8.6.5.2.

NOTE 2: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode then, as the test procedure is based on continous downlink transmission of test data in sub-sequent TTIs, the UL RLC SDU size parameter shall be selected to adopt to the uplink data rate and to the uplink/downlink TTI ratio. Selection of UL RLC SDU size for the different radio bearers under test should be such that the UE returns data in sub-sequent TTIs without causing the UE transmission buffer to become full. To achieve this the UL RLC SDU size shall be set to UL TF payload size under test, minus the size of length indicator and expansion bit, and divided by the ratio between downlink and uplink TTI. E.g. for a AM radio bearer having the the uplink RLC payload size equal to 320, the downlink TTI equal to 10 ms, and the uplink TTI equal to 20 ms, then for the transport format 4x336 (TF payload size = 4x320=1280 bits) the UL RLC SDU size parameter should be set to 632 bits (=1280bits/(20ms/10ms)- 8 bits).

NOTE 3: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transperant mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transperent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

NOTE 4: [10] TS 34.109 clause 5.3.2.9 defines the loopback delay requirement for UE test loop mode 1 to be max 10 times actual TTI of a radio bearer when RLC and MAC is operated in transparent mode. As RLC/MAC may be operated in non-transparent modes depending on the actual reference radio bearer configuration to be tested an additional 2 TTI have been added to secure that UE starts transmitting data in uplink before SS transmit the MEASUREMENT CONTROL message.

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

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 1 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..6	<--		Paging	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.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
9	<--		RADIO BEARER SETUP (DCCH)	RRC In case the reference radio bearer configuration includes radio bearers for both PS and CS domain then the CS radio bearer(s) are configured in the first RADIO BEARER SETUP message. PS radio bearer(s) are configured in a second RADIO BEARER SETUP message, see step 10a.
10	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
10a				In case the reference radio bearer configuration includes radio bearers for both PS and CS domain then repeat steps 9 and 10 to configure the PS radio bearer(s)
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test
12	<--		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.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14a	<-- -->		Test data	SS sends continues test data in every TTI using the downlink transport format combination under test. The number of RLC SDUs and their sizes are specified in the actual test case. SS checks returned data
14b			Wait T1	SS continue to send data every TTI and check the returned data for time T1 T1 = 12 times the max TTI in the actual radio bearer combination under test
15a	<-- --> <--		Test data (DTCH) + MEASUREMENT CONTROL (DCCH)	SS continues sending test data in every TTI. SS sends a MEASUREMENT CONTROL message simultaneously to the test data requesting periodic reporting at interval T2
15b	<-- --> -->		Test data (DTCH) + MEASUREMENT REPORT (DCCH)	SS continue to send data in every TTI and check the returned data for time 2xT2 SS checks that at least one MEASUREMENT REPORT message is received
16	<--		OPEN UE TEST LOOP (DCCH)	TC
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every sub-test.	
19			RB RELEASE (DCCH)	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE (DCCH)	TC Optional step
21	-->		DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step

<End of modified section>

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14.2.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.4.1 Conformance requirement

The UE shall be able to establish the UTRAN requested radio bearers within the UE's signaled radio access capabilities.

The UE shall correctly transfer user data from peer to peer RLC entitities according to the requested radio bearer configuration.

Reference(s)

3GPP TS 25.331, clause 8.2.1

3GPP TS 25.2xx series (Physical Layer)

3GPP TS 25.321 (MAC)

3GPP TS 25.322 (RLC)

14.2.4.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.4.

14.2.4.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x148
	TF1, bits	1x39	1x103	1x60	1x148
	TF2, bits	1x81	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x148
	TF1, bits	1x39	1x103	1x60	1x148
	TF2, bits	1x81	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 103 bits RB7: 60 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 81 bits RB6: 103 bits RB7: 60 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 14.1.1 for test procedure.

14.2.4.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x81); RB6/TF1 (1x103); and RB7/TF1 (1x60).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 or RB7.
   - for sub-test 2: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by SS

<End of modified section>

<Start of next modified section>

14.2.26 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.26.1 Conformance requirement

See 14.2.4.1.

14.2.26.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.26.

14.2.26.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

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	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 14.1.1 for test procedure.

14.2.26.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return

- for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

<End of modified section>

<Start of next modified section>

14.2.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

14.2.40.1 Conformance requirement

See 14.2.4.1.

14.2.40.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.40.

14.2.40.3 Method of test

See 14.1.2 for test procedure.

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	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

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_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, 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_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, 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_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, 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_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, DUL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, 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_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632

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)
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, 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: 952
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 952
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, 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: 1272
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272

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)
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs. 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 the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

14.2.40.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
   - for sub-test 3, 6, 9 and 12: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4, 7, 10 and 13: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5, 8, 11 and 14: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

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

Tdoc ⌘T1-030110

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

Tdoc ⌘T1S030136

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **457** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Corrections to add minimum set of TFCIs to package 2 RB test cases
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	12/02/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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: ⌘ Current RB test cases does not include the minimum set of TFCIs in the restricted uplink TFCIs. The restricted set of TFCI must comply with the minimum set as specified in TS 25.331, clause 8.6.5.2.

Summary of change: ⌘

1. TC 14.2.27, 14.2.29, 14.2.31.1, 14.2.32.1 and 14.2.41:
   a. Added minimum set of TFCIs
   b. Added note in sub-test table stating which TFCIs are included in the minimum set of TFCIs.
   c. Updated test requirement (14.2.27, 14.2.29, 14.2.31)

Note
Package 2 radio bearer test cases 14.4.2.1, 14.4.2.2, 14.4.2.3, 14.4.3 and 14.5.1 are not affected.

Consequences if not approved: ⌘ Test cases not consistent with core specification

Clauses affected:	⌘	14.2.27, 14.2.29, 14.2.31.1, 14.2.32.1 and 14.2.41			
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			

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>

14.2.27 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.27.1 Conformance requirement

See 14.2.4.1.

14.2.27.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.27.

14.2.27.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

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	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 14.1.1 for test procedure.

14.2.27.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return

- for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
- for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

<End of modified section>

<Start of modified section>

14.2.29 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

14.2.29.1 Conformance requirement

See 14.2.4.1.

14.2.29.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.29.

14.2.29.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	9x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

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	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2872

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 14.1.1 for test procedure.

14.2.29.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).

- for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336)..
- for sub-test 3: RB5/TF3 (4x336) or RB5/TF1 (1x336)..
- for sub-test 4: RB5/TF4 (8x336) or RB5/TF1 (1x336)..
- for sub-test 5: RB5/TF3 (4x336) or RB5/TF1 (1x336)..

3. At step 15 the UE shall return
   - for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

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14.2.31 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

14.2.31.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH/ 10 ms TTI

14.2.31.1.1 Conformance requirement

See 14.2.4.1.

14.2.31.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.31 for the downlink 10 ms TTI case.

14.2.31.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (256 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

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	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 14.1.1 for test procedure.

14.2.31.1.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).

3. At step 15 the UE shall return

   - for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

   - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

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14.2.32 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

14.2.32.1 Interactive or background / UL:64 DL:384 kbps / PS RAB / 10 ms TTI

14.2.32.1.1 Conformance requirement

See 14.2.4.1.

14.2.32.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.32 for the 10 ms TTI case.

14.2.32.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

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 1)	Test data size (bits) (note 1)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 14.1.1 for test procedure.

14.2.32.1.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).

- for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
- for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
- for sub-test 4 and 5: RB5/TF4 (4x336) or RB5/TF1 (1x336).

3. At step 15 the UE shall return
   - for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

<End of modified section>

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14.2.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.41.1 Conformance requirement

See 14.2.4.1.

14.2.41.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.41.

14.2.41.3 Method of test

See 14.1.2 for test procedure.

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	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

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_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, 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_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, 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_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, 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_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TCF18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, 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_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632

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)
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, 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
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, 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_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 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)
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs. 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 the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

14.2.41.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
   - for sub-test 3: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
   - for sub-test 6: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 8: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
   - for sub-test 9: RLC SDUs 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: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 11: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS.
   - for sub-test 12: RLC SDUs 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: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 14: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

3GPP TSG- T1 Meeting #18 ***Tdoc ⌘T1-030111***
San Antonio, US, 10th – 14th February 2003

3GPP TSG- T1 SIG Meeting #26 ***Tdoc ⌘T1S030137***
San Antonio, US, 10th – 14th February 2003

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **458** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 R5; Corrections to add minimum set of TFCIs to package 3 RB test cases
Source:	⌘	Ericsson
Work item code:	⌘	TEI
Date:	⌘	12/02/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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: ⌘ Current RB test cases does not include the minimum set of TFCIs in the restricted uplink TFCIs. The restricted set of TFCI must comply with the minimum set as specified in TS 25.331, clause 8.6.5.2.

Summary of change: ⌘

1. TC 14.2.4a, 14.2.5a, 14.2.7a, 14.2.12, 14.2.16, 14.2.17, 14.2.23b, 14.2.23c, 14.2.38a, 14.2.38b, 14.2.38c, 14.2.38e, 14.2.38f, 14.2.38g, 14.2.38h, 14.2.38i, 14.2.38j, 14.2.43.1, 14.2.49.1, 14.2.51.1, 14.2.51a.1, 14.2.51b.1, 14.2.57 and 14.2.58:
   a. Added minimum set of TFCIs
   b. Added note in sub-test table stating which TFCIs are included in the minimum set of TFCIs.
   c. Updated test requirement (14.2.12, 14.2.16, 14.2.17, 14.2.23b, 14.2.23c)

Note
Package 3 radio bearer test cases 14.4.4, 14.2.13.2, 14.2.14.1, 14.2.14.2, 14.2.15 and 14.2.23a are not affected.

Consequences if not approved:	⌘	Test cases not consistent with core specification

Clauses affected:	⌘	14.2.4a, 14.2.5a, 14.2.7a, 14.2.12, 14.2.16, 14.2.17, 14.2.23b, 14.2.23c, 14.2.38a, 14.2.38b, 14.2.38c, 14.2.38e, 14.2.38f, 14.2.38g, 14.2.38h, 14.2.38i, 14.2.38j, 14.2.43.1, 14.2.49.1, 14.2.51.1, 14.2.51a.1, 14.2.51b.1, 14.2.57 and 14.2.58			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	
			X Test specifications		
			X O&M Specifications		
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.

<Start of modified section>

14.2.4a Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.4a.1 Conformance requirement

See clause 14.2.4.1.

14.2.4a.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.4a.

14.2.4a.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x148
	TF1, bits	1x39	1x53	1x60	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0, TF0)
UL_TFC3	(TF3, TF2, TF0, TF0)
UL_TFC4	(TF4, TF3, TF0, TF0)
UL_TFC5	(TF5, TF4, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF0, TF1)
UL_TFC9	(TF3, TF2, TF0, TF1)
UL_TFC10	(TF4, TF3, TF0, TF1)
UL_TFC11	(TF5, TF4, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x148
	TF1, bits	1x39	1x53	1x60	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0, TF0)
DL_TFC3	(TF3, TF2, TF0, TF0)
DL_TFC4	(TF4, TF3, TF0, TF0)
DL_TFC5	(TF5, TF4, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF0, TF1)
DL_TFC9	(TF3, TF2, TF0, TF1)
DL_TFC10	(TF4, TF3, TF0, TF1)
DL_TFC11	(TF5, TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 103 bits RB7: 60 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits RB7: 60 bits	RB5: 42 bits RB6: 53 bits RB7: No data
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits RB7: 60 bits	RB5: 55 bits RB6: 63 bits RB7: No data
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 75 bits RB6: 84 bits RB7: 60 bits	RB5: 75 bits RB6: 84 bits RB7: No data
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 81 bits RB6: 103 bits RB7: 60 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See clause 14.1.1 for test procedure.

14.2.4a.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53)
   - for sub-test 3: RB5/TF3 (1x55) and RB6/TF2 (1x63)
   - for sub-test 4: RB5/TF4 (1x75) and RB6/TF3 (1x84)
   - for sub-test 5: RB5/TF5 (1x81), RB6/TF4 (1x103) and RB7/TF1 (1x60)
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 or RB7.
   - for sub-test 2,3 and 4: an RLC SDU on RB5 and RB6 having the same content as sent by SS; and no data shall be received on RB7.
   - for sub-test 5: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by SS.

<End of modified section>

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14.2.5a Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.5a.1 Conformance requirement

See clause 14.2.4.1.

14.2.5a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.5a.

14.2.5a.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x65	0x99	0x40	0x148
	TF1, bits	1x39	1x53	1x40	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x76	N/A	N/A
	TF4, bits	1x58	1x99	N/A	N/A
	TF5, bits	1x65	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0, TF0)
UL_TFC3	(TF3, TF2, TF0, TF0)
UL_TFC4	(TF4, TF3, TF0, TF0)
UL_TFC5	(TF5, TF4, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF0, TF1)
UL_TFC9	(TF3, TF2, TF0, TF1)
UL_TFC10	(TF4, TF3, TF0, TF1)
UL_TFC11	(TF5, TF4, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	1x0	0x99	0x40	0x148
	TF1, bits	1x39	1x53	1x40	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x76	N/A	N/A
	TF4, bits	1x58	1x99	N/A	N/A
	TF5, bits	1x65	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0, TF0)
DL_TFC3	(TF3, TF2, TF0, TF0)
DL_TFC4	(TF4, TF3, TF0, TF0)
DL_TFC5	(TF5, TF4, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF0, TF1)
DL_TFC9	(TF3, TF2, TF0, TF1)
DL_TFC10	(TF4, TF3, TF0, TF1)
DL_TFC11	(TF5, TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 99 bits RB7: 40 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits RB7: 40 bits	RB5: 42 bits RB6: 53 bits RB7: No data
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits RB7: 40 bits	RB5: 55 bits RB6: 63 bits RB7: No data
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 58 bits RB6: 76 bits RB7: 40 bits	RB5: 58 bits RB6: 76 bits RB7: No data
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 65 bits RB6: 99 bits RB7: 40 bits	RB5: 65 bits RB6: 99 bits RB7: 40 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See clause 14.1.1 for test procedure.

14.2.5a.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53)
   - for sub-test 3: RB5/TF3 (1x55) and RB6/TF2 (1x63)
   - for sub-test 4: RB5/TF4 (1x58) and RB6/TF3 (1x76)
   - for sub-test 5: RB5/TF5 (1x65), RB6/TF4 (1x99) and RB7/TF1 (1x40)
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by the SS; and no data shall be received on RB6 or RB7.
   - for sub-test 2, 3 and 4: an RLC SDU on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7.
   - for sub-test 5: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by the SS.

<End of modified section>

<Start of next modified section>

14.2.7a Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.7a.1 Conformance requirement

See clause 14.2.4.1.

14.2.7a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.7a.

14.2.7a.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x61	0x87	0x148
	TF1, bits	1x39	1x53	1x148
	TF2, bits	1x42	1x63	N/A
	TF3, bits	1x55	1x76	N/A
	TF4, bits	1x58	1x87	N/A
	TF5, bits	1x61	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF3, TF2, TF0)
UL_TFC4	(TF4, TF3, TF0)
UL_TFC5	(TF5, TF4, TF0)
UL_TFC6	(TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1)
UL_TFC9	(TF3, TF2, TF1)
UL_TFC10	(TF4, TF3, TF1)
UL_TFC11	(TF5, TF4, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	1x0	0x87	0x148
	TF1, bits	1x39	1x53	1x148
	TF2, bits	1x42	1x63	N/A
	TF3, bits	1x55	1x76	N/A
	TF4, bits	1x58	1x87	N/A
	TF5, bits	1x61	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF3, TF2, TF0)
DL_TFC4	(TF4, TF3, TF0)
DL_TFC5	(TF5, TF4, TF0)
DL_TFC6	(TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1)
DL_TFC9	(TF3, TF2, TF1)
DL_TFC10	(TF4, TF3, TF1)
DL_TFC11	(TF5, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 87 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits	RB5: 42 bits RB6: 53 bits
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits	RB5: 55 bits RB6: 63 bits
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 58 bits RB6: 76 bits	RB5: 58 bits RB6: 76 bits
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 61 bits RB6: 87 bits	RB5: 61 bits RB6: 87 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See clause 14.1.1 for test procedure.

14.2.7a.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53)
   - for sub-test 3: RB5/TF3 (1x55) and RB6/TF2 (1x63)
   - for sub-test 4: RB5/TF4 (1x58) and RB6/TF3 (1x76)
   - for sub-test 5: RB5/TF5 (1x61) and RB6/TF4 (1x87)
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by the SS; and no data shall be received on RB6.
   - for sub-test 2 to 5: an RLC SDU on RB5 and RB6 having the same content as sent by the SS.

<End of modified section>

<Start of next modified section>

14.2.12 Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.12.1 Conformance requirement

See 14.2.4.1.

14.2.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.12.

14.2.12.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: 'Timer based discard without explicit signalling' is configured in uplink to secure that the UE will be able to return data in uplink for the case when the UE test loop function, due to processing delays, will not deliver the SDUs in one and the same TTI, but instead in two subsequent TTIs.	

Uplink TFS:

	TFI	RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

		RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

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	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 576	RB5: 2x576
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 14.1.1 for test procedure.

14.2.12.4 Test requirements

See clause 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
   - for sub-test 2: RB5/TF2 (2x576) or RB5/TF1 (1x576).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS.
   - for sub-test 2: two RLC SDUs on RB5 having the same content as sent by SS.

<End of modified section>

<Start of next modified section>

14.2.16 Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.16.1 Conformance requirement

See 14.2.4.1.

14.2.16.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.16.

14.2.16.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	**RB5 (28.8 kbps)**	**DCCH**
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

		RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

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	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 576	RB5: 2x576
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 14.1.1 for test procedure.

14.2.16.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
   - for sub-test 2: RB5/TF2 (2x576) or RB5/TF1 (1x576)..
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS.
   - for sub-test 2: two RLC SDU on RB5 having the same content as sent by SS.

14.2.17 Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.17.1 Conformance requirement

See 14.2.4.1.

14.2.17.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.17.

14.2.17.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	RB5 (57.6 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A
	TF3, bits	3x576	N/A
	TF4, bits	4x576	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (57.6 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A
	TF3, bits	3x576	N/A
	TF4, bits	4x576	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5,	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 576	RB5: 2x576
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 576	RB5: 3x576
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 576	RB5: 4x576
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 14.1.1 for test procedure.

14.2.17.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
   - for sub-test 2: RB5/TF2 (2x576) or RB5/TF1 (1x576).
   - for sub-test 3: RB5/TF3 (3x576) or RB5/TF1 (1x576).
   - for sub-test 4: RB5/TF4 (4x576) or RB5/TF1 (1x576).
3. At step 15 the UE shall return
   - for sub-test 1: one RLC SDU on RB5 having the same content as sent by SS.
   - for sub-test 2: two RLC SDU on RB5 having the same content as sent by SS.

- for sub-test 3: three RLC SDU on RB5 having the same content as sent by SS.
- for sub-test 4: four RLC SDU on RB5 having the same content as sent by SS.

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14.2.23b Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.23b.1 Conformance requirement

See clause 14.2.4.1.

14.2.23b.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.23b.

14.2.23b.3 Method of test

Uplink TFS:

	TFI	RB5 (16 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

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	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC3,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC3 ,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5: 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 has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

See 14.1.1 for test procedure.

14.2.23b.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1 and 2: an RLC SDU on RB5 having the same content as sent by the SS.

14.2.23c Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.23c.

14.2.23c.1 Conformance requirement

See 14.2.4.1.

14.2.23c.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.23c.

14.2.23c.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

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	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC5,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
For RB5: 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 has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 14.1.1 for test procedure.

14.2.23c.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

<End of modified section>

<Start of next modified section>

14.2.38a Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38a.1 Conformance requirement

See 14.2.4.1.

14.2.38a.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38a.

14.2.38a.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (0 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	N/A	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC4	(TF1, TF0, TF0, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1, TF0, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (0 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	N/A	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF0, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1, TF0, TF1)

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_TFC4	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 RB6: 103 RB7: 60 RB8: 0	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC5	UL_TFC2 UL_TFC5	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 0	RB5: 81 RB6: 103 RB7: 60 RB8: No data
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

14.2.38a.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38b Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38b.1 Conformance requirement

See 14.2.4.1.

14.2.38b.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38b.

14.2.38b.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

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_TFC7	UL_TFC1 UL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC8	UL_TFC2 UL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC9	UL_TFC3 UL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC10	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC11	UL_TFC5 UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC6 are part of minimum set of TFCIs.

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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. 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).

14.2.38b.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.

3. At step 15a and step 15b the UE shall return

   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.

- for sub-test 3: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 4: an RLC SDU on RB5 and RB8 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 RB5, RB6, RB7 and RB8 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38c Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38c.1 Conformance requirement

See 14.2.4.1.

14.2.38c.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38c.

14.2.38c.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps)	DCCH
TFS	TF0, bits	0x81	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps)	DCCH
TFS	TF0, bits	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

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_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, 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_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, 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_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, DL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632

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)
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 952
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272

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)
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, , UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs. 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 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 has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

14.2.38c.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3, 6, 9 and 12: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4, 7, 10 and 13: an RLC SDU on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5, 8, 11 and 14: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

<Start of next modified section>

14.2.38e Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38e.1 Conformance requirement

See 14.2.4.1.

14.2.38e.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38e.

14.2.38e.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (0 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	N/A	1x148
	TF2, bits	1x42	1x63	N/A	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A	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, TF0, TF0, TF0)
UL_TFC3	(TF3, TF2, TF0, TF0, TF0)
UL_TFC4	(TF4, TF3, TF0, TF0, TF0)
UL_TFC5	(TF5, TF1, TF1, TF0, TF0)
UL_TFC6	(TF0, TF0, TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF0, TF0, TF1)
UL_TFC9	(TF3, TF2, TF0, TF0, TF1)
UL_TFC10	(TF4, TF3, TF0, TF0, TF1)
UL_TFC11	(TF5, TF1, TF1, TF0, TF1)

Downlink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (0 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	N/A	1x148
	TF2, bits	1x42	1x63	N/A	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0, TF0, TF0)
DL_TFC3	(TF3, TF2, TF0, TF0, TF0)
DL_TFC4	(TF4, TF3, TF0, TF0, TF0)
DL_TFC5	(TF5, TF1, TF1, TF0, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF0, TF0, TF1)
DL_TFC9	(TF3, TF2, TF0, TF0, TF1)
DL_TFC10	(TF4, TF3, TF0, TF0, TF1)
DL_TFC11	(TF5, TF1, TF1, TF0, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC7	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 0 bits	RB5: 39 bits RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC8	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 0 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: No data
3	DL_TFC3, DL_TFC9	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 0 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: No data
4	DL_TFC4, DL_TFC10	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 0 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: No data
5	DL_TFC5, DL_TFC11	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 0 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: No data
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

14.2.38e.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2,3 and 4: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
   - for sub-test 5: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38f Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38f.1 Conformance requirement

See clause 14.2.4.1.

14.2.38f.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38f.

14.2.38f.3 Method of test

See clause 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps, 40 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A	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,TF0,TF0,TF0)
UL_TFC3	(TF3,TF2,TF0,TF0,TF0)
UL_TFC4	(TF4,TF3,TF0,TF0,TF0)
UL_TFC5	(TF5,TF4,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF1,TF0)
UL_TFC7	(TF1,TF0,TF0,TF1,TF0)
UL_TFC8	(TF2,TF1,TF0,TF1,TF0)
UL_TFC9	(TF3,TF2,TF0,TF1,TF0)
UL_TFC10	(TF4,TF3,TF0,TF1,TF0)
UL_TFC11	(TF5,TF4,TF1,TF1,TF0)
UL_TFC12	(TF0,TF0,TF0,TF0,TF1)
UL_TFC13	(TF1,TF0,TF0,TF0,TF1)
UL_TFC14	(TF2,TF1,TF0,TF0,TF1)
UL_TFC15	(TF3,TF2,TF0,TF0,TF1)
UL_TFC16	(TF4,TF3,TF0,TF0,TF1)
UL_TFC17	(TF5,TF4,TF1,TF0,TF1)
UL_TFC18	(TF0,TF0,TF0,TF1,TF1)
UL_TFC19	(TF1,TF0,TF0,TF1,TF1)
UL_TFC20	(TF2,TF1,TF0,TF1,TF1)
UL_TFC21	(TF3,TF2,TF0,TF1,TF1)
UL_TFC22	(TF4,TF3,TF0,TF1,TF1)
UL_TFC23	(TF5,TF4,TF1,TF1,TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps, 40 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0,TF0,TF0)
DL_TFC2	(TF2,TF1,TF0,TF0,TF0)
DL_TFC3	(TF3,TF2,TF0,TF0,TF0)
DL_TFC4	(TF4,TF3,TF0,TF0,TF0)
DL_TFC5	(TF5,TF4,TF1,TF0,TF0)
DL_TFC6	(TF0,TF0,TF0,TF1,TF0)
DL_TFC7	(TF1,TF0,TF0,TF1,TF0)
DL_TFC8	(TF2,TF1,TF0,TF1,TF0)
DL_TFC9	(TF3,TF2,TF0,TF1,TF0)
DL_TFC10	(TF4,TF3,TF0,TF1,TF0)
DL_TFC11	(TF5,TF4,TF1,TF1,TF0)
DL_TFC12	(TF0,TF0,TF0,TF0,TF1)
DL_TFC13	(TF1,TF0,TF0,TF0,TF1)
DL_TFC14	(TF2,TF1,TF0,TF0,TF1)
DL_TFC15	(TF3,TF2,TF0,TF0,TF1)
DL_TFC16	(TF4,TF3,TF0,TF0,TF1)
DL_TFC17	(TF5,TF4,TF1,TF0,TF1)
DL_TFC18	(TF0,TF0,TF0,TF1,TF1)
DL_TFC19	(TF1,TF0,TF0,TF1,TF1)
DL_TFC20	(TF2,TF1,TF0,TF1,TF1)
DL_TFC21	(TF3,TF2,TF0,TF1,TF1)
DL_TFC22	(TF4,TF3,TF0,TF1,TF1)
DL_TFC23	(TF5,TF4,TF1,TF1,TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1, DL_TFC13	UL_TFC1, UL_TFC13	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC13	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC14	UL_TFC2, UL_TFC14	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC14	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: No data
3	DL_TFC3, DL_TFC15	UL_TFC3, UL_TFC15	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC15	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: No data
4	DL_TFC4, DL_TFC16	UL_TFC4, UL_TFC16	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC16	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: No data
5	DL_TFC5, DL_TFC17	UL_TFC5, UL_TFC17	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC17	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: No data
6	DL_TFC6, DL_TFC18	UL_TFC6, UL_TFC18	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC18	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: No data RB6: No data RB7: No data RB8: 312 bits

7	DL_TFC7, DL_TFC19	UL_TFC7, UL_TFC19	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7, UL_TFC12, UL_TFC13, UL_TFC18, UL_TFC19	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 312 bits
8	DL_TFC8, DL_TFC20	UL_TFC8, UL_TFC20	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC12, UL_TFC14, UL_TFC18, UL_TFC20	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 312 bits
9	DL_TFC9, DL_TFC21	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9, UL_TFC12, UL_TFC15, UL_TFC18, UL_TFC21	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 312 bits
10	DL_TFC10, DL_TFC22	UL_TFC10, UL_TFC22	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC12, UL_TFC16, UL_TFC18, UL_TFC22	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 312 bits
11	DL_TFC11, DL_TFC23	UL_TFC11, UL_TFC23	DL_TFC0, DL_TFC12, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC12, UL_TFC17, UL_TFC18, UL_TFC23	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6 and UL_TFC12 are part of minimum set of TFCIs.

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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

14.2.38f.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2,3 and 4: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
   - for sub-test 5: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
   - for sub-test 6: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
   - for sub-test 8,9 and 10: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
   - for sub-test 11: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38g Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38g.1 Conformance requirement

See clause 14.2.4.1.

14.2.38g.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38g.

14.2.38g.3 Method of test

See clause 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (16 kbps, 40 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A	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,TF0,TF0,TF0)
UL_TFC3	(TF3,TF2,TF0,TF0,TF0)
UL_TFC4	(TF4,TF3,TF0,TF0,TF0)
UL_TFC5	(TF5,TF4,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF1,TF0)
UL_TFC7	(TF1,TF0,TF0,TF1,TF0)
UL_TFC8	(TF3,TF2,TF0,TF1,TF0)
UL_TFC9	(TF4,TF3,TF0,TF1,TF0)
UL_TFC10	(TF5,TF4,TF1,TF1,TF0)
UL_TFC11	(TF0,TF0,TF0,TF2,TF0)
UL_TFC12	(TF1,TF0,TF0,TF2,TF0)
UL_TFC13	(TF3,TF2,TF0,TF2,TF0)
UL_TFC14	(TF4,TF3,TF0,TF2,TF0)
UL_TFC15	(TF5,TF4,TF1,TF2,TF0)
UL_TFC16	(TF0,TF0,TF0,TF0,TF1)
UL_TFC17	(TF1,TF0,TF0,TF0,TF1)
UL_TFC18	(TF2,TF1,TF0,TF0,TF1)
UL_TFC19	(TF3,TF2,TF0,TF0,TF1)
UL_TFC20	(TF4,TF3,TF0,TF0,TF1)
UL_TFC21	(TF5,TF4,TF1,TF0,TF1)
UL_TFC22	(TF0,TF0,TF0,TF1,TF1)
UL_TFC23	(TF1,TF0,TF0,TF1,TF1)
UL_TFC24	(TF3,TF2,TF0,TF1,TF1)
UL_TFC25	(TF4,TF3,TF0,TF1,TF1)
UL_TFC26	(TF5,TF4,TF1,TF1,TF1)
UL_TFC27	(TF0,TF0,TF0,TF2,TF1)
UL_TFC28	(TF1,TF0,TF0,TF2,TF1)
UL_TFC29	(TF3,TF2,TF0,TF2,TF1)
UL_TFC30	(TF4,TF3,TF0,TF2,TF1)
UL_TFC31	(TF5,TF4,TF1,TF2,TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (16 kbps, 40 ms TTI)**	**DCCH**
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0,TF0,TF0)
DL_TFC2	(TF2,TF1,TF0,TF0,TF0)
DL_TFC3	(TF3,TF2,TF0,TF0,TF0)
DL_TFC4	(TF4,TF3,TF0,TF0,TF0)
DL_TFC5	(TF5,TF4,TF1,TF0,TF0)
DL_TFC6	(TF0,TF0,TF0,TF1,TF0)
DL_TFC7	(TF1,TF0,TF0,TF1,TF0)
DL_TFC8	(TF2,TF1,TF0,TF1,TF0)
DL_TFC9	(TF3,TF2,TF0,TF1,TF0)
DL_TFC10	(TF4,TF3,TF0,TF1,TF0)
DL_TFC11	(TF5,TF4,TF1,TF1,TF0)
DL_TFC12	(TF0,TF0,TF0,TF2,TF0)
DL_TFC13	(TF1,TF0,TF0,TF2,TF0)
DL_TFC14	(TF2,TF1,TF0,TF2,TF0)
DL_TFC15	(TF3,TF2,TF0,TF2,TF0)
DL_TFC16	(TF4,TF3,TF0,TF2,TF0)
DL_TFC17	(TF5,TF4,TF1,TF2,TF0)
DL_TFC18	(TF0,TF0,TF0,TF0,TF1)
DL_TFC19	(TF1,TF0,TF0,TF0,TF1)
DL_TFC20	(TF2,TF1,TF0,TF0,TF1)
DL_TFC21	(TF3,TF2,TF0,TF0,TF1)
DL_TFC22	(TF4,TF3,TF0,TF0,TF1)
DL_TFC23	(TF5,TF4,TF1,TF0,TF1)
DL_TFC24	(TF0,TF0,TF0,TF1,TF1)
DL_TFC25	(TF1,TF0,TF0,TF1,TF1)
DL_TFC26	(TF2,TF1,TF0,TF1,TF1)
DL_TFC27	(TF3,TF2,TF0,TF1,TF1)
DL_TFC28	(TF4,TF3,TF0,TF1,TF1)
DL_TFC29	(TF5,TF4,TF1,TF1,TF1)
DL_TFC30	(TF0,TF0,TF0,TF2,TF1)
DL_TFC31	(TF1,TF0,TF0,TF2,TF1)
DL_TFC32	(TF2,TF1,TF0,TF2,TF1)
DL_TFC33	(TF3,TF2,TF0,TF2,TF1)
DL_TFC34	(TF4,TF3,TF0,TF2,TF1)
DL_TFC35	(TF5,TF4,TF1,TF2,TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1, DL_TFC19	UL_TFC1, UL_TFC17	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC16, UL_TFC17	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC20	UL_TFC2, UL_TFC18	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC16, UL_TFC18	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: No data
3	DL_TFC3, DL_TFC21	UL_TFC3, UL_TFC19	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC16, UL_TFC19	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: No data
4	DL_TFC4, DL_TFC22	UL_TFC4, UL_TFC20	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC16, UL_TFC20	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: No data
5	DL_TFC5, DL_TFC23	UL_TFC5, UL_TFC21	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC16, UL_TFC21	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: No data
6	DL_TFC6, DL_TFC24	UL_TFC6, UL_TFC22	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC16, UL_TFC22	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: No data RB6: No data RB7: No data RB8: 312 bits

7	DL_TFC7, DL_TFC25	UL_TFC7, UL_TFC23	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7, UL_TFC16, UL_TFC17, UL_TFC22, UL_TFC23	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 312 bits
8	DL_TFC8, DL_TFC26	UL_TFC8, UL_TFC24	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC16, UL_TFC19, UL_TFC22, UL_TFC24	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 312 bits
9	DL_TFC9, DL_TFC27	UL_TFC8, UL_TFC24	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC16, UL_TFC19, UL_TFC22, UL_TFC24	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 312 bits
10	DL_TFC10, DL_TFC28	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9, UL_TFC16, UL_TFC20, UL_TFC22, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 312 bits
11	DL_TFC11, DL_TFC29	UL_TFC10, UL_TFC26	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC16, UL_TFC21, UL_TFC22, UL_TFC26	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits

12	DL_TFC12, DL_TFC30	UL_TFC11, UL_TFC27	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC16, UL_TFC27	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: No data RB6: No data RB7: No data RB8: 632 bits
13	DL_TFC13, DL_TFC31	UL_TFC12, UL_TFC28	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC27, UL_TFC28	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 632 bits
14	DL_TFC14, DL_TFC32	UL_TFC13, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC13, UL_TFC16, UL_TFC19, UL_TFC27, UL_TFC29	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 632 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 632 bits
15	DL_TFC15, DL_TFC33	UL_TFC13, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC13, UL_TFC16, UL_TFC19, UL_TFC27, UL_TFC29	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 632 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 632 bits
16	DL_TFC16, DL_TFC34	UL_TFC14, UL_TFC30	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC14, UL_TFC16, UL_TFC20, UL_TFC27, UL_TFC30	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 632 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 632 bits

17	DL_TFC17, DL_TFC35	UL_TFC15, UL_TFC31	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC27, UL_TFC31	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6 and UL_TFC16 are part of minimum set of TFCIs. 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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

14.2.38g.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2,3 and 4: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
   - for sub-test 5: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
   - for sub-test 6: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
   - for sub-test 8: RLC SDUs on RB5 having the first 42 bits equal to the content of the test data sent by the SS in downlink ; RLC SDUs on RB6 having the first 53 bits equal to the content of the test data sent by the SS in downlink ; RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB7.
   - for sub-test 9 and 10: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
   - for sub-test 11: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.

- for sub-test 12: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 13: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
- for sub-test 14: RLC SDUs on RB5 having the first 42 bits equal to the content of the test data sent by the SS in downlink ; RLC SDUs on RB6 having the first 53 bits equal to the content of the test data sent by the SS in downlink ; RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 15 and 16: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 17: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38h Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38h.1 Conformance requirement

See clause 14.2.4.1.

14.2.38h.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38h.

14.2.38h.3 Method of test

See clause 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps, 40 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	3x336	N/A
	TF4, bits	1x75	1x103	N/A	4x336	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,RB8,DCCH)
UL_TFC0	(TF0,TF0,TF0,TF0,TF0)
UL_TFC1	(TF0,TF0,TF0,TF1,TF0)
UL_TFC2	(TF0,TF0,TF0,TF2,TF0)
UL_TFC3	(TF0,TF0,TF0,TF4,TF0)
UL_TFC4	(TF5,TF4,TF1,TF0,TF0)
UL_TFC5	(TF5,TF4,TF1,TF1,TF0)
UL_TFC6	(TF5,TF4,TF1,TF2,TF0)
UL_TFC7	(TF5,TF4,TF1,TF4,TF0)
UL_TFC8	(TF4,TF3,TF0,TF0,TF0)
UL_TFC9	(TF4,TF3,TF0,TF1,TF0)
UL_TFC10	(TF3,TF2,TF0,TF0,TF0)
UL_TFC11	(TF2,TF1,TF0,TF0,TF0)
UL_TFC12	(TF1,TF0,TF0,TF0,TF0)
UL_TFC13	(TF1,TF0,TF0,TF1,TF0)
UL_TFC14	(TF1,TF0,TF0,TF2,TF0)
UL_TFC15	(TF1,TF0,TF0,TF4,TF0)
UL_TFC16	(TF0,TF0,TF0,TF0,TF1)
UL_TFC17	(TF0,TF0,TF0,TF1,TF1)
UL_TFC18	(TF0,TF0,TF0,TF2,TF1)
UL_TFC19	(TF0,TF0,TF0,TF4,TF1)
UL_TFC20	(TF5,TF4,TF1,TF0,TF1)
UL_TFC21	(TF5,TF4,TF1,TF1,TF1)
UL_TFC22	(TF5,TF4,TF1,TF2,TF1)
UL_TFC23	(TF5,TF4,TF1,TF4,TF1)
UL_TFC24	(TF4,TF3,TF0,TF0,TF1)
UL_TFC25	(TF4,TF3,TF0,TF1,TF1)
UL_TFC26	(TF3,TF2,TF0,TF0,TF1)
UL_TFC27	(TF2,TF1,TF0,TF0,TF1)
UL_TFC28	(TF1,TF0,TF0,TF0,TF1)
UL_TFC29	(TF1,TF0,TF0,TF1,TF1)
UL_TFC30	(TF1,TF0,TF0,TF2,TF1)
UL_TFC31	(TF1,TF0,TF0,TF4,TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (32 kbps, 40 ms TTI)**	**DCCH**
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	3x336	N/A
	TF4, bits	1x75	1x103	N/A	4x336	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF0,TF0,TF0,TF1,TF0)
DL_TFC2	(TF0,TF0,TF0,TF2,TF0)
DL_TFC3	(TF0,TF0,TF0,TF4,TF0)
DL_TFC4	(TF5,TF4,TF1,TF0,TF0)
DL_TFC5	(TF5,TF4,TF1,TF1,TF0)
DL_TFC6	(TF5,TF4,TF1,TF2,TF0)
DL_TFC7	(TF5,TF4,TF1,TF4,TF0)
DL_TFC8	(TF4,TF3,TF0,TF0,TF0)
DL_TFC9	(TF4,TF3,TF0,TF1,TF0)
DL_TFC10	(TF4,TF3,TF0,TF2,TF0)
DL_TFC11	(TF4,TF3,TF0,TF4,TF0)
DL_TFC12	(TF3,TF2,TF0,TF0,TF0)
DL_TFC13	(TF3,TF2,TF0,TF1,TF0)
DL_TFC14	(TF3,TF2,TF0,TF2,TF0)
DL_TFC15	(TF3,TF2,TF0,TF4,TF0)
DL_TFC16	(TF2,TF1,TF0,TF0,TF0)
DL_TFC17	(TF2,TF1,TF0,TF1,TF0)
DL_TFC18	(TF2,TF1,TF0,TF2,TF0)
DL_TFC19	(TF2,TF1,TF0,TF4,TF0)
DL_TFC20	(TF1,TF0,TF0,TF0,TF0)
DL_TFC21	(TF1,TF0,TF0,TF1,TF0)
DL_TFC22	(TF1,TF0,TF0,TF2,TF0)
DL_TFC23	(TF1,TF0,TF0,TF4,TF0)
DL_TFC24	(TF0,TF0,TF0,TF0,TF1)
DL_TFC25	(TF0,TF0,TF0,TF1,TF1)
DL_TFC26	(TF0,TF0,TF0,TF2,TF1)
DL_TFC27	(TF0,TF0,TF0,TF4,TF1)
DL_TFC28	(TF5,TF4,TF1,TF0,TF1)
DL_TFC29	(TF5,TF4,TF1,TF1,TF1)
DL_TFC30	(TF5,TF4,TF1,TF2,TF1)
DL_TFC31	(TF5,TF4,TF1,TF4,TF1)
DL_TFC32	(TF4,TF3,TF0,TF0,TF1)
DL_TFC33	(TF4,TF3,TF0,TF1,TF1)
DL_TFC34	(TF4,TF3,TF0,TF2,TF1)
DL_TFC35	(TF4,TF3,TF0,TF4,TF1)
DL_TFC36	(TF3,TF2,TF0,TF0,TF1)
DL_TFC37	(TF3,TF2,TF0,TF1,TF1)
DL_TFC38	(TF3,TF2,TF0,TF2,TF1)
DL_TFC39	(TF3,TF2,TF0,TF4,TF1)
DL_TFC40	(TF2,TF1,TF0,TF0,TF1)
DL_TFC41	(TF2,TF1,TF0,TF1,TF1)
DL_TFC42	(TF2,TF1,TF0,TF2,TF1)
DL_TFC43	(TF2,TF1,TF0,TF4,TF1)
DL_TFC44	(TF1,TF0,TF0,TF0,TF1)
DL_TFC45	(TF1,TF0,TF0,TF1,TF1)
DL_TFC46	(TF1,TF0,TF0,TF2,TF1)
DL_TFC47	(TF1,TF0,TF0,TF4,TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1, DL_TFC25	UL_TFC1, UL_TFC17	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: No data RB6: No data RB7: No data RB8: 312
2	DL_TFC2, DL_TFC26	UL_TFC2, UL_TFC18	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC18	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: No data RB6: No data RB7: No data RB8: 632
3	DL_TFC3, DL_TFC27	UL_TFC3, UL_TFC19	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC19	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: No data RB6: No data RB7: No data RB8: 1272
4	DL_TFC4, DL_TFC28	UL_TFC4, UL_TFC20	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC20	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: No data
5	DL_TFC5, DL_TFC29	UL_TFC5, UL_TFC21	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC20, UL_TFC21	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits
6	DL_TFC6, DL_TFC30	UL_TFC6, UL_TFC22	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC18, UL_TFC20, UL_TFC22	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits

7	DL_TFC7, DL_TFC31	UL_TFC7, UL_TFC23	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC7, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC19, UL_TFC20, UL_TFC23	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits
8	DL_TFC8, DL_TFC32	UL_TFC8, UL_TFC24	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC24	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: No data
9	DL_TFC9, DL_TFC33	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 312 bits
10	DL_TFC10, DL_TFC34	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 632 bits
11	DL_TFC11, DL_TFC35	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 1272 bits
12	DL_TFC12, DL_TFC36	UL_TFC10, UL_TFC26	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC10, UL_TFC16, UL_TFC26	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: No data

13	DL_TFC13, DL_TFC37	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 312 bits
14	DL_TFC14, DL_TFC38	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 632 bits
15	DL_TFC15, DL_TFC39	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 1272 bits
16	DL_TFC16, DL_TFC40	UL_TFC11, UL_TFC27	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC27	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: No data
17	DL_TFC17, DL_TFC41	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 312 bits

18	DL_TFC18, DL_TFC42	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 632 bits
19	DL_TFC19, DL_TFC43	UL_TFC9, UL_TFC25	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC17, UL_TFC24, UL_TFC25	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 1272 bits
20	DL_TFC20, DL_TFC44	UL_TFC12, UL_TFC28	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC16, UL_TFC28	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: No data
21	DL_TFC21, DL_TFC45	UL_TFC13, UL_TFC29	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC13, UL_TFC16, UL_TFC17, UL_TFC28, UL_TFC29	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 312 bits
22	DL_TFC22, DL_TFC46	UL_TFC14, UL_TFC30	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC14, UL_TFC16, UL_TFC18, UL_TFC28, UL_TFC30	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 632 bits

23	DL_TFC23, DL_TFC47	UL_TFC15, UL_TFC31	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC16	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12, UL_TFC15, UL_TFC16, UL_TFC19, UL_TFC28, UL_TFC31	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 1272 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC11, UL_TFC12 and UL_TFC16 are part of minimum set of TFCIs. 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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

14.2. 38h.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return
   - for sub-test 1,2 and 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
   - for sub-test 5, 6 and 7: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
   - for sub-test 8: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
   - for sub-test 9: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
   - for sub-test 10 and 11: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; RLC SDUs on RB8 having the same content as the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB7.

- for sub-test 12: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
- for sub-test 13: RLC SDUs on RB5 having the first 55 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB6 having the first 63 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 14 and 15: RLC SDUs on RB5 having the first 55 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB6 having the first 63 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB8 having the same content as the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB7.
- for sub-test 16: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
- for sub-test 17: RLC SDUs on RB5 having the first 42 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB6 having the first 53 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 18 and 19: RLC SDUs on RB5 having the first 42 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB6 having the first 53 bits equal to the content of the test data sent by the SS in downlink; RLC SDUs on RB8 having the same content as the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB7.
- for sub-test 20: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
- for sub-test 21, 22 and 23: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38i Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38i.1 Conformance requirement

See clause 14.2.4.1.

14.2.38i.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38i.

14.2.38i.3 Method of test

See clause 14.1.2 for test procedure.

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	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	3x336	N/A
	TF4, bits	1x75	1x103	N/A	4x336	N/A
	TF5, bits	1x81	N/A	N/A	N/A	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,TF0,TF0,TF0)
UL_TFC3	(TF3,TF2,TF0,TF0,TF0)
UL_TFC4	(TF4,TF3,TF0,TF0,TF0)
UL_TFC5	(TF5,TF4,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF1,TF0)
UL_TFC7	(TF1,TF0,TF0,TF1,TF0)
UL_TFC8	(TF2,TF1,TF0,TF1,TF0)
UL_TFC9	(TF3,TF2,TF0,TF1,TF0)
UL_TFC10	(TF4,TF3,TF0,TF1,TF0)
UL_TFC11	(TF5,TF4,TF1,TF1,TF0)
UL_TFC12	(TF0,TF0,TF0,TF2,TF0)
UL_TFC13	(TF1,TF0,TF0,TF2,TF0)
UL_TFC14	(TF2,TF1,TF0,TF2,TF0)
UL_TFC15	(TF3,TF2,TF0,TF2,TF0)
UL_TFC16	(TF4,TF3,TF0,TF2,TF0)
UL_TFC17	(TF5,TF4,TF1,TF2,TF0)
UL_TFC18	(TF0,TF0,TF0,TF4,TF0)
UL_TFC19	(TF1,TF0,TF0,TF4,TF0)
UL_TFC20	(TF2,TF1,TF0,TF4,TF0)
UL_TFC21	(TF3,TF2,TF0,TF4,TF0)
UL_TFC22	(TF4,TF3,TF0,TF4,TF0)
UL_TFC23	(TF5,TF4,TF1,TF4,TF0)
UL_TFC24	(TF0,TF0,TF0,TF0,TF1)
UL_TFC25	(TF1,TF0,TF0,TF0,TF1)
UL_TFC26	(TF2,TF1,TF0,TF0,TF1)
UL_TFC27	(TF3,TF2,TF0,TF0,TF1)
UL_TFC28	(TF4,TF3,TF0,TF0,TF1)
UL_TFC29	(TF5,TF4,TF1,TF0,TF1)
UL_TFC30	(TF0,TF0,TF0,TF1,TF1)
UL_TFC31	(TF1,TF0,TF0,TF1,TF1)
UL_TFC32	(TF2,TF1,TF0,TF1,TF1)
UL_TFC33	(TF3,TF2,TF0,TF1,TF1)
UL_TFC34	(TF4,TF3,TF0,TF1,TF1)
UL_TFC35	(TF5,TF4,TF1,TF1,TF1)
UL_TFC36	(TF0,TF0,TF0,TF2,TF1)
UL_TFC37	(TF1,TF0,TF0,TF2,TF1)
UL_TFC38	(TF2,TF1,TF0,TF2,TF1)
UL_TFC39	(TF3,TF2,TF0,TF2,TF1)
UL_TFC40	(TF4,TF3,TF0,TF2,TF1)
UL_TFC41	(TF5,TF4,TF1,TF2,TF1)
UL_TFC42	(TF0,TF0,TF0,TF4,TF1)
UL_TFC43	(TF1,TF0,TF0,TF4,TF1)
UL_TFC44	(TF2,TF1,TF0,TF4,TF1)
UL_TFC45	(TF3,TF2,TF0,TF4,TF1)
UL_TFC46	(TF4,TF3,TF0,TF4,TF1)
UL_TFC47	(TF5,TF4,TF1,TF4,TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	3x336	N/A
	TF4, bits	1x75	1x103	N/A	4x336	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0,TF0,TF0)
DL_TFC2	(TF2,TF1,TF0,TF0,TF0)
DL_TFC3	(TF3,TF2,TF0,TF0,TF0)
DL_TFC4	(TF4,TF3,TF0,TF0,TF0)
DL_TFC5	(TF5,TF4,TF1,TF0,TF0)
DL_TFC6	(TF0,TF0,TF0,TF1,TF0)
DL_TFC7	(TF1,TF0,TF0,TF1,TF0)
DL_TFC8	(TF2,TF1,TF0,TF1,TF0)
DL_TFC9	(TF3,TF2,TF0,TF1,TF0)
DL_TFC10	(TF4,TF3,TF0,TF1,TF0)
DL_TFC11	(TF5,TF4,TF1,TF1,TF0)
DL_TFC12	(TF0,TF0,TF0,TF2,TF0)
DL_TFC13	(TF1,TF0,TF0,TF2,TF0)
DL_TFC14	(TF2,TF1,TF0,TF2,TF0)
DL_TFC15	(TF3,TF2,TF0,TF2,TF0)
DL_TFC16	(TF4,TF3,TF0,TF2,TF0)
DL_TFC17	(TF5,TF4,TF1,TF2,TF0)
DL_TFC18	(TF0,TF0,TF0,TF3,TF0)
DL_TFC19	(TF1,TF0,TF0,TF3,TF0)
DL_TFC20	(TF2,TF1,TF0,TF3,TF0)
DL_TFC21	(TF3,TF2,TF0,TF3,TF0)
DL_TFC22	(TF4,TF3,TF0,TF3,TF0)
DL_TFC23	(TF5,TF4,TF1,TF3,TF0)
DL_TFC24	(TF0,TF0,TF0,TF4,TF0)
DL_TFC25	(TF1,TF0,TF0,TF4,TF0)
DL_TFC26	(TF2,TF1,TF0,TF4,TF0)
DL_TFC27	(TF3,TF2,TF0,TF4,TF0)
DL_TFC28	(TF4,TF3,TF0,TF4,TF0)
DL_TFC29	(TF5,TF4,TF1,TF4,TF0)
DL_TFC30	(TF0,TF0,TF0,TF0,TF1)
DL_TFC31	(TF1,TF0,TF0,TF0,TF1)
DL_TFC32	(TF2,TF1,TF0,TF0,TF1)
DL_TFC33	(TF3,TF2,TF0,TF0,TF1)
DL_TFC34	(TF4,TF3,TF0,TF0,TF1)
DL_TFC35	(TF5,TF4,TF1,TF0,TF1)
DL_TFC36	(TF0,TF0,TF0,TF1,TF1)
DL_TFC37	(TF1,TF0,TF0,TF1,TF1)
DL_TFC38	(TF2,TF1,TF0,TF1,TF1)
DL_TFC39	(TF3,TF2,TF0,TF1,TF1)
DL_TFC40	(TF4,TF3,TF0,TF1,TF1)
DL_TFC41	(TF5,TF4,TF1,TF1,TF1)
DL_TFC42	(TF0,TF0,TF0,TF2,TF1)
DL_TFC43	(TF1,TF0,TF0,TF2,TF1)
DL_TFC44	(TF2,TF1,TF0,TF2,TF1)
DL_TFC45	(TF3,TF2,TF0,TF2,TF1)
DL_TFC46	(TF4,TF3,TF0,TF2,TF1)
DL_TFC47	(TF5,TF4,TF1,TF2,TF1)
DL_TFC48	(TF0,TF0,TF0,TF3,TF1)
DL_TFC49	(TF1,TF0,TF0,TF3,TF1)
DL_TFC50	(TF2,TF1,TF0,TF3,TF1)
DL_TFC51	(TF3,TF2,TF0,TF3,TF1)
DL_TFC52	(TF4,TF3,TF0,TF3,TF1)
DL_TFC53	(TF5,TF4,TF1,TF3,TF1)
DL_TFC54	(TF0,TF0,TF0,TF4,TF1)
DL_TFC55	(TF1,TF0,TF0,TF4,TF1)
DL_TFC56	(TF2,TF1,TF0,TF4,TF1)
DL_TFC57	(TF3,TF2,TF0,TF4,TF1)
DL_TFC58	(TF4,TF3,TF0,TF4,TF1)
DL_TFC59	(TF5,TF4,TF1,TF4,TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1, DL_TFC31	UL_TFC1, UL_TFC25	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC25	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC32	UL_TFC2, UL_TFC26	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC26	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: No data
3	DL_TFC3, DL_TFC33	UL_TFC3, UL_TFC27	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC27	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: No data
4	DL_TFC4, DL_TFC34	UL_TFC4, UL_TFC28	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC28	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: No data
5	DL_TFC5, DL_TFC35	UL_TFC5, UL_TFC29	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC29	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: No data
6	DL_TFC6, DL_TFC36	UL_TFC6, UL_TFC30	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC30	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: No data RB6: No data RB7: No data RB8: 312 bits

7	DL_TFC7, DL_TFC37	UL_TFC7, UL_TFC31	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7, UL_TFC24, UL_TFC25, UL_TFC30, UL_TFC31	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 312 bits
8	DL_TFC8, DL_TFC38	UL_TFC8, UL_TFC32	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC24, UL_TFC26, UL_TFC30, UL_TFC32	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 312 bits
9	DL_TFC9, DL_TFC39	UL_TFC9, UL_TFC33	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9, UL_TFC24, UL_TFC27, UL_TFC30, UL_TFC33	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 312 bits
10	DL_TFC10, DL_TFC40	UL_TFC10, UL_TFC34	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC24, UL_TFC28, UL_TFC30, UL_TFC34	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 312 bits
11	DL_TFC11, DL_TFC41	UL_TFC11, UL_TFC35	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC24, UL_TFC29, UL_TFC30, UL_TFC35	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits

12	DL_TFC12, DL_TFC42	UL_TFC12, UL_TFC36	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC24, UL_TFC36	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: No data RB6: No data RB7: No data RB8: 632 bits
13	DL_TFC13, DL_TFC43	UL_TFC13, UL_TFC37	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC13, UL_TFC24, UL_TFC25, UL_TFC36, UL_TFC37	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 632 bits
14	DL_TFC14, DL_TFC44	UL_TFC14, UL_TFC38	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC14, UL_TFC24, UL_TFC26, UL_TFC36, UL_TFC38	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 632 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 632 bits
15	DL_TFC15, DL_TFC45	UL_TFC15, UL_TFC39	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC15, UL_TFC24, UL_TFC27, UL_TFC36, UL_TFC39	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 632 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 632 bits
16	DL_TFC16, DL_TFC46	UL_TFC16, UL_TFC40	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC16, UL_TFC24, UL_TFC28, UL_TFC36, UL_TFC40	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 632 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 632 bits

17	DL_TFC17, DL_TFC47	UL_TFC17, UL_TFC41	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC17, UL_TFC24, UL_TFC29, UL_TFC36, UL_TFC41	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits
18	DL_TFC18, DL_TFC48	UL_TFC18, UL_TFC42	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC24, UL_TFC42	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: No data RB6: No data RB7: No data RB8: 952 bits
19	DL_TFC19, DL_TFC49	UL_TFC19, UL_TFC43	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC19, UL_TFC24, UL_TFC25, UL_TFC42, UL_TFC43	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 952 bits
20	DL_TFC20, DL_TFC50	UL_TFC20, UL_TFC44	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC20, UL_TFC24, UL_TFC26, UL_TFC42, UL_TFC44	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 1272 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 952 bits
21	DL_TFC21, DL_TFC51	UL_TFC21, UL_TFC45	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC21, UL_TFC24, UL_TFC27, UL_TFC42, UL_TFC45	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 1272 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 952 bits

22	DL_TFC22, DL_TFC52	UL_TFC22, UL_TFC46	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC22, UL_TFC24, UL_TFC28, UL_TFC42, UL_TFC46	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 1272 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 952 bits
23	DL_TFC23, DL_TFC53	UL_TFC23, UL_TFC47	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC23, UL_TFC24, UL_TFC29, UL_TFC42, UL_TFC47	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 952 bits
24	DL_TFC24, DL_TFC54	UL_TFC18, UL_TFC42	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC24, UL_TFC42	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: No data RB6: No data RB7: No data RB8: 1272 bits
25	DL_TFC25, DL_TFC55	UL_TFC19, UL_TFC43	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC19, UL_TFC24, UL_TFC25, UL_TFC42, UL_TFC43	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 1272 bits
26	DL_TFC26, DL_TFC56	UL_TFC20, UL_TFC44	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC20, UL_TFC24, UL_TFC26, UL_TFC42, UL_TFC44	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 1272 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 1272 bits

27	DL_TFC27, DL_TFC57	UL_TFC21, UL_TFC45	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC21, UL_TFC24, UL_TFC27, UL_TFC42, UL_TFC45	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 1272 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 1272 bits
28	DL_TFC28, DL_TFC58	UL_TFC22, UL_TFC46	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC22, UL_TFC24, UL_TFC28, UL_TFC42, UL_TFC46	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 1272 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 1272 bits
29	DL_TFC29, DL_TFC59	UL_TFC23, UL_TFC47	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC23, UL_TFC24, UL_TFC29, UL_TFC42, UL_TFC47	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6 and UL_TFC24 are part of minimum set of TFCIs. 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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

14.2.38i.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2,3 and 4: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.
   - for sub-test 5: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.

- for sub-test 6: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
- for sub-test 8,9 and 10: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 11: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.
- for sub-test 12: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 13: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
- for sub-test 14,15 and 16: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 17: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.
- for sub-test 18: RLC SDUs on RB8 having the first 952 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 19: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs on RB8 having the first 952 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
- for sub-test 20,21 and 22: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; RLC SDUs on RB8 having the first 952 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB7.
- for sub-test 23: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the first 952 bits equal to the content of the test data sent by the SS in downlink.
- for sub-test 24: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 25: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
- for sub-test 26,27 and 28: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.
- for sub-test 29: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.38j Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.38j.1 Conformance requirement

See clause 14.2.4.1.

14.2.38j.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.38j.

14.2.38j.3 Method of test

See clause 14.1.2 for test procedure.

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	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	3x336	N/A
	TF4, bits	1x75	1x103	N/A	4x336	N/A
	TF5, bits	1x81	N/A	N/A	N/A	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,TF0,TF0,TF0)
UL_TFC3	(TF3,TF2,TF0,TF0,TF0)
UL_TFC4	(TF4,TF3,TF0,TF0,TF0)
UL_TFC5	(TF5,TF4,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF1,TF0)
UL_TFC7	(TF1,TF0,TF0,TF1,TF0)
UL_TFC8	(TF2,TF1,TF0,TF1,TF0)
UL_TFC9	(TF3,TF2,TF0,TF1,TF0)
UL_TFC10	(TF4,TF3,TF0,TF1,TF0)
UL_TFC11	(TF5,TF4,TF1,TF1,TF0)
UL_TFC12	(TF0,TF0,TF0,TF2,TF0)
UL_TFC13	(TF1,TF0,TF0,TF2,TF0)
UL_TFC14	(TF2,TF1,TF0,TF2,TF0)
UL_TFC15	(TF3,TF2,TF0,TF2,TF0)
UL_TFC16	(TF4,TF3,TF0,TF2,TF0)
UL_TFC17	(TF5,TF4,TF1,TF2,TF0)
UL_TFC18	(TF0,TF0,TF0,TF4,TF0)
UL_TFC19	(TF1,TF0,TF0,TF4,TF0)
UL_TFC20	(TF2,TF1,TF0,TF4,TF0)
UL_TFC21	(TF3,TF2,TF0,TF4,TF0)
UL_TFC22	(TF4,TF3,TF0,TF4,TF0)
UL_TFC23	(TF5,TF4,TF1,TF4,TF0)
UL_TFC24	(TF0,TF0,TF0,TF0,TF1)
UL_TFC25	(TF1,TF0,TF0,TF0,TF1)
UL_TFC26	(TF2,TF1,TF0,TF0,TF1)
UL_TFC27	(TF3,TF2,TF0,TF0,TF1)
UL_TFC28	(TF4,TF3,TF0,TF0,TF1)
UL_TFC29	(TF5,TF4,TF1,TF0,TF1)
UL_TFC30	(TF0,TF0,TF0,TF1,TF1)
UL_TFC31	(TF1,TF0,TF0,TF1,TF1)
UL_TFC32	(TF2,TF1,TF0,TF1,TF1)
UL_TFC33	(TF3,TF2,TF0,TF1,TF1)
UL_TFC34	(TF4,TF3,TF0,TF1,TF1)
UL_TFC35	(TF5,TF4,TF1,TF1,TF1)
UL_TFC36	(TF0,TF0,TF0,TF2,TF1)
UL_TFC37	(TF1,TF0,TF0,TF2,TF1)
UL_TFC38	(TF2,TF1,TF0,TF2,TF1)
UL_TFC39	(TF3,TF2,TF0,TF2,TF1)
UL_TFC40	(TF4,TF3,TF0,TF2,TF1)
UL_TFC41	(TF5,TF4,TF1,TF2,TF1)
UL_TFC42	(TF0,TF0,TF0,TF4,TF1)
UL_TFC43	(TF1,TF0,TF0,TF4,TF1)
UL_TFC44	(TF2,TF1,TF0,TF4,TF1)
UL_TFC45	(TF3,TF2,TF0,TF4,TF1)
UL_TFC46	(TF4,TF3,TF0,TF4,TF1)
UL_TFC47	(TF5,TF4,TF1,TF4,TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x53	1x60	1x336	1x148
	TF2, bits	1x42	1x63	N/A	2x336	N/A
	TF3, bits	1x55	1x84	N/A	4x336	N/A
	TF4, bits	1x75	1x103	N/A	8x336	N/A
	TF5, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0,TF0,TF0)
DL_TFC2	(TF2,TF1,TF0,TF0,TF0)
DL_TFC3	(TF3,TF2,TF0,TF0,TF0)
DL_TFC4	(TF4,TF3,TF0,TF0,TF0)
DL_TFC5	(TF5,TF4,TF1,TF0,TF0)
DL_TFC6	(TF0,TF0,TF0,TF1,TF0)
DL_TFC7	(TF1,TF0,TF0,TF1,TF0)
DL_TFC8	(TF2,TF1,TF0,TF1,TF0)
DL_TFC9	(TF3,TF2,TF0,TF1,TF0)
DL_TFC10	(TF4,TF3,TF0,TF1,TF0)
DL_TFC11	(TF5,TF4,TF1,TF1,TF0)
DL_TFC12	(TF0,TF0,TF0,TF2,TF0)
DL_TFC13	(TF1,TF0,TF0,TF2,TF0)
DL_TFC14	(TF2,TF1,TF0,TF2,TF0)
DL_TFC15	(TF3,TF2,TF0,TF2,TF0)
DL_TFC16	(TF4,TF3,TF0,TF2,TF0)
DL_TFC17	(TF5,TF4,TF1,TF2,TF0)
DL_TFC18	(TF0,TF0,TF0,TF3,TF0)
DL_TFC19	(TF1,TF0,TF0,TF3,TF0)
DL_TFC20	(TF2,TF1,TF0,TF3,TF0)
DL_TFC21	(TF3,TF2,TF0,TF3,TF0)
DL_TFC22	(TF4,TF3,TF0,TF3,TF0)
DL_TFC23	(TF5,TF4,TF1,TF3,TF0)
DL_TFC24	(TF0,TF0,TF0,TF4,TF0)
DL_TFC25	(TF1,TF0,TF0,TF4,TF0)
DL_TFC26	(TF2,TF1,TF0,TF4,TF0)
DL_TFC27	(TF3,TF2,TF0,TF4,TF0)
DL_TFC28	(TF4,TF3,TF0,TF4,TF0)
DL_TFC29	(TF5,TF4,TF1,TF4,TF0)
DL_TFC30	(TF0,TF0,TF0,TF0,TF1)
DL_TFC31	(TF1,TF0,TF0,TF0,TF1)
DL_TFC32	(TF2,TF1,TF0,TF0,TF1)
DL_TFC33	(TF3,TF2,TF0,TF0,TF1)
DL_TFC34	(TF4,TF3,TF0,TF0,TF1)
DL_TFC35	(TF5,TF4,TF1,TF0,TF1)
DL_TFC36	(TF0,TF0,TF0,TF1,TF1)
DL_TFC37	(TF1,TF0,TF0,TF1,TF1)
DL_TFC38	(TF2,TF1,TF0,TF1,TF1)
DL_TFC39	(TF3,TF2,TF0,TF1,TF1)
DL_TFC40	(TF4,TF3,TF0,TF1,TF1)
DL_TFC41	(TF5,TF4,TF1,TF1,TF1)
DL_TFC42	(TF0,TF0,TF0,TF2,TF1)
DL_TFC43	(TF1,TF0,TF0,TF2,TF1)
DL_TFC44	(TF2,TF1,TF0,TF2,TF1)
DL_TFC45	(TF3,TF2,TF0,TF2,TF1)
DL_TFC46	(TF4,TF3,TF0,TF2,TF1)
DL_TFC47	(TF5,TF4,TF1,TF2,TF1)
DL_TFC48	(TF0,TF0,TF0,TF3,TF1)
DL_TFC49	(TF1,TF0,TF0,TF3,TF1)
DL_TFC50	(TF2,TF1,TF0,TF3,TF1)
DL_TFC51	(TF3,TF2,TF0,TF3,TF1)
DL_TFC52	(TF4,TF3,TF0,TF3,TF1)
DL_TFC53	(TF5,TF4,TF1,TF3,TF1)
DL_TFC54	(TF0,TF0,TF0,TF4,TF1)
DL_TFC55	(TF1,TF0,TF0,TF4,TF1)
DL_TFC56	(TF2,TF1,TF0,TF4,TF1)
DL_TFC57	(TF3,TF2,TF0,TF4,TF1)
DL_TFC58	(TF4,TF3,TF0,TF4,TF1)
DL_TFC59	(TF5,TF4,TF1,TF4,TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1, DL_TFC31	UL_TFC1, UL_TFC25	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC25	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC32	UL_TFC2, UL_TFC26	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC2,~~ UL_TFC24, UL_TFC26	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: No data
3	DL_TFC3, DL_TFC33	UL_TFC3, UL_TFC27	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC3,~~ UL_TFC24, UL_TFC27	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: No data
4	DL_TFC4, DL_TFC34	UL_TFC4, UL_TFC28	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC4,~~ UL_TFC24, UL_TFC28	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: No data
5	DL_TFC5, DL_TFC35	UL_TFC5, UL_TFC29	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC5,~~ UL_TFC24, UL_TFC29	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: No data
6	DL_TFC6, DL_TFC36	UL_TFC6, UL_TFC30	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC24, UL_TFC30	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: No data RB6: No data RB7: No data RB8: 312 bits

7	DL_TFC7, DL_TFC37	UL_TFC7, UL_TFC31	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7, UL_TFC24, UL_TFC25, UL_TFC30, UL_TFC31	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 312 bits
8	DL_TFC8, DL_TFC38	UL_TFC8, UL_TFC32	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, ~~UL_TFC2,~~ UL_TFC6, UL_TFC8, UL_TFC24, UL_TFC26, UL_TFC30, UL_TFC32	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 312 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 312 bits
9	DL_TFC9, DL_TFC39	UL_TFC9, UL_TFC33	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, ~~UL_TFC3,~~ UL_TFC6, UL_TFC9, UL_TFC24, UL_TFC27, UL_TFC30, UL_TFC33	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 312 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 312 bits
10	DL_TFC10, DL_TFC40	UL_TFC10, UL_TFC34	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, ~~UL_TFC4,~~ UL_TFC6, UL_TFC10, UL_TFC24, UL_TFC28, UL_TFC30, UL_TFC34	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 312 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 312 bits
11	DL_TFC11, DL_TFC41	UL_TFC11, UL_TFC35	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11, UL_TFC24, UL_TFC29, UL_TFC30, UL_TFC35	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 312 bits

12	DL_TFC12, DL_TFC42	UL_TFC12, UL_TFC36	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC24, UL_TFC36	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: No data RB6: No data RB7: No data RB8: 632 bits
13	DL_TFC13, DL_TFC43	UL_TFC13, UL_TFC37	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC12, UL_TFC13, UL_TFC24, UL_TFC25, UL_TFC36, UL_TFC37	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 632 bits
14	DL_TFC14, DL_TFC44	UL_TFC14, UL_TFC38	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC2,~~ UL_TFC12, UL_TFC14, UL_TFC24, UL_TFC26, UL_TFC36, UL_TFC38	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 632 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 632 bits
15	DL_TFC15, DL_TFC45	UL_TFC15, UL_TFC39	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC3,~~ UL_TFC12, UL_TFC15, UL_TFC24, UL_TFC27, UL_TFC36, UL_TFC39	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 632 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 632 bits
16	DL_TFC16, DL_TFC46	UL_TFC16, UL_TFC40	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC4,~~ UL_TFC12, UL_TFC16, UL_TFC24, UL_TFC28, UL_TFC36, UL_TFC40	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 632 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 632 bits

17	DL_TFC17, DL_TFC47	UL_TFC17, UL_TFC41	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC5,~~ UL_TFC12, UL_TFC17, UL_TFC24, UL_TFC29, UL_TFC36, UL_TFC41	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 632 bits
18	DL_TFC18, DL_TFC48	UL_TFC18, UL_TFC42	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC24, UL_TFC42	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: No data RB6: No data RB7: No data RB8: 1272 bits
19	DL_TFC19, DL_TFC49	UL_TFC19, UL_TFC43	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC19, UL_TFC24, UL_TFC25, UL_TFC42, UL_TFC43	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 1272 bits
20	DL_TFC20, DL_TFC50	UL_TFC20, UL_TFC44	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC2,~~ UL_TFC18, UL_TFC20, UL_TFC24, UL_TFC26, UL_TFC42, UL_TFC44	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 1272 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 1272 bits
21	DL_TFC21, DL_TFC51	UL_TFC21, UL_TFC45	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC3,~~ UL_TFC18, UL_TFC21, UL_TFC24, UL_TFC27, UL_TFC42, UL_TFC45	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 1272 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 1272 bits

22	DL_TFC22, DL_TFC52	UL_TFC22, UL_TFC46	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC4,~~ UL_TFC18, UL_TFC22, UL_TFC24, UL_TFC28, UL_TFC42, UL_TFC46	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 1272 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 1272 bits
23	DL_TFC23, DL_TFC53	UL_TFC23, UL_TFC47	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC5,~~ UL_TFC18, UL_TFC23, UL_TFC24, UL_TFC29, UL_TFC42, UL_TFC47	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits
24	DL_TFC24, DL_TFC54	UL_TFC18, UL_TFC42	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC24, UL_TFC42	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: No data RB6: No data RB7: No data RB8: 2552 bits
25	DL_TFC25, DL_TFC55	UL_TFC19, UL_TFC43	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC18, UL_TFC19, UL_TFC24, UL_TFC25, UL_TFC42, UL_TFC43	RB5: 39 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 39 bits RB6: No data RB7: No data RB8: 2552 bits
26	DL_TFC26, DL_TFC56	UL_TFC20, UL_TFC44	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC2,~~ UL_TFC18, UL_TFC20, UL_TFC24, UL_TFC26, UL_TFC42, UL_TFC44	RB5: 42 bits RB6: 53 bits RB7: 60 bits RB8: 1272 bits	RB5: 42 bits RB6: 53 bits RB7: No data RB8: 2552 bits

27	DL_TFC27, DL_TFC57	UL_TFC21, UL_TFC45	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC3,~~ UL_TFC18, UL_TFC21, UL_TFC24, UL_TFC27, UL_TFC42, UL_TFC45	RB5: 55 bits RB6: 63 bits RB7: 60 bits RB8: 1272 bits	RB5: 55 bits RB6: 63 bits RB7: No data RB8: 2552 bits
28	DL_TFC28, DL_TFC58	UL_TFC22, UL_TFC46	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC4,~~ UL_TFC18, UL_TFC22, UL_TFC24, UL_TFC28, UL_TFC42, UL_TFC46	RB5: 75 bits RB6: 84 bits RB7: 60 bits RB8: 1272 bits	RB5: 75 bits RB6: 84 bits RB7: No data RB8: 2552 bits
29	DL_TFC29, DL_TFC59	UL_TFC23, UL_TFC47	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, ~~UL_TFC5,~~ UL_TFC18, UL_TFC23, UL_TFC24, UL_TFC29, UL_TFC42, UL_TFC47	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 1272 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits RB8: 2552 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6 and UL_TFC24 are part of minimum set of TFCIs. 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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

14.2.38j.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.

3. At step 15 the UE shall return

   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.

   - for sub-test 2,3 and 4: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7 and RB8.

   - for sub-test 5: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.

   - for sub-test 6: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.

   - for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.

   - for sub-test 8,9 and 10: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.

   - for sub-test 11: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.

   - for sub-test 12: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.

   - for sub-test 13: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.

   - for sub-test 14,15 and 16: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.

   - for sub-test 17: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.

   - for sub-test 18: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.

   - for sub-test 19: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.

   - for sub-test 20,21 and 22: RLC SDUs on RB5, RB6 and RB8 having the same content as sent by the SS; and no data shall be received on RB7.

   - for sub-test 23: RLC SDUs on RB5, RB6 , RB7 and RB8 having the same content as sent by the SS.

   - for sub-test 24: RLC SDUs 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 25: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs 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 RB6 and RB7.

   - for sub-test 26,27 and 28: RLC SDUs on RB5 and RB6 having the same content as sent by the SS; RLC SDUs 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 RB7.

   - for sub-test 29: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

<Start of next modified section>

14.2.43 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

14.2.43.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB / 10 ms TTI

14.2.43.1.1 Conformance requirement

See 14.2.4.1.

14.2.43.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.43 for the downlink 10 ms TTI case.

14.2.43.1.3 Method of test

See 14.1.2 for test procedure.

For the PS DL:384/UL:64 kbps radio bearer the downlink TTI is 10ms while the uplink TTI is 20ms. As the SS will send one DL SDU every 10 ms then the UE test loop function will return 2 UL SDUs per uplink TTI. To not cause uplink transmission buffer overflow then the UL RLC SDU size should be chosen such that the UE will transmit 2 RLC SDUs per uplink TTI. For the case when the transport format under test does not allow for 2 SDUs to fit into the transport format size without requiring concatenation then the UL RLC SDU size shall be chosen such that one SDU is returned per uplink TTI.

The following RLC parameter value is used in the RADIO BEARER SETUP message used to setup the PS DL:384/UL:64 kbps radio bearer:

Uplink RLC Transmission window size	512

NOTE The transmission window size value have been chosen to avoid that UE transmission buffer becomes full during the 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	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (384 kbps, 10 ms)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A
	TF5, bits	N/A	N/A	N/A	12x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF0, TF1)
DL_TFC19	(TF1, TF0, TF0, TF0, TF1)
DL_TFC20	(TF2, TF1, TF1, TF0, TF1)
DL_TFC21	(TF0, TF0, TF0, TF1, TF1)
DL_TFC22	(TF1, TF0, TF0, TF1, TF1)
DL_TFC23	(TF2, TF1, TF1, TF1, TF1)
DL_TFC24	(TF0, TF0, TF0, TF2, TF1)
DL_TFC25	(TF1, TF0, TF0, TF2, TF1)
DL_TFC26	(TF2, TF1, TF1, TF2, TF1)
DL_TFC27	(TF0, TF0, TF0, TF3, TF1)
DL_TFC28	(TF1, TF0, TF0, TF3, TF1)
DL_TFC29	(TF2, TF1, TF1, TF3, TF1)
DL_TFC30	(TF0, TF0, TF0, TF4, TF1)
DL_TFC31	(TF1, TF0, TF0, TF4, TF1)
DL_TFC32	(TF2, TF1, TF1, TF4, TF1)
DL_TFC33	(TF0, TF0, TF0, TF5, TF1)
DL_TFC34	(TF1, TF0, TF0, TF5, TF1)
DL_TFC35	(TF2, TF1, TF1, TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 4)	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC19	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC18, 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_TFC20	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, ~~UL_TFC2,~~ UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC21	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC22	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC23	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, ~~UL_TFC5,~~ UL_TFC5, UL_TFC17, UL_TFC18, UL_TFC15, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC24	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC18, 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: 312 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC25	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 632

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 4)	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
8	DL_TFC8, DL_TFC26	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, ~~UL_TFC2,~~ UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC27	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC18, 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: 1272 (note 2)	RB5: No data RB6: No data RB7: No data RB8: 1272
10	DL_TFC10, DL_TFC28	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC29	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, ~~UL_TFC2,~~ UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC30	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC18, 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: 632 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC31	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 4)	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
14	DL_TFC14, DL_TFC32	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, ~~UL_TFC2,~~ UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC33	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC18, 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: 632 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC34	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC18, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC35	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, ~~UL_TFC2,~~ UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 3832

NOTE 1: 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 the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

NOTE 2: RB8 (TF1/TF3): For sub-tests where uplink transport format TF1 (1x336) or TF3 (3x336) are used then no adoptation to the difference in downlink TTI (10 ms) and uplink TTI (20ms) is possible as this would require the UE to concatenate 2 SDUs into one PDU for TF1; or into three PDUs for TF3. For these sub-tests the UL RLC SDU size is set equal to the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

NOTE 3: RB8 (TF2/TF4): For sub-tests where uplink transport formats TF2 (2x336) or TF4 (4x336) is used then to adopt to the difference in downlink TTI (10 ms) and uplink TTI (20ms) the UL RLC SDU size has been chosen such that 2 SDUs will be returned per uplink TTI. I.e. the UL RLC SDU size is set equal to half the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

NOTE 4: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs.

14.2.43.1.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.

3. At step 15a and step 15b the UE shall return

   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.

   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.

   - for sub-test 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.

   - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.

   - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.

   - for sub-test 6: RLC SDUs on RB8 having the first 312 bits equal to the content 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: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.

   - for sub-test 8: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink.

   - for sub-test 9: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.

   - for sub-test 10: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.

   - for sub-test 11: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.

   - for sub-test 12: RLC SDUs 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 13: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs 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 RB6 and RB7.

   - for sub-test 14: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink.

   - for sub-test 15: RLC SDUs 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 16: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs 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 RB6 and RB7.

   - for sub-test 17: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the the SS; and RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

<Start of next modified section>

14.2.49 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.49.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI

14.2.49.1.1 Conformance requirement

See 14.2.4.1.

14.2.49.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.49 for the 20 ms TTI case.

14.2.49.1.3 Method of test

See 14.1.2 for test procedure.

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB8):

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

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	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	2x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	2x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

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_TFC7	UL_TFC1, DL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC8	UL_TFC2, DL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, ~~UL_TFC2,~~ UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC9	UL_TFC3, DL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: No data RB6: No data RB7: No data RB8: 2x640
4	DL_TFC4, DL_TFC10	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: 2x640
5	DL_TFC5, DL_TFC11	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: 2x640
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC6 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 14.1.1 for test procedure.

14.2.49.1.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
   - for sub-test 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
- for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

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14.2.51 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

14.2.51.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:64 DL:64 kbps / PS RAB

14.2.51.1.1 Conformance requirement

See 14.2.4.1.

14.2.51.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.51 for the 20 ms TTI case.

14.2.51.1.3 Method of test

See 14.1.2 for test procedure.

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC	
TM RLC	
Segmentation indication	FALSE
Transmission RLC discard	
CHOICE *SDU Discard Mode*	
Timer based no explicit	
Timer_discard	100ms
Downlink RLC	
TM RLC	
Segmentation indication	FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	**RB5 (Conv. 64 kbps, 20 ms TTI)**	**RB6 (I/B 64 kbps, 20 ms TTI)**	**DCCH**
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps, 20 ms TTI)	RB6 (I/B 64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 952
4	DL_TFC4, DL_TFC14	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
5	DL_TFC5, DL_TFC15	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 2x640 RB6: 952
9	DL_TFC9, DL_TFC19	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 1272

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5 and UL_TFC10 are part of minimum set of TFCIs. 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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

14.2.51.1.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1, 2, 3, 4: RLC SDUs on RB6 having the same content as sent by the SS; and no data shall be received on RB5.
   - for sub-test 5: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6.
   - for sub-test 6, 7, 8 and 9: RLC SDUs on RB5 and RB6 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

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14.2.51a Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.51a.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:8 DL:8 kbps / PS RAB

14.2.51a.1.1 Conformance requirement

See 14.2.4.1.

14.2.51a.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.51a for the 20 ms TTI case.

14.2.51a.1.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 8 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF1, TF0, TF0)
UL_TFC3	(TF1, TF1, TF0)
UL_TFC4	(TF0, TF0, TF1)
UL_TFC5	(TF0, TF1, TF1)
UL_TFC6	(TF1, TF0, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 8kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF1, TF0, TF0)
DL_TFC3	(TF1, TF1, TF0)
DL_TFC4	(TF0, TF0, TF1)
DL_TFC5	(TF0, TF1, TF1)
DL_TFC6	(TF1, TF0, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (nNote 21)	Test data size (bits) (nNote 21)
1	DL_TFC1 DL_TFC5	UL_TFC1 UL_TFC5	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 1280 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2 DL_TFC6	UL_TFC2 UL_TFC6	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 1280 RB6: 312	RB5: 1280 RB6: No data
3	DL_TFC3 DL_TFC7	UL_TFC3 UL_TFC7	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 1280 RB6: 312	RB5: 1280 RB6: 312

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5 and UL_TFC10 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. 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).

14.2.51a.1.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 2: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 3: an RLC SDU on RB5 and RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

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14.2.51b Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:16 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.51b.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:16 DL:64 kbps / PS RAB

14.2.51b.1.1 Conformance requirement

See 14.2.4.1.

14.2.51b.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.51b for the 20 ms TTI case.

14.2.51b.1.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 16 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF1, TF0, TF0)
UL_TFC4	(TF1, TF1, TF0)
UL_TFC5	(TF1, TF2, TF0)
UL_TFC6	(TF0, TF0, TF1)
UL_TFC7	(TF0, TF1, TF1)
UL_TFC8	(TF0, TF2, TF1)
UL_TFC9	(TF1, TF0, TF1)
UL_TFC10	(TF1, TF1, TF1)
UL_TFC11	(TF1, TF2, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 64 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) ~~N~~(note 2~~1~~)	Test data size (bits) ~~N~~(note 2)~~1~~
1	DL_TFC1, DL_TFC11	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC7	RB5: 1280 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2 ,UL_TFC8	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8	RB5: 1280 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8	RB5: 1280 RB6: 632	RB5: No data RB6: 952
4	DL_TFC4, DL_TFC14	UL_TFC2 ,UL_TFC8	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8	RB5: 1280 RB6: 632	RB5: No data RB6: 1272
5	DL_TFC5, DL_TFC15	UL_TFC3 ,UL_TFC9	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 1280 RB6: 312	RB5: 1280 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 1280 RB6: 312	RB5: 1280 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 1280 RB6: 632	RB5: 1280 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 1280 RB6: 632	RB5: 1280 RB6: 952
9	DL_TFC9, DL_TFC19	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 1280 RB6: 632	RB5: 1280 RB6: 1272

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) ~~N~~(note 2~~1~~)	Test data size (bits) ~~N~~(note 2)~~1~~
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC3 and UL_TFC6 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TB size .						

14.2.51b.1.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1, 2: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 3, 4: an RLC SDU on RB5 having the same content as sent by SS and on RB6 having the content equal to the first 632 bits of the test data sent by the SS in downlink
   - for sub-test 5: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 6 , 7 : an RLC SDU on RB5 and RB6 having the same content as sent by SS
   - for sub-test 8 , 9 : on RB5 an RLC SDU having the same content as sent by SS and RB6 having the content equal to the first 632 bits of the test data sent by the SS in downlink
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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14.2.57 Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.57.1 Conformance requirement

See 14.2.4.1.

14.2.57.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.57.

14.2.57.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 + RB6 (64 kbps RAB, 20 ms TTI)	DCCH
TFS	TF0, bits	0x340	0x148
	TF1, bits	1x340	1x148
	TF2, bits	2x340	N/A
	TF3, bits	3x340	N/A
	TF4, bits	4x340	N/A

Uplink TFCS:

TFCI	(RB5 + RB6, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 + RB6 (64 kbps RAB, 20 ms TTI)	DCCH
TFS	TF0, bits	0x340	0x148
	TF1, bits	1x340	1x148
	TF2, bits	2x340	N/A
	TF3, bits	3x340	N/A
	TF4, bits	4x340	N/A

Downlink TFCS:

TFCI	(RB5 + RB6, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) N(note 2)1	Test data size (bits) N(note 2)1
1	DL_TFC1 DL_TFC6	UL_TFC1 DL_TFC6	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312 RB6: 312	RB5: 312 RB6: No data
2	DL_TFC2 DL_TFC7	UL_TFC2 DL_TFC7	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632 RB6: 632	RB5: 632 RB6: No data
3	DL_TFC3 DL_TFC8	UL_TFC3 DL_TFC8	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952 RB6: 952	RB5: 952 RB6: No data
4	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272	RB5: 1272 RB6: No data
5	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB5: 1272	RB5: No data RB6: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5 and RB6: 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 has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

14.2.57.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS in RB5.
   - for sub-test 5: an RLC SDU on RB6 having the same content as the DL RLC SDU sent by the SS in RB6.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

14.2.58 Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

14.2.58.1 Conformance requirement

See 14.2.4.1.

14.2.58.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.58.

14.2.58.3 Method of test

See 14.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 uplink (16 kbps, 20 ms TTI)**	**RB6 (8 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148

Uplink TFCS:

TFCI	**(RB5, RB6, DCCH)**
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF0, TF1, TF0)
UL_TFC3	(TF1, TF1, TF0)
UL_TFC4	(TF0, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	**RB5 (64 kbps, 40 ms TTI)**	**RB6 (8 kbps)**	**DCCH**
TFS	TF0, bits	0x656	0x336	0x148
	TF1, bits	1x656	1x336	1x148
	TF2, bits	2x656	N/A	N/A
	TF3, bits	4x656	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF0, TF0)
DL_TFC3	(TF3, TF0, TF0)
DL_TFC4	(TF0, TF1, TF0)
DL_TFC5	(TF1, TF1, TF0)
DL_TFC6	(TF2, TF1, TF0)
DL_TFC7	(TF3, TF1, TF0)
DL_TFC8	(TF0, TF0, TF1)
DL_TFC9	(TF1, TF0, TF1)
DL_TFC10	(TF2, TF0, TF1)
DL_TFC11	(TF3, TF0, TF1)
DL_TFC12	(TF0, TF1, TF1)
DL_TFC13	(TF1, TF1, TF1)
DL_TFC14	(TF2, TF1, TF1)
DL_TFC15	(TF3, TF1, TF1)

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_TFC9	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 632 RB6: 312	RB5: 632 RB6: no data
2	DL_TFC2, DL_TFC10	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 632 RB6: 312	RB5: 1272 RB6: no data
3	DL_TFC3, DL_TFC11	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 632 RB6: 312	RB5: 2552 RB6: no data
4	DL_TFC4, DL_TFC12	UL_TFC2, UL_TFC6	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 632 RB6: 312	RB5: no data RB6: 312
5	DL_TFC5, DL_TFC13	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6	RB5: 632 RB6: 312	RB5: 632 RB6: 312
6	DL_TFC6, DL_TFC14	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6	RB5: 632 RB6: 312	RB5: 1272 RB6: 312
7	DL_TFC7, DL_TFC15	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 632 RB6: 312	RB5: 2552 RB6: 312

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC4 are part of minimum set of TFCIs.

NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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). As the uplink TTI for RB5 is 20 ms while the downlink TTI is 40 ms then, to achieve continous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU size has been set to two times the payload size of the UL TF under test minus 8 bits (the size of a 7 bit length indicator and expansion bit).
RB6: 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 has been set equal to the uplink TFS size minus 8 bits (the size of a 7 bit length indicator and expansion bit).

14.2.58.4 Test requirements

See 14.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6.
   - for sub-test 2 and 3: RLC SDUs on RB5 having the first 632 bits equal to the content of the test data sent by theSS in downlink; and no data shall be received on RB6.
   - for sub-test 4: RLC SDUs on RB6 having the same content as sent by the SS; and no data shall be received on RB5.
   - for sub-test 5: RLC SDUs on RB5 and RB6 having the same content as sent by the SS.
   - for sub-test 6 and 7: RLC SDUs on RB5 having the first 632 bits equal to the content of the test data sent by theSS in downlink; and RLC SDUs on RB6 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

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

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **459** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Generic setup procedure for radio bearer testing using the DSCH
Source:	⌘	Motorola and MCC Task 160
Work item code:	⌘	TEI
Date:	⌘	04/02/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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 Generic RAB procedure for the Radio bearers involving the DSCH is proposed.
Summary of change:	⌘	The section 14.1.2a is added for the Generic RAB procedure for the Radio bearers involving the DSCH
Consequences if not approved:	⌘	The test procedure in not available

Clauses affected:	⌘	14.1.2a

		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

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>

14.1.2a Generic test procedure for testing multi-RB combinations and simultaneous signalling in case of DSCH

This procedure is used to test multiple radio bearer combinations where PS data goes on the DSCH. This procedure is also used to verify simultaneous transmission and reception of user data and signaling data.

Initial conditions

UE in idle mode

Test procedure

a) The SS establish the reference radio bearer configuration as specified in TS 34.108, clause 6.10 for the actual radio bearer test. For the case when the reference radio bearer configuration includes radio bearers for both CS and PS domain then the radio bearer setup procedure has to be performed once per domain. The first radio bearer setup procedure shall perform configuration of the physical channel for the radio bearer combination under test as well as the transport channels for the CS radio bearer(s), also the transport format combination set for only CS radio bearers has to be provided. The second radio bearer procedure shall perform the configuration for the transport channel for the PS radio bearers.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. Here first time only the TFCs for the data on CS RAB and the data on PS RAB are restricted.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 1.

d) The SS transmits test data on all radio bearers under test. The number of RLC SDUs to transmit every TTI and the size "Test data size" is specified for each sub-test of the actual radio bearer test. See note 2.

e) The SS checks that UE has looped back the data on the CS and PS Radio bearer.

f) The SS opens the UE test loop.

g) SS uses the RRC transport format combination control procedure. And now restricts the TFCs for the data on CS RAB and the data on PS RAB and also on SRB.

h) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

i) SS transmit data on the CS RAB a MEASUREMENT CONTROL message requesting periodic reporting with a period of T2.

j) SS transmits the data on PS RAB.

k) SS waits the time equal to 2 times T2

l) SS checks that, for all radio bearers under test, the content of the received RLC SDUs have the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loop back of RLC SDUs.

m) The SS opens the UE test loop.

o) Steps b) to m) are repeated for all sub-tests

p) The SS may optionally release the radio bearer.

q) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transparent mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transparent mode. Selection of UL RLC SDU size for the different radio bearers under test should be such that the UE returns data in sub-sequent TTIs without causing the UE transmission buffer to become full. To achieve this the UL RLC SDU size shall be set to UL TF payload size under test, minus the size of length indicator and expansion bit, and divided by the ratio between downlink and uplink TTI. E.g. for a AM radio bearer having the uplink RLC payload size equal to 320, the downlink TTI equal to 10 ms, and the uplink TTI equal to 20 ms, then for the transport format 4x336 (TF payload size = 4x320=1280 bits) the UL RLC SDU size parameter should be set to 632 bits (=1280bits/(20ms/10ms)- 8 bits).

NOTE 2: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transparent mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transparent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

Note 3: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signaling radio bearers as well as the possible UE processing delays shall be taken into consideration. The restricted set of TFCIs must comply with the minimum set of TFCIs as specified in TS 25.331, clause 8.6.5.2.

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
6a		<--	AUTHENTICATION REQUEST	
6b		-->	AUTHENTICATION RESPONSE	
6c		<--	SECURITY MODE COMMAND	
6d		-->	SECURITY MODE COMPLETE	

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 1 In addition to activate integrity protection Step 6b and Step 6c are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.

Expected sequence for DSCH multi RAB test cases.

Step	Direction		Message	Comments
	UE	SS		
1..6	<-- -->		Paging	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.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
Case A: CS or PS radio bearers only				
A9	←		RADIO BEARER SETUP (DCCH)	RRC
A10	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
Case B: CS + PS radio bearers				
B9	←		RADIO BEARER SETUP (DCCH)	RRC CS radio bearer(s) are configured
B10	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
B10a	←		SECURITY MODE COMMAND	See Note
B10b	→		SECURITY MODE COMPLETE	RRC
B10c	←		RADIO BEARER SETUP (DCCH)	RRC PS radio bearer(s) are configured
B10c	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-testHere the UL TFS are restricted to test the simultaneous data on CS and PS RAB.
12	<--		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.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14a	<--		Test data (DTCH 1) and Test data on DTCH 2	SS Sends the data on the CS RAB (DPCH).SS Sends the data on the PS RAB .(PDSCH) (Note 1)
14b	→		Test data (DTCH 1) + Test Data (DTCH 2)	SS Receives the data on CS RAB, PS RAB
14c	<--		OPEN UE TEST LOOP (DCCH)	TC
14d	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC

Step	Direction		Message	Comments
	UE	SS		
15a	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test Here the UL TFS are restricted to test the simultaneous data on CS and PS RAB and SRB
15b	<--		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.
15c	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
15d	<--		Test data (DTCH 1) and Test data on DTCH 2	SS Sends the data on the CS RAB (DPCH). SS Sends the data on the PS RAB. (PDSCH) (Note 1)
15e	<-		MEASUREMENT CONTROL (DCCH)	SS sends a MEASUREMENT CONTROL message simultaneously to the test data requesting periodic reporting at interval T2 (Note 1)
15f	--> -->		Test data (DTCH 1) + Test Data (DTCH 2) MEASUREMENT REPORT (DCCH)	SS Receives the data on CS RAB, PS RAB and the Measurement Control Report. SS Shall get at least on measurement Control report.message (Note 1)
16	<--		OPEN UE TEST LOOP (DCCH)	TC
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every sub-test.	
19			RB RELEASE (DCCH)	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE (DCCH)	TC Optional step
21	-->		DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step
Note. For case B (CS+PS radio bearers) the second security mode procedure is needed to enable testing of ciphering on the PS radio bearers. For the CS domain the security mode procedure is performed as part of the CS paging procedure.				

Note 1:
Here using the test steps 11 to 14d, the simultaneous data on the CS and PS RAB can be tested.
And using the steps 15a to 15f, the simultaneous data on CS RAB, PS RAB and SRB can be tested. ,

For testing the simultaneous data on CS RAB, PS RAB and SRB, following procedure is used.
First data on the CS RAB is sent. Then in the next step Measurement Control message is sent.
In the Downlink the restricted transport format combination will be (1 1), that SS MAC has to send the data on CS RAB and the measurement control message on SRB simultaneously.
Here it is assumed that, since the transport format combination (1, 0) (that is send only data) will not be available in the DL, the MAC has to wait until it get something to transmit on the SRB.
Then data on the PS RAB is sent.
With this on the UE UL Side, the data will be available on both CS and PS RAB and also on the SRB.
With this the transport format combination (1,1, 1) that is simultaneous data on RAB and SRB can be tested in the uplink.

Specific message contents

RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS))

Information Element	Value/remark
New DSCH-RNTI	0000 0000 0000 0010B
RRC State indicator	CELL_DCH
RAB information for setup	
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOptions
- 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	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	19
- Logical channel identity	1
Added or Reconfigured TrCH information list	1 DCH added, 1 DCH reconfigured
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Explicit
- DL DCH TFCS	
- CHOICE TFCI signalling	Split
- Split Type	Hard
- Length of TFCI(field2)	5
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure	
- CHOICE CTFC Size	
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4
- CTFC	Reference to TS34.108 clause 6.10.2.4 Parameter Set
- Power offset information	Not present
- TFCI Field 2 information	
- CHOICE *Signalling method*	Explicit
- TFCS explicit configuration	
- CHOICE TFCS representation	Complete reconfiguration
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4
- CTFC	Reference to TS34.108 clause 6.10.2.4 Parameter Set
- Power offset information	Not present
Deleted TrCH information list	Not Present
Added or Reconfigured TrCH information list	
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DSCH
- DL Transport channel identity	19
- CHOICE DL parameters	Explicit
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set

Information Element	Value/remark
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	Not Present
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH identity	5
- DCH quality target	
- BLER Quality value	-2.0
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- 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
CHOICE Mode	FDD
- Downlink PDSCH information	
- PDSCH with SHO DCH Info	Not Present
- PDSCH code mapping	
- DL Scrambling Code	Primary scrambling code
- Choice *signalling method*	Explicit
- PDSCH code info	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- multi-code info	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL 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	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link list	
- Downlink information for each radio link	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Reference to clause 6.1 “Default settings (FDD)”
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	
- DL Scrambling Code	Primary scrambling code
- Choice *signalling method*	Explicit
- PDSCH code info	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Reference to TS34.108 clause 6.10 Parameter Set
- multi-code info	1

Information Element	Value/remark
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	1
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	0
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

<End of modified section>

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

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** 460 ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Prose for the MultiRAB DSCH Radio bearer test cases .
Source:	⌘	Motorola and MCC Task 160
Work item code:	⌘	TEI
Date:	⌘	04/02/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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 Prose for the for the Radio bearers test cases involving the DSCH is not available .
Summary of change:	⌘	1.The test prose added for the sections 14.3.5.1, 14.3.5.2, 14.3.6.1, 14.3.6.2 The test procedure referred in these clauses is 14.1.2a. This is taken from the CR T1S-030130
Consequences if not approved:	⌘	The test prose in not available

Clauses affected:	⌘	14.3.5.1, 14.3.5.2, 14.3.6.1, 14.3.6.2

		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

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.

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

<Start of modified section>

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)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_TFC2 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_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_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_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_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_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_TFC9 UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
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_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_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_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_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_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3882

NOTE: 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).

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.

<End of modified section>

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

<Start of modified section>

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:

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_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)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
2	DL_TFC2, DL_TFC5,	UL_TFC2, UL_TFC17	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2 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_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_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_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_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_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_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_TFC9 UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
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_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_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_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	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_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_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_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_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112
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_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_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_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_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_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 7672

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)

NOTE : 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).

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 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-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-tests14, 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.

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4. At step 15f UE shall send at least one MEASUREMENT REPORT message.

<End of modified section>

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

<Start of modified section>

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)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_TFC2 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_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_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_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_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_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_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_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_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_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 2552

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_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_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_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_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_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_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_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_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_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_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	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_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_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_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 20472

NOTE: 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).

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.

<End of modified section>

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

<Start of modified section>

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)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_TFC2 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_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_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_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_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 TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_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_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_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_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_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_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_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_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_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_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 10232

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
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_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_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_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_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_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_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_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_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_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_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_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 TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
29	DL_TFC1, DL_TFC4, DL_DSCH_TFC12	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC12	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC13	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC13	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 28152
33	DL_TFC1, DL_TFC4, DL_DSCH_TFC14	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 30712
34	DL_TFC2, DL_TFC5, DL_DSCH_TFC14	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC15	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC15	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC16	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 35832
38	DL_TFC2, DL_TFC5, DL_DSCH_TFC16	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC17	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 38392

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
40	DL_TFC2, DL_TFC5, DL_DSCH_TFC17	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC18	UL_TFC13, UL_TFC28	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC18	UL_TFC14, UL_TFC29	DL_DSCH_TFC0, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC14, UL_TFC15, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 40952

NOTE: 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).

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 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, 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.

<End of modified section>

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

T1-030211

CR-Form-v3

CHANGE REQUEST

⌘ **34.123-1** **CR** **463** ⌘ rev **-** ⌘ Current version: **5.2.0** ⌘

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

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

Title:	⌘	Inclusion of new test cases for intra frequency Measurement Control and Report TDD
Source:	⌘	Siemens AG
Work item code:	⌘	TEI, LCRTDD
Date:	⌘	2nd February 2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one of the following categories:
F *(essential 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 one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ Different Intra-frequency events for Measurement Control and Report signalling tests for FDD and TDD, are defined. Test cases for TDD mode must be included to test properly UE´s supporting TDD mode.

Summary of change: ⌘ Following definitions in TS 25.331 for intra frequency measurements, events 1A to 1F are specified for FDD, and 1G to 1I for TDD.

To test the intra frequency transitions between idle mode, CELL_FACH and CELL_DCH, event 1G for TDD mode is proposed.

To have a more clear structure, and thinking in the possibility to use the test cases for FDD and TDD in the other cases, only intra frequency transitions are proposed separately.

The structure proposed is described below:

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)
8.4.1.1A Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state (TDD)
8.4.1.3 Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state (FDD)
8.4.1.3A Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state (FDD)
8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)
8.4.1.5A Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)
8.4.1.7 Measurement Control and Report: Intra-frequency measurement for

		transition from CELL_FACH to CELL_DCH state (FDD) 8.4.1.7A Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (TDD) The others test cases will be reused for TDD, and no so many differences have been found. The intention to inclusion the subsection with the numbering A is to have a more clear structure when anyone goes to see the contents in the spec.
Consequences if not approved:	⌘	Measurement control and report for intra frequency cannot be tested for TDD mode.

Clauses affected:	⌘	8.4.1		
Other specs affected:	⌘	[ ] Other core specifications [X] Test specifications [ ] O&M Specifications	⌘	
Other comments:	⌘			

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> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.

1> if the MEASUREMENT REPORT message was triggered by an event (i.e. not a periodical report):

…

The UE shall:

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

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

1> the procedure ends.

…

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:

…

4> for any other measurement type:

5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> resume the measurements according to the new stored measurement control information.

3> otherwise:

4> set the variable CONFIGURATION_INCOMPLETE to TRUE.

2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:

3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.

1> if the IE "measurement command" has the value "release":

…

1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;

Reference

3GPP TS 25.331 clause 8.4.1.8.1, 8.4.1.3, 8.4.2.2.

8.4.1.1.3 Test Purpose

1. To confirm that the UE continues to monitor intra-frequency measurement quantity of the cells listed in System Information Block type 11 or 12 messages, after it has entered CELL_DCH state from idle mode. When the intra-frequency measurement reporting criteria specified in System Information Block type 11 or 12 messages have been met, it shall report the measurements using MEASUREMENT REPORT message(s).

2. To confirm that the UE terminates monitoring and reporting activities for the cells listed in "intra-frequency cell info list" IE in System Information Block type 11 or 12 messages, after it has received a MEASUREMENT CONTROL message that specifies the measurement type to be "intra-frequency measurement" with the same measurement identity as in System Information Block Type 11 or 12 messages. To confirm that the UE reconfigures the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

8.4.1.1.4 Method of test

Initial Condition

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

Test Procedure

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

Table 8.4.1.1-1

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

The UE is initially in idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters in the modified System Information Block message are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP", report criteria = "periodic reporting criteria", reporting interval = "64 seconds".
SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service). The UE shall send a MEASUREMENT REPORT message after reaching CELL_DCH state, reporting cell 2's CPICH RSCP value. After 64 seconds has passed since SS receives the first MEASUREMENT REPORT message, the UE shall transmit a second MEASUREMENT REPORT message.

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

SS sends a MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS configures an intra-frequency measurement based on the measurement quantity CPICH RSCP. Parameters used in this

message are: measurement identity = "1", report criteria = "event-trigger", event identity = "1e", reporting threshold = "-70 dBm". SS checks to see that no MEASUREMENT REPORT messages are sent within the next 64 seconds (which is due to periodic reporting). SS reconfigures the downlink transmission power settings according to values in column "T1" in table 8.4.1.1-1. The UE shall transmit a MEASUREMENT REPORT message when it detects that the CPICH RSCP of cell 3 has risen above the threshold value specified in the previous MEASUREMENT CONTROL message.
SS sends then a new MEASUREMENT CONTROL message to add cell 2 to the list of the cells the UE shall measure. Since the RSCP for cell 2 is above the threshold for event 1e to be triggered, a MEASUREMENT REPORT triggered by cell 2 shall be sent by the UE.
SS reconfigures the downlink transmission power settings according to values in column "T2" in table 8.4.1.1-1.
SS sends a new MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS configures an intra-frequency measurement based on the measurement quantity CPICH RSCP. Parameters used in this message are:
measurement identity = "1", report criteria = "event-trigger", event identity = "1a", Reporting range 8db. SS reconfigures the downlink transmission power settings according to values in column "T0" in table 8.4.1.1-1.
The UE shall transmit a MEASUREMENT REPORT message when it detects that the condition for event 1a is fulfilled. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

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

Step	Direction		Message	Comment
	UE	SS		
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 "T0" 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)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present (This IE shall be ignored by the UE for SIB11)
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection	Not Present (The IE shall be absent as this is the serving cell)
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0dB
- Reference time difference to cell	1024
- 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	Not present For neigbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE Mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	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
- Periodical Reporting / Event Trigger Reporting Mode	Periodical reporting
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	64 seconds
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

MEASUREMENT REPORT (Step 6 and 6a)

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

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove all intra-frequency cells
- New intra-frequency cells	2 new intra-frequency cells
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 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
- Intra-frequency cell id	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	Set to same code as used for cell 1
- 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
- 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
- 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	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)

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

MEASUREMENT CONTROL (Step 10a)

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

MEASUREMENT REPORT (Step 10b)

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

MEASUREMENT CONTROL (Step 12)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove all intra-frequency cells
- New intra-frequency cells	2 new intra-frequency cells
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	256 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency cell id	
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not Present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1a
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	15 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	64 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.

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

8.4.1.1A.1 Definition

8.4.1.1A.2 Conformance requirement

The UE shall obey the following rules for different measurement types after transiting from idle mode to CELL_DCH state:

Upon transition from idle mode to CELL_DCH state, the UE shall:
1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> begin measurement reporting.

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 in TS 25.331 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> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:

4> if the measurement is valid in the current RRC state of the UE:

5> begin measurements according to the stored control information for this measurement identity.

2> for 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 "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;

1> if the UE "Additional Measurement List" is present:

2> if the received measurement configuration in this MEASUREMENT CONTROL message, or any measurement identities in the "Additional Measurement List" do not all have the same validity:

3> set the variable CONFIGURATION_INCOMPLETE to TRUE.

1> and the procedure ends.

The purpose of the measurement reporting procedure is to transfer measurement results from the UE to UTRAN.

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 according to the requirements set in [19] or [20] 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. Events and triggering of reports for different measurement types are described in detail in clause 14.

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

1> set the IE "measurement identity" to the measurement identity, which is associated with that measurement in variable MEASUREMENT_IDENTITY;

1> set the IE "measured results" to include measurements according to the IE "reporting quantity" of that measurement stored in variable MEASUREMENT_IDENTITY; and

2> if all the reporting quantities are set to "false":

3> not set the IE "measured results".

1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and

2> if more than one additional measured results are to be included:

3> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.

1> if the MEASUREMENT REPORT message was triggered by an event (i.e. not a periodical report):

2> set the IE "Event results" according to the event that triggered the 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.

Reference TS 25.331, clauses 8.4.1.8.1, 8.4.2, 8.4.1.3

8.4.1.1A.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.

3. To confirm that the UE reconfigures the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.

4. To confirm that the UE sends MEASUREMENT REPORT message if event 1G is configured and intra-frequency measurement indicates change in best cell.

8.4.1.1A.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 8.4.1.1A-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 column marked as "T1" will be applied during the test.

Table 8.4.1.1A-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	
PCCPCH_RSCP	dBm	-69	-69	-74	-64	-79	-74

The UE is initially in idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters in the modified System Information Block message are as follow: measurement type = "intra-frequency measurement", measurement quantity = "PCCPCH RSCP", report criteria = "periodic reporting criteria", reporting interval = "64 seconds".
SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service).

The UE shall send a MEASUREMENT REPORT message after reaching CELL_DCH state, reporting cell 2's PCCPCH RSCP value. After 64 seconds has passed since SS receives the first MEASUREMENT REPORT message, the UE shall transmit a second MEASUREMENT REPORT message.
SS sends a MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS configures an intra-frequency measurement based on the measurement quantity PCCPCH RSCP. Parameters used in this message are: measurement identity = "1", report criteria = "event-trigger", event identity = "1g". All intra-frequency cells are removed. Cell 3 is included as new intra-frequency cell. 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 8.4.2.1-1.
The UE shall transmit a MEASUREMENT REPORT message when it detects that the PCCPCH RSCP of cell 3 is present. SS sends another MEASUREMENT CONTROL message on the downlink DCCH to include cell 2 in the monitored cells. SS configures an intra-frequency measurement based on the measurement quantity PCCPCH RSCP. Parameters used in this message are: measurement identity = "1", report criteria = "event-trigger", event identity = "1g". The UE shall transmit a MEASUREMENT REPORT message when it detects that the PCCPCH RSCP of cell 2 and indicating Cell 3 as a best cell. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

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). Cell 2 is included in CELL_INFO LIST.
2	↔		SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	UE reaches PS-CELL_DCH or CS-CELL_DCH
3	↔		SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	UE reaches PS-DCCH_DCH or CS-DCCH_DCH
4	↔		SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	UE reaches PS-DCCH+DTCH_DCH or CS-DCCH+DTCH_DCH
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
7	→		MEASUREMENT REPORT	SS shall receive consecutive MEASUREMENT REPORT messages at 64 seconds interval.
8	←		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.
9				SS waits for 64 seconds and verifies that no further MEASUREMENT REPORT messages are detected on the uplink DCCH.
10				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.1A-1.
11	→		MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 3 containing report the measured PCCPCH RSCP value of cell 3.
12	←		MEASUREMENT CONTROL	A MEASUREMENT CONTROL is sent to the UE to modify the list of the cells the UE shall monitor.

Step	Direction		Message	Comment
	UE	SS		
13	→		MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 2, containing report the measured PCCPCH RSCP value of cell 2. The UE shall report event 1G for change to best cell, cell2.
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:

System Information Block type 11 (Step 1)

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	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present (This IE shall be ignored by the UE for SIB11)
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection	Not Present (The IE shall be absent as this is the serving cell)
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0dB
- Reference time difference to cell	1024
- Read SFN Indicator	TRUE
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present For neigbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE Mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- PCCPCH 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
- CHOICE mode	TDD
- PCCPCH 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
- Periodical Reporting / Event Trigger Reporting Mode	Periodical reporting
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity

- Reporting interval	64 seconds
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

MEASUREMENT REPORT (Step 6 and 7)

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 CCPCH Info	Check to see if it's the same for cell 2
- PCCPCH RSCP	"Checked to see if set to within an acceptable range"
- Pathloss	Check to see if this IE is present
Measured Results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove all intra-frequency cells
- New intra-frequency cells	2 new intra-frequency cells
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 3
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same code as for cell 1
- Cell for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE Mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- PCCPCH 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
- PCCPCH 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	1g
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1 dB
- 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

MEASUREMENT REPORT (Step 11)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	(for cell 1)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 1
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 3)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CCPCH Info	Check to see if it's the same for cell 3
- PCCPCH 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 "1g"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "TDD"
- Cell parameters Id	Check to see if it's the same for cell 3

MEASUREMENT CONTROL (Step 12)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	1 new intra-frequency cells
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 2
- 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 13)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	(for cell 1)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	Check to see if it's the same for cell 1
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 2)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CCPCH Info	Check to see if it's the same for cell 2
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 3)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CCPCH Info	Check to see if it's the same for cell 3
- PCCPCH 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 "1g"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "TDD"
- Primary CCPCH Info	Check to see if it's the same code for cell 2

8.4.1.1A.5 Test Requirement

After step 5 the UE shall start to transmit 2 MEASUREMENT REPORT messages at 64 seconds interval. The measurement quantity "PCCPCH RSCP" of cell 2 shall be reported in these messages.
After step 8 the UE shall not transmit any MEASUREMENT REPORT messages within 64 seconds after SS has transmitted the MEASUREMENT CONTROL message in step 8.
After step 10 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, to report the PCCPCH RSCP value for cell 3. This MEASUREMENT REPORT message shall also contain IE "Event results", indicating the triggering of event '1g' by cell 3. It shall also contain the measured PCCPCH RSCP value and cell synchronisation information for cell 3, and the measured PCCPCH RSCP values for cell 1.
After step 12 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, to report the PCCPCH RSCP value for cell 2. This MEASUREMENT REPORT message shall also contain IE "Event results", indicating the triggering of event '1g' by cell 2.

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

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

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

1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11).

Upon reception of a MEASUREMENT CONTROL message 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-frequency measurement":

3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or

3> if the IE "Inter-frequency cell info list" for that measurement identity is empty; or

3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:

4> if the measurement is valid in the current RRC state of the UE:

5> begin measurements according to the stored control information for this measurement identity.

If the IE "Reporting Cell Status" is not received for inter-frequency measurement, the UE shall:

1> exclude the IE "Cell Measured Results" for any cell in MEASUREMENT REPORT.

Reference

3GPP TS 25.331 clauses 8.4.1.3, 8.4.1.8.2 and 8.6.7.9

8.4.1.2.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 messages, after it enters CELL_DCH state from idle mode.

2. To confirm that the UE starts to perform inter-frequency measurement and related reporting activities, when it receives a MEASUREMENT CONTROL message with the "DPCH compress mode status info" IE indicating that a stored compressed mode pattern sequence be simultaneously activated.

3. To confirm that the UE excludes the IE "cell measured results" for any cells in the MEASUREMENT REPORT messages, after it receives a MEASUREMENT CONTROL message with "Reporting cell status" IE omitted.

Note that this test case is only applicable in case the UE requires compressed mode to perform inter-frequency measurements.

8.4.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 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).

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.2-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.4.1.2-1

Parameter	Unit	Cell 1	Cell 4
UTRA RF Channel Number		Ch. 1	Ch. 2
CPICH Ec	dBm/ 3.84 MHz	-60	-75

The UE is initially in idle mode and has selected cell 1 for camping.
SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). The RRC CONNECTION SETUP message used in procedure P3 or P5 should contain IE "DPCH compressed mode info", activating the transmission pattern gap sequence with TGPSI=1 only if UE requires compressed mode. 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 not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for cells listed in the IE "inter-frequency cell info list" in System Information Block Type 11.
If UE requires compressed mode, SS sends PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH, specifying that compressed mode sequence pattern with TGPSI=1 be deactivated. The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH if UE configures according to the PHYSICAL CHANNEL RECONFIGURATION message.
SS sends MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS requests UE to perform inter-frequency measurement with periodic reporting of CPICH RSCP values for cell 4. If UE requires compressed mode, IE "DPCH compressed status info" IE to activate the transmission gap pattern sequence with TGPSI = 1 is included in this message.
The UE shall start inter-frequency measurement and reporting for cell 4's CPICH RSCP values. It shall report this measurement result by transmitting MEASUREMENT REPORT messages on uplink DCCH periodically at 16 seconds interval.
SS sends MEASUREMENT CONTROL message on the downlink DCCH omitting the IE "Reporting cell status". The UE shall send MEASUREMENT REPORT messages on the uplink DCCH, with the IE "Cell measured results" excluded in these messages. 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 idle mode and camped onto cell 1.System Information Block Type 11 to be transmitted is 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.	SS prompts the operator to make an outgoing call.
3	↔		SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5			Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received. If compresed mode is not required (refer ICS/IXIT), then goto step 9.
7	←		PHYSICAL CHANNEL RECONFIGURATION	Existing compressed mode sequence pattern is de-activated in this message.

8	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
9	←	MEASUREMENT CONTROL	SS requests UE to start inter-frequency measurement for cell 4, and performing periodic reporting for cell 4's CPICH RSCP. See specific message content below.
10	→	MEASUREMENT REPORT	UE shall report cell 4's CPICH RSCP reading periodically.
11	←	MEASUREMENT CONTROL	SS changes the reporting criteria of cell 4 to 'event 2c'. "Reporting cell status" IE in this message is omitted.
12	→	MEASUREMENT REPORT	SS monitors the uplink DCCH to make sure that only 1 such message is received almost immediately after step 11. This message shall not contain IE "Inter-frequency cell measured results"
13	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

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

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
-Use of HCS	Not used
-Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	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 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	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	Not present For neigbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
-Cells for measurement	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

RRC CONNECTION SETUP (Step 2)

If UE do not require compressed mode, use the message found in TS 34.108 clause 9.
If UE requires compressed mode, use the message found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Initialise
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- DPC mode	Single TPC
- CHOICE Mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Refer to the parameter set in TS 34.108
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending the on UE capability
- Downlink compressed mode method	SF/2 (or Not present depending on the UE capability)
- Uplink compressed mode method	SF/2 or Not present depending on the UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0
Downlink information for each radio link list	
- Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Reference to 34.108
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH can be used
- DPCH frame offset	Set to value: Default DPCH Offset value mod 38400
- Secondary CPICH info	Not Present
- DL Channelisation code	
- Secondary scrambling code	1
- Spreading factor	Reference to 34.108
- Code number	0
- Scrambling code change	No code change
- TPC combination index	0
- SSDT Cell identity	Not present
- Closed loop timing adjustment mode	Not present
SCCPCH information for FACH	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type in Annex A titled "Non speech in CS" or "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL 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
- Number of bits for Pilot bits (SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	
- Transmission gap pattern sequence	
- TGPSI	1
- TPGS status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0
Downlink information per radio link list	Not Present

MEASUREMENT CONTROL (Step 9)

If UE requires compressed mode,

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical reporting
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	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 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	Set to same code as used for cell 4
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cell 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
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	
TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

If UE do not require compressed mode,

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
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	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 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	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	4
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cell 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
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured results	Check to see if it is absent
Event Results	Check to see if it is absent

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Set up
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 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	Set to same code as used for cell 4
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not Present
- Measurement validity	Not present
- Inter-frequency set update	
-UE Autonomous update mode	On with no reporting
-Non autonomous update mode	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	0.5 dB
- Time to trigger	0 milliseconds
- Reporting cell status	Not Present
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non used frequency	0
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12)

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 absent
- Inter-frequency cell measurement results	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured Results	Check to see if it is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Inter-frequency event identity	Check to see if this IE is set to "2c"
- Inter-frequency cells	
- 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
- Non frequency related 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 as cell 4

8.4.1.2.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH RSCP of cell 4.
If UE requires compressed mode, after step 7, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.
After step 9 the UE shall transmit MEASUREMENT REPORT messages on uplink DCCH, reporting cell 4's CPICH RSCP value at periodic time interval of 16 seconds in "inter-frequency cell measurement results" IE.
After step 11 the UE shall transmit only 1 MEASUREMENT REPORT message on the uplink DCCH. In this message, IE "inter-frequency cell measured results" shall be absent.

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

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

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

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

In CELL_FACH state, the UE shall:

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

1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

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

1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH:

2> resume the measurement reporting.

1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):

3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

Reference

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

8.4.1.3.3 Test Purpose

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

8.4.1.3.4 Method of test

Initial Condition

System Simulator: 2 cells. Cell 1 and cell 2 are active.
UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

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

Table 8.4.1.3-1

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

The UE is initially in idle mode and camps on cell 1. The System Information Block type 11 are modified compared to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the IE "intra-frequency cell info list". The key measurement parameters are as follow: measurement type = "intra-frequency measurement", measurement quantity = "CPICH RSCP", reporting mode = "event reporting". In the System Information Block type 11 messages, reporting of CPICH RSCP is also required for intra-frequency reporting when transmitting RACH messages on cell 1.
SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. SS starts timer T305 and waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measured value of cell 1's CPICH RSCP in IE "Measured results on

RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH, without changing the physical channel resources.
SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates dedicated physical channels to the UE. The UE shall transit to CELL_DCH state and then send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcast on System Information Block type 11 messages when the UE was still in idle mode. The IE "Measured results" in the MEASUREMENT REPORT messages shall contain measured values of cell 2's CPICH RSCP.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 1, System Information Block type 11	The UE is in idle mode and camps onto cell 1. System Information Block type 1 and 11 to be transmitted are different from the default settings (see specific message contents)
2	↔		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5			Void	
6				SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are detected. SS waits for 5 minutes (for the expiry of T305 timer).
7	→		CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the measured CPICH RSCP for cell 1.
8	←		CELL UPDATE CONFIRM	SS does not change the physical channel configurations.
9	←		PHYSICAL CHANNEL RECONFIGURATION	SS assigns dedicated physical resources.
10	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
11	→		MEASUREMENT REPORT	UE shall begin to report cell 2's CPICH RSCP value periodically at 16 seconds interval. The measurement identity shall match the one that is broadcast for use in CELL_DCH in SIB11 in step 1.

Specific Message Content

System Information Block type 1 (Step 1)

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

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset1_{s,n}$	Not Present (Default is 0 dB)
- $Qoffset2_{s,n}$	Not Present
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE Mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	FDD
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	

- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	15 dB
- Cells forbidden to affect reporting range	Not Present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present

CELL UPDATE (Step 7)

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

PHYSICAL CHANNEL RECONFIGURATION (Step 9)

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

MEASUREMENT REPORT (Step 11)

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

8.4.1.3.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.
After step 6 the UE shall initiate cell update procedure by transmitting CELL UPDATE message on CCCH. In this message, IE "cell update cause" shall be set to "periodic cell update". It shall include IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.
After step 10 the UE shall transmit MEASUREMENT REPORT messages at 16 seconds interval. In these messages, cell 2's CPICH RSCP value shall be reported in IE "Measured results". The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in System Information Block type 11 messages transmitted in step 1. The MEASUREMENT REPORT messsages shall also contain IE "Event results", indicating that intra-frequency event "1a" has triggered in the UE.

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

8.4.1.3A.1 Definition

8.4.1.3A.2 Conformance requirement

The UE shall obey the follow rules for different measurement types after transiting from idle mode to CELL_FACH state:

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

1> begin or continue monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11, TS 25.331).

The purpose of the measurement reporting procedure is to transfer measurement results from the UE to UTRAN.

In CELL_FACH 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 traffic volume measurement or UE positioning measurement that is being performed in the UE;

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

1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

In TDD, if the Radio Bearer associated with the MEASUREMENT_IDENTITY fulfilling the reporting criteria for an ongoing traffic volume measurement is mapped on transport channel of type USCH, the UE shall:

1> initiate the "PUSCH CAPACITY REQUEST" procedure instead of transmitting a MEASUREMENT REPORT (TDD Only).

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

1> set the IE "measurement identity" to the measurement identity, which is associated with that measurement in variable MEASUREMENT_IDENTITY;

1> set the IE "measured results" to include measurements according to the IE "reporting quantity" of that measurement stored in variable MEASUREMENT_IDENTITY; and

2> if all the reporting quantities are set to "false":

3> not set the IE "measured results".

1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and

2> if more than one additional measured results are to be included:

3> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.

1> if the MEASUREMENT REPORT message was triggered by an event (i.e. not a periodical report):

2> set the IE "Event results" according to the event that triggered the 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 subclause 8.6 in TS 25.331 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> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:

4> if the measurement is valid in the current RRC state of the UE:

5> begin measurements according to the stored control information for this measurement identity.

2> for 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 "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;

1> if the UE "Additional Measurement List" is present:

2> if the received measurement configuration in this MEASUREMENT CONTROL message, or any measurement identities in the "Additional Measurement List" do not all have the same validity:

3> set the variable CONFIGURATION_INCOMPLETE to TRUE.

1> and the procedure ends.

Reference TS 25.331, clauses 8.4.1.9.1, 8.4.2, 8.4.1.3

8.4.1.3A.3 Test Purpose

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

8.4.1.3A.4 Method of test

Initial Condition

System Simulator: 2 cells. Cell 1 and cell 2 are active.
UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

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

Table 8.4.1.3A-1

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel Number		Ch. 1	Ch. 1
PCCPCH RSCP	dBm	-64	-74

The UE is initially in idle mode and camps on cell 1. The System Information Block type 11 are modified compared to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the IE "intra-frequency cell info list".
SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. SS starts timer T305 and waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measured value of cell 1's PCCPCH RSCP in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH, without changing the physical channel resources.
SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates dedicated physical channels to the UE. The UE shall transit to CELL_DCH state and then send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcast on System Information Block type 11 messages when the UE was still in idle mode. The IE "Measured results" in the MEASUREMENT REPORT messages shall contain measured values of cell 2's PCCPCH RSCP. Also MEASUREMENT REPORT message indicates that cell 2 has not fullfiled the condition for changing to a best cell.

NOTE: The Radio Bearer associated with the MEASUREMENT_IDENTITY fulfilling the reporting criteria for an ongoing traffic volume measurement must not be mapped on transport channel of type USCH

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 1, System Information Block type 11	The UE is in idle mode and camps onto cell 1. System Information Block type 1 and 11 to be transmitted are different from the default settings (see specific message contents)
2	↔		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	UE reaches PS-DCCH FACH
4	↔		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	UE reaches PS-DCCH+DTCH FACH
5				SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are detected. SS waits for 5 minutes (for the expiry of T305 timer).

6	→	CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the measured PCCPCH RSCP for cell 1.
7	←	CELL UPDATE CONFIRM	SS does not change the physical channel configurations.
8	←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns dedicated physical resources.
9	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
10	→	MEASUREMENT REPORT	UE shall begin to report cell 2's PCCPCH RSCP value periodically at 16 seconds interval. The measurement identity shall match the one that is broadcast for use in CELL_DCH in SIB11 in step 1.

Specific Message Content

System Information Block type 1 (Step 1)

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

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- 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	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- $Qoffset1_{s,n}$	Not Present (Default is 0 dB)
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103dBm
- Cells for measurement	Not Present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE Mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	TDD
- Reporting quantity	PCCPCH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC

- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Cells forbidden to affect reporting range	Not Present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present

CELL UPDATE (Step 6)

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

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

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

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and if the reported cell synchronisation information is correct
- Cell parameters Id	Check to see if it's the same as for cell 2
- Primary CCPCH RSCP	Check to see if it's the same as for cell 2
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell parameters Id	Check to see if it's the same as for cell 1
- Primary CCPCH RSCP	Check to see if it's the same as for cell 1
- Cell synchronisation information	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if set to "1g"

8.4.1.3A.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.
After step 6 the UE shall initiate cell update procedure by transmitting CELL UPDATE message on CCCH. In this message, IE "cell update cause" shall be set to "periodic cell update". It shall include IE "measured results on RACH", containing the measurement value for cell 1's PCCPCH RSCP.
After step 10 the UE shall transmit MEASUREMENT REPORT messages at 16 seconds interval. In these messages, cell 2's PCCPCH RSCP value shall be reported in IE "Measured results". The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in System Information Block type 11 messages transmitted in step 1. The MEASUREMENT REPORT messsages shall also contain IE "Event results", indicating that intra-frequency event "1g" has triggered in the UE.

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

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

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

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

Reference

3GPP TS 25.331, clause 8.4.1.9.2

8.4.1.4.3 Test Purpose

1. To confirm that the UE begins to monitor the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 11 or 12 messages, after it enters CELL_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

8.4.1.4.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.
UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.4-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.4-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially at idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 4 into the "inter-frequency cell list" IE.
SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for inter-frequency cells belonging to the monitored set. SS re-adjusts its downlink power settings according to columns marked "T1" in table 8.4.1.4-1. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to cell 4 in order to report this event. Upon receiving this message, SS replies with the CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH. UE shall then reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11	The UE is in idle mode in cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2	↔		SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
5	→		Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4-1.

Step	Direction		Message	Comment
	UE	SS		
8	→		CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9	←		CELL UPDATE CONFIRM	Use message content.
10	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

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

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 Indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI assigned during the execution of procedure P6.
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 9)

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

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.
After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.
After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (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 MASTER IFORMATION BLOCK and system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

MASTER INFORMATION BLOCK

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

Information Element	Value/Remarks
MIB Value Tag	1

System Information Block type 11

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

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.5-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.5-1

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm/ 3.84 MHz	-60	-60	-75	-85	-122	-70

The UE is initially in CELL_DCH state. The System Information Block type 11 message is modified compared to the default message contents, in order to prevent the reporting of "Cell synchronisation information". No measurement to be applied by the UE in CELL_DCH state is specified in any of the System Information Block type 11 or 12 messages.
SS sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement for the measurement of cell 2's CPICH RSCP. At the same time, reporting of CPICH RSCP values of active set cells and monitored set cells are requested with the reporting criteria set to "periodic reporting" and "reporting interval" set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.
SS transmits PHYSICAL CHANNEL RECONFIGURATION message to move the UE to CELL_FACH. After receiving this message, the UE shall reconfigure itself and reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS monitors the uplink channels to verify that no MEASUREMENT REPORT messages are received.

SS reconfigures itself according to the settings in columns marked "T1" in table 8.4.1.5-1. SS transmits System Information Block type 12 messages in cell 1, which include cell 3 into the IE "intra-frequency cell info list" and modifies SIB11 to indicate that SIB12 is now being broadcast. IEs "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in the System Information Type 12 messages. Event type 1a reporting criterion is specified for intra-frequency measurements. SS 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, 2 and 3 in IE "Cell measured results" and the triggering of event '1a' on cell 3 in IE "Event results".

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.

Step	Direction		Message	Comment
	UE	SS		
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	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

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

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

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

MASTER INFORMATION BLOCK (Step 9)

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

Information Element	Value/Remarks
MIB Value Tag	2

System Information Block type 11 (Step 9)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH 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	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	FDD
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting range constant	20.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present

- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting Interval	500 milliseconds
- Reporting cell status	
- 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
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not present

SYSTEM INFORMATION CHANGE INDICATION (Step 10)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	2

CELL UPDATE (Step 11)

Information Element	Value/remark
U-RNTI	Check to see if set to the same value assigned during the execution of procedure P3 or P5.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if it is set to "Periodical cell update"
Failure case	Check to see if it is absent
Measured results on RACH	
- Measurement result for current cell	
- CHOICE measurement quantity	Check to see if set to "CPICH RSCP"
- CPICH RSCP	Check to see if it is present
- Measurement results for monitored cells	
- SFN-SFN observed time difference	Not Checked
- Primary CPICH info	
- Primary scrambling code	Check to see if the same as cell 3's code.
- CHOICE measurement quantity	Check to see if set to "CPICH RSCP"
- CPICH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

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

MEASUREMENT REPORT (Step 15)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's CPICH RSCP value.
After step 8, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 5.
After step 10, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values CPICH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".
After step 15, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 9. It shall send MEASUREMENT REPORT messages at 500 milliseconds interval. In these messages, triggering of event '1a' shall be reported in IE "Event results" with IE "Primary CPICH info" containing the primary scrambling code for cell 3.
The message shall contain IE "measured result" to report CPICH RSCP values of cell 1, 2 and 3.

8.4.1.5A Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)

8.4.1.5A.1 Definition

8.4.1.5A.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).

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5A.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.

8.4.1.5A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, while cell 3 is switched off..
UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For MASTER IFORMATION BLOCK and system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

MASTER INFORMATION BLOCK

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

Information Element	Value/Remarks
MIB Value Tag	1

System Information Block type 11

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

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH 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	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- 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 8.4.1.5A-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 column marked as "T1" will be applied during the test.

Table 8.4.1.5A-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	
PCCPCH RSCP	dBm	-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 PCCPCH RSCP. At the same time, reporting of PCCPCH 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 8.4.2.3-1. 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 PCCPCH 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 PCCPCH RSCP values of the cells 1, 2 and 3 in IE "Cell measured results" and the triggering of event '1g' on cell 3 in IE "Event results".

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in PS-DCCH+DTCH_DCH (state 6-10) in cell 1.
2	←		MEASUREMENT CONTROL	SS requests for measurement of cell 2´s PCCPCH RSCP value and reporting of PCCPCH RSCP values of active cell and monitored set cell.
3	→		MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval.
4	←		PHYSICAL CHANNEL RECONFIGURATION	SS moves the UE to CELL_FACH state.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE reaches CELL_FACH state.
6	←		Master Information Block System Information Block type 11, 12	SS reconfigures itself according to the settings stated in column "T1" of table 8.4.1.5A-1. SIB 11 is modified to indicate that SIB12 is now broadcast and includes cell 2 as a neighbour cell. SIB 12 indicates that cell 3 is included in the IE "intra-frequency cell info list". Event 1g is also configured for cell3. SS waits for 1 minute and verifies that no MEASUREMENT REPORT messages are detected on the uplink.
7	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits until T305 has expired.
8	→		CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and cell 3 present in this message.
9	←		CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
12	→		MEASUREMENT REPORT	The UE shall report event 1G for change to best cell, cell3. Repeated at 500 milliseconds interval

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 2
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH 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
CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 3)

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 CCPCH Info	Check to see if it's the same for cell 1
- 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 CCPCH Info	Check to see if it's the same for cell 2
- 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 4)

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 6)

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 6)

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 PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- 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
- Qrxlevmin	-103 dBm
- 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 6)

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	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	6
- Intra-frequency cell cells	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.3 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	TDD
- Reporting quantity	PCCPCH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting range constant	20.0 dB
- Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Time to trigger	60 ms

- Amount of reporting	Infinity
- Reporting Interval	500 milliseconds
- Reporting cell status	
- 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
- 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 7)

Information Element	**Value/Remarks**
BCCH modification info	
- MIB Value tag	2

CELL UPDATE (Step 8)

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 "PCCPCH RSCP"
- PCCPCH RSCP	Check to see if it is present
- Measurement results for monitored cells	
- SFN-SFN observed time difference	Not Checked
- Cell parameters Id	Check to see if the same as cell 3.
- CHOICE measurement quantity	Check to see if set to "PCCPCH RSCP"
- PCCPCH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

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 12)

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
- Cell parameters Id	Check to see if it's the same for cell 1
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	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
- Cell parameters Id	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	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
- Cell parameters Id	Check to see if it's the same for cell 3
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	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 '1g'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'TDD'
- Cell parameters id	Check to see if it's the same for cell 3

8.4.1.5A.5 Test Requirement

After step 2, 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 PCCPCH RSCP value.
After step 5, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 2.
After step 7, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values PCCPCH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".
After step 12, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 6. It shall send MEASUREMENT REPORT messages at 500 milliseconds interval. In these messages, triggering of event '1g' shall be reported in IE "Event results" with IE " Cell parameters Id " containing the same for cell 3.
The message shall contain IE "measured result" to report PCCPCH RSCP values of cell 1, 2 and 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

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

1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;

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

1> in CELL_FACH state:

2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

Reference

3GPP TS 25.331, clause 8.4.1.6.2

8.4.1.6.3 Test Purpose

1. To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL_DCH state to CELL_FACH.

2. To confirm that the UE begins to monitor the cells listed in "inter-frequency cell info" received in System Information Block type 11 or 12 messages, following a state transition from CELL_DCH state to CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 2 are active.
UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.
SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATIONmessage to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 12	PS-DCCH+DTCH_DCH (state 6-10) in cell 1. System Information Block type 12 is modified with respect to the default settings. All measurement and reporting activities are disabled in this message.
2			Void	If compresed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8	←		MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9	→		MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12	←		Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15	→		CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16	←		CELL UPDATE CONFIRM	See message content.
17	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL_DCH"

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
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	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 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	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	4
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".
If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_-quality_measure	CPICH_Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to TS 25.101
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH Tx power	Not Present
- TX diversity indicator	FALSE
- Cell selection and re-selection info	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	2

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI	Check to see if same to value assigned in P3 or P5
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".
After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.
After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".
After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

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

1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH:

2> resume the measurement reporting.

1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):

3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

…

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;

1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

…

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

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:

…

4> for any other measurement type:

5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> resume the measurements according to the new stored measurement control information.

3> otherwise:

…

2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:

3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.

1> if the IE "measurement command" has the value "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a and 8.4.1.7.1

8.4.1.7.3 Test Purpose

- To confirm that UE retrieves stored measurement control information for intra-frequency measurement measurement type with "measurement validity" assigned to "CELL_DCH", after it enters CELL_DCH state from CELL_FACH state.

- To confirm that the UE continues to monitor the neighbouring cells listed "intra-frequency cell info" IE in the System Information Block type 11 or 12 messages, if no intra-frequency measurements applicable to CELL_DCH are stored.

- To confirm that the UE transmits MEASUREMENT REPORT messages if reporting criteria stated in IE "intra-frequency measurement reporting criteria" in System Information Block type 11 or 12 messages are fulfilled.

- To confirm that a MEASUREMENT CONTROL message received in CELL_DCH state overrides the measurement and associated reporting contexts maintained in the UE by virtue of System Information Block type 11 or 12 messages.

8.4.1.7.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.
UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.7-1

Para-meter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm /3.84 MHz	-60	-122	-70	-60	-75	-75

The UE is brought to CELL_FACH state in cell 1. (step 1) SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
SS send a RADIO BEARER RECONFIGURATION message to UE (step2), and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message (step3). The UE shall send a MEASUREMENT REPORT message containing IE "Measured results" to report cell 2's CPICH RSCP value and IE "event results" to report triggering of event type "1e" (step 4). After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info" (step 5). After receiving such a message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement 11. SS verifies that only measurement readings for cell 3 's CPICH RSCP are report in IE "cell measured results" in these message (step 6). Cell 3 shall also trigger event 1e for the measurement that the UE had stored from system information, so a MEASUREMENT REPORT message shall be received for measurement 10 too (step 6a). The order of steps 6 and 6a is not important and could be reversed.
Next, SS sends PHYSICAL CHANNEL RECONFIGURATION message (step 7). SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE (step 8). SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received (step 9).
SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH (step 9a). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 9b). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e. the UE shall have deleted the measurement measurement configured through the MEASUREMENT CONTROL message of step 5, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE (step 9c).
SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH once again (step 9d). The UE shalll move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 9e). SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure intra-frequency measurements with validity CELL_DCH (step 10). SS waits, and verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 11).
SS sends RADIO BEARER RECONFIGURATION message and configures dedicated physical channels (step12). The UE shall return to CELL_DCH state, transmit a RADIO BEARER RECONFIGURATION COMPLETE message (step 13). The UE shall also send a MEASUREMENT REPORT message to the SS triggered by cell 2 (step 14).
SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH (step 14a). The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 14b). SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 14c).

SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH (step 14d). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 14e). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of step 10, instead of the ones that are broadcast in SIB12 (step 14f).
Following the reception of the MEASUREMENT REPORT message, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in "measurement identity" = 12 (step 15). Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 16). After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more (step 17). This message is identical to the one sent in step 10 (see specific message content). A MEASUREMENT REPORT message shall be received from the UE triggered by cell 2 (step 17a). SS transmits a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures common physical channel (step 18). The UE shall transit to CELL_FACH state and then respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 19). SS monitors the uplink DCCH once more to verify that no MEASUREMENT REPORT messages are detected (step 20). SS modifies the downlink transmission power of the respect cells according to the settings in columns "T1" in table 8.4.1.7-1. System information block type 11 and System Information Block 12 for cell 2 shall be different from the default setting according to what is defined in the specific message content part of this section (step 21). The UE shall initiate a cell re-selection procedure. This is verified in the SS when a CELL UPDATE message is received on the uplink CCCH with the "cell update cause" IE set to "cell reselection" (step 22). SS transmits a CELL UPDATE CONFIRM message, which includes "New C-RNTI", on the DCCH (step 23). Then the UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message (step 23a). Next, SS sends a RADIO BEARER RECONFIGURATION message on the downlink DCCH, assigning dedicated physical channels in both uplink and downlink directions (step 24). The UE shall respond with a RADIO BEARER RECONFIGURATION COMPLETE message and then return to CELL_DCH state (step 25). UE shall then send MEASUREMENT REPORT messages reporting cell 1 and 3’s CPICH RSCP according ot the content in System Information Block type 12 messages broadcasted in cell 2 (step 26).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents" clause.
1a	←		SYSTEM INFORMATION CHANGE INDICATION	
2	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4	→		MEASUREMENT REPORT	Reports cell 2's CPICH RSCP measurement value.
5	←		MEASUREMENT CONTROL	Cell 3 is i added to the list of monitored set of the UE.
6	→		MEASUREMENT REPORT	Cell 3 shall trigger the event 1e configured in the measurement identity 11.
6a	→		MEASUREMENT REPORT	Cell 3 shall also trigger the event 1e configured in the measurement identity 10. The order of steps 6 and 6a could be reversed.
7	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
9a	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
9b	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
9c	→		MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value
9d	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
9e	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state
10	←		MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement and reporting for cell 2. Measurement validity" IE is set to CELL_DCH state.
11				SS waits and verifies that no MEASUREMENT REPORT messages are sent by UE.
12	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
13	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
14	→		MEASUREMENT REPORT	UE reports cell 2's measured results for CPICH RSCP.
14a	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
14b	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state

Step	Direction		Message	Comment
	UE	SS		
14c				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
14d	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels
14e	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
14f	→		MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 10.
15	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activitiest related to "measurement identity" = 12.
16				SS waits and verifies that UE stop transmitting MEASUREMENT REPORT messages.
17	←		MEASUREMENT CONTROL	This message is the same as in step 10
17a	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 2.
18	←		PHYSICAL CHANNEL RECONFIGURATION	Allocates common physical channels.
19	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
20				SS checks that no MEASUREMENT REPORT messages are received.
21	←		System Information Block type 11 System Information Block type 12	SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T1" in table 8.4.1.7. SS sends SIB11 and SIB12 with specific values to Cell2.
22	→		CELL UPDATE	UE shall re-selects to cell 2 and then perform a cell update procedure.
23	←		CELL UPDATE CONFIRM	UE shall stay in CELL_FACH state.
23a	→		UTRAN MOBILITY INFORMATION CONFIRM	
24	←		RADIO BEARER RECONFIGURATION	Dedicated physical channels are assigned to the UE in this message.
25	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
26	→		MEASUREMENT REPORT	UE begins to report cell 1 and 3's measured results for CPICH RSCP.

Specific Message Content

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	3

System Information Block type 11 for cell 1 (Step 1)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	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 of TS34.108
- 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

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantityfor RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- W	Not present
- Hysteresis	0 dB
- Threshold used frequency	-80 dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- Time to trigger	0

- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 1a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	3
- BCCH modification time	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 21a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	2
- BCCH modification time	Not Present

RADIO BEARER RECONFIGURATION (Step 2, Step 9a, Step 12, Step 14d and Step 24)

Use the same message type found in Annex A, with condition set to A4.

MEASUREMENT REPORT (Steps 4 and 9c)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold used frequency	-90 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	

- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	
- Primary CPICH Info	Check to see if it's the same code for cell 3
- Primary Scrambling Code	Check to see if this IE is absent
- CPICH Ec/No	Check to see if this IE is present
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1e'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same code for cell 3
- Primary CPICH info	
- Primary scrambling code	

MEASUREMENT REPORT (Step 6a)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	Check to see if it's set to 'Intra-frequency measurement event results'
- CHOICE event result	Check to see if this IE is set to '1e'
- Intra-frequency event identity	
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Steps 7, 9d, 14a and 18)

Use the same message sub-type found in Annex A, which is entitled "Packet to CELL_FACH from CELL_DCH in PS".

MEASUREMENT CONTROL (Steps 10 and 17)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra- frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold Used Frequency	-80 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency

- Maximum number of reported cells	1
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Steps 14, 14f and 17a)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	Check to see if this IE is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if it's the same code for cell 2
- Primary CPICH Info	Check to see if this IE is absent
- Primary Scrambling Code	Check to see if this IE is present
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1e'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same code for cell 2
- Primary CPICH info	
- Primary scrambling code	

MEASUREMENT CONTROL (Step 15)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

System Information Block type 11 for cell 2 (Step 21)

Information Element	Value/Remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 2 (Step 21)

Information Element	Value/Remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cell
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of cell 2
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

CELL UPDATE (Step 22)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Cell Re-selection'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 23)

Use the default message content of the same message type in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 23a)

Only the message type is checked.

MEASUREMENT REPORT (Step 26)

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

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.
After step 5 the UE shall transmit two MEASUREMENT REPORT messages which contain measured results of cell 3's CPICH RSCP value only, one for measurement identity 10 and one for measurement identity 11.
After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.
After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.
After steps 13 and 14e, the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT messages, containing measured results of cell 2's CPICH RSCP value.
After step 15 the UE shall stop measurement activities pertaining to periodic reporting of cell 2's CPICH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH.
After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.
After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".
After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.
After step 25 the UE shall report cell 1 and 3's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

8.4.1.7A Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (TDD)

8.4.1.7A.1 Definition

8.4.1.7A.2 Conformance requirement

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

1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH:

2> resume the measurement reporting.

1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):

3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

…

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;

1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

…

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:

…

4> for any other measurement type:

5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> resume the measurements according to the new stored measurement control information.

3> otherwise:

…

2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:

3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.

1> if the IE "measurement command" has the value "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a and 8.4.1.7.1

8.4.1.7A.3 Test Purpose

1. To confirm that UE retrieves each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;
2. To confirm that UE resumes the measurement reporting if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH .
3. To test that UE continues 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) if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY
4. To confirm that UE sends the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" is fulfilled if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11).

8.4.1.7A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.
UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7A-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 column marked as "T1" will be applied during the test.

Table 8.4.1.7A-1

Para-meter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
PCCPCH RSCP	dBm	-74	-74	-64	-69	-69	-122

The UE is initially in CELL_FACH state in cell 1. SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
SS send a RADIO BEARER RECONFIGURATION message to UE, and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message. The UE shall send a MEASUREMENT REPORT message containing IE "Measured results" to report cell 2's PCCPCH RSCP value and IE "event results" to report triggering of event type "1g".
After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info". After receiving this message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement 11. SS verifies that only measurement readings for cell 3 's PCCPCH RSCP are report in IE "cell measured results" in these message. Cell 3 shall also trigger event 1g for the measurement that the UE had stored from system information.
SS reconfigures the downlink according to values “T1” and sends new System Information Blocks 11 and 12.
SS sends PHYSICAL CHANNEL RECONFIGURATION message. SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE. SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received.
SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH. The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS. Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e. the UE shall have deleted the measurement measurement configured through the MEASUREMENT CONTROL message, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE.
SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH once again. The UE shalll move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS. SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure intra-frequency measurements with validity CELL_DCH. SS waits, and verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
SS sends RADIO BEARER RECONFIGURATION message and configures dedicated physical channels. The UE shall return to CELL_DCH state, transmit a RADIO BEARER RECONFIGURATION COMPLETE message. The UE shall also send a MEASUREMENT REPORT message to the SS triggered by cell 2.
SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH. The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS. SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH. The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS. Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of a step before, instead of the ones that are broadcast in SIB12.
Following the reception of the MEASUREMENT REPORT message, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in "measurement identity" = 12. Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH. After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more. This message is identical to the one sent in a step before. A MEASUREMENT REPORT message shall be received from the UE triggered by cell 2.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents". Measurement identity 10 is included for event 1g and cell2.
2	←		SYSTEM INFORMATION CHANGE INDICATION	
3	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
5	→		MEASUREMENT REPORT	Reports cell 2's PCCPCH RSCP measurement value. Event 1g for cell 2 is triggered.
6	←		MEASUREMENT CONTROL	Cell 3 is added to the list of monitored set of the UE. Measurement identity 11 is included for event 1g and cell3.
7	→		MEASUREMENT REPORT	Cell 3 shall trigger the event 1g configured in the measurement identity 11.
8	→		MEASUREMENT REPORT	Cell 2 shall also trigger the event 1g configured in the measurement identity 10.
9	←		System Information Block type 11 and 12	System Simulator reconfigures the downlink transmission power settings for cells according to Table 8.4.1.7A-1
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
12				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
13	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
14	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
15	→		MEASUREMENT REPORT	UE shall report cell 2's PCCPCH RSCP measurement value
16	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
17	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state
18	←		MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement and reporting for cell 2. Measurement validity" IE is set to CELL_DCH state.
19				SS waits and verifies that no MEASUREMENT REPORT messages are sent by UE.

Step	Direction		Message	Comment
	UE	SS		
20	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
21	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
22	→		MEASUREMENT REPORT	UE reports cell 2's measured results for PCCPCH RSCP.
23	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
24	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state
25				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
26	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels
27	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
28	→		MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 18.
29	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activitiest related to "measurement identity" = 12.
30				SS waits and verifies that UE stop transmitting MEASUREMENT REPORT messages.
31	←		MEASUREMENT CONTROL	This message is the same as in step 18
32	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 2.

Specific Message Content

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	3

System Information Block type 11 for cell 1 (Step 1)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- 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	TRUE
- CHOICE mode	TDD
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- 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

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantityfor RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- W	Not present
- Hysteresis	0 dB
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present

- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 2)

Information Element	Value/Remarks
BCCH modification info - MIB Value Tag - BCCH modification time	 3 Not Present

RADIO BEARER RECONFIGURATION (Step 3, Step 13, Step 20, Step 26)

Use the same message type found in TS34.108, with condition set to A4.

MEASUREMENT REPORT (Steps 5 and 22)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 2
- PCCPCH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1g'
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same for cell 2

MEASUREMENT CONTROL (Step 6)

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 3
- Cells selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	TDD
- Primary CCPCH Info	Set to the same for cell 3
- W	Not Present
- Hysteresis	0 dB
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	
- Primary CPICH Info	Check to see if it's the same code for cell 3
- Proposed TGSN Reporting required	Check to see if this IE is present
- PCCPCH RSCP reporting indicator	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1g'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same for cell 3

MEASUREMENT REPORT (Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	Check to see if it's set to 'Intra-frequency measurement event results'
- CHOICE event result	Check to see if this IE is set to '1g'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same for cell 2

System Information Block type 11 for cell 1 (Step 9)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- 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	TRUE
- CHOICE mode	TDD
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- 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

System Information Block type 12 for cell 1 (Step 9)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantityfor RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- W	Not present
- Hysteresis	0 dB
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present

___ - Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Steps 10, 16, 23)

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

MEASUREMENT CONTROL (Steps 18 and 31)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra- frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Set to same as used for cell 2
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CCPCH Info	Set to the same for cell 2
- W	Not Present
- Hysteresis	0 dB
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1

MEASUREMENT REPORT (Steps 22, 28 and 32)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	Check to see if this IE is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	
- Primary CCPCH Info	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1g'
- Intra-frequency event identity	
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same for cell 2

MEASUREMENT CONTROL (Step 29)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

8.4.1.7A.5 Test Requirement

After step 3 the UE shall report cell 2's PCCPCH RSCP value by transmitting MEASUREMENT REPORT messages.
After step 5 the UE shall transmit two MEASUREMENT REPORT messages which contain measured results of cell 3's PCCPCH RSCP value only, one for measurement identity 10 and one for measurement identity 11.
After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.
After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.
After steps 13 and 14e, the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT messages, containing measured results of cell 2's PCCPCH RSCP value.
After step 15 the UE shall stop measurement activities pertaining to periodic reporting of cell 2's PCCPCH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH.
After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.
After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".
After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.
After step 25 the UE shall report cell 1 and 3's PCCPCH RSCP value by transmitting MEASUREMENT REPORT messages.

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

T1-030212

CR-Form-v3

CHANGE REQUEST

⌘ **34.123-1** **CR** **464** ⌘ rev **-** ⌘ Current version: **5.2.0** ⌘

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

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

Title:	⌘	Inclusion of test case for event 1H and 1I
Source:	⌘	Siemens AG
Work item code:	⌘	TEI, LCRTDD
Date:	⌘	2nd February 2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one of the following categories:
F *(essential 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 one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Events 1H and 1I should be tested
Summary of change:	⌘	Inclusion of the new test case: 8.4.1.44 Measurement Control and Report: Intra-frequency measurement for events 1H and 1I (TDD)
Consequences if not approved:	⌘	Measurement control and report for events 1H and 1I cannot be tested.

Clauses affected:	⌘	8.4
Other specs affected:	⌘	☐ Other core specifications ☒ Test specifications ☐ O&M Specifications
Other comments:	⌘	

8.4.1.44 Measurement Control and Report: Intra-frequency measurement for events 1H and 1I (TDD)

8.4.1.44.1 Definition

8.4.1.44.2 Conformance requirement

When event 1h is configured in the UE, the UE shall:

1> if equation 1 is fulfilled for a time period indicated by "Time to trigger" and if that P-CCPCH is not included in the IE "cells triggered" in the variable TRIGGERED_1H_EVENT:

2> include that P-CCPCH in the IE "cells triggered" in the variable TRIGGERED_1H_EVENT;

2> send a measurement report with the IEs set as below:

3> set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1h" and in "cell measurement event results" the "Cell parameters ID" of the P-CCPCH that triggered the report;

3> include in "Cell measured results" the "Timeslot ISCP" of those cells that are included in the variable TRIGGERED_1H_EVENT.

1> if a primary CCPCH is included in the "cells triggered" in the variable TRIGGERED_1H_EVENT:

2> send a measurement report with IEs set as below:

3> set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1h" and "cell measurement event results" to the "Cell parameters ID" of the P-CCPCH that triggered the report;

3> set in "measured results " the "Timeslot ISCP" of those cells that are included in the variable TRIGGERED_1H_EVENT and "additional measured results" according to subclause 8.4.2 in TS 25.331, not taking into account the cell individual offset for each cell.

1> if Equation 2 below is fulfilled for a primary CCPCH:

2> if a primary CCPCH is included in the "cells triggered" in the variable TRIGGERED_1H_EVENT:

3> remove the entry of that primary CCPCH from "cells triggered" in the variable TRIGGERED_1H_EVENT.

The UE shall use the equations below for evaluation of reporting event 1h:

Equation 1

$$10 \cdot LogM_i + H_{1h} + O_i < T_{1h},$$

Equation 2

$$10 \cdot LogM_i - H_{1h} + O_i > T_{1h},$$

The variables in the formula are defined as follows:

M_i is the Timeslot ISCP of the currently evaluated cell i expressed in mW

O_i is the cell individual offset of the currently evaluated cell i

T_{1h} is the Threshold for event 1h

H_{1h} is the hysteresis parameter for the event 1h.

Before any evaluation is done, the Timeslot ISCP expressed in mW is filtered according to subclause 8.6.7.2. in TS 25.331

When event 1i is configured in the UE, the UE shall:

1> if equation 1 is fulfilled for a time period indicated by "Time to trigger" and if that P-CCPCH is not included in the IE "cells triggered" in the variable TRIGGERED_1I_EVENT:

2> include that P-CCPCH in the IE "cells triggered" in the variable TRIGGERED_1I_EVENT;

2> send a measurement report with the IEs set as below:

3> set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1i" and in "cell measurement event results" to the "Cell parameters ID" of the P-CCPCH that triggered the report;

3> include in "measured results" the "Timeslot ISCP" of those cells that are included in the variable TRIGGERED_1I_EVENT and "additional measured results" according to 8.4.2 in TS 25.331, not taking into account the cell individual offset for each cell.

1> if a primary CCPCH is included in the "cells triggered" in the variable TRIGGERED_1I_EVENT:

2> if Equation 2 below is fulfilled for a primary CCPCH:

3> if a primary CCPCH is included in the "cells triggered" in the variable TRIGGERED_1I_EVENT:

4> remove the entry of that primary CCPCH from "cells triggered" in the variable TRIGGERED_1I_EVENT.

The UE shall use the equation below for evaluation of reporting event 1i:

Equation 1

$$10 \cdot LogM_i - H_{1i} + O_i > T_{1h},$$

Equation 2

$$10 \cdot LogM_i + H_{1i} + O_i < T_{1h},$$

The variables in the formula are defined as follows:

$\boldsymbol{M_i}$ is the Timeslot ISCP of the currently evaluated cell ***i*** expressed in mW

$\boldsymbol{O_i}$ is the cell individual offset of the currently evaluated cell ***i***

$\boldsymbol{T_{1i}}$ is the Threshold for event 1i

$\boldsymbol{H_{1i}}$ is the hysteresis parameter for the event 1i.

Before any evaluation is done, the Timeslot ISCP expressed in mW is filtered according to subclause 8.6.7.2. in TS 25.331

Reference

3GPP TS 25.331 clause 14.1.3.2, 14.1.3.3.

8.4.1.44.3 Test Purpose

1. To confirm that the UE sends MEASUREMENT REPORT message if event 1I is configured and intra-frequency measurement indicates that Timeslot ISCP is above a certain threshold

2. To confirm that the UE sends MEASUREMENT REPORT message if event 1H is configured, and intra-frequency measurement indicates that Timeslot ISCP is below a certain threshold

8.4.1.44.4 Method of test

8.4.1.44.4.1 3.84 Mcps option

<FFS>

8.4.1.44.4.2 1.28 Mcps option

Initial Condition

System Simulator: 1 cell – The initial configurations of the cell in the SS shall follow the values indicated in the column marked "T1" in table 8.4.1.44.4.2-1. Threshold for events 1H and 1I are specified in table 8.4.1.44.4.2-2
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.

The test consists of four successive time periods, with a time duration of T1, T2, T3 and T4 respectively. Two cells shall be present in the test, being cell 1 the current serving cell. Timeslot ISCP values are specified for the cell, to check against a certain threshold.

Test Procedure

Table 8.4.1.44.4.2-1 illustrates the Cell 1 specific test parameters for correct event 1H and 1I reporting in AWGN propagation condition. The other RF values needed for the test are referred to section 8 in TS 34.122

Column marked "T1" denotes the initial conditions, while columns marked "T2", “T3” and “T4” are to be applied subsequently. The exact instants on which these values shall be applied are described in the text below.

Table 8.4.1.44.4.2-1

Parameter	**Unit**	**Cell 1**			
		T1	T2	T3	T4
UTRA RF Channel Number		Channel 1			
DL timeslot number		6			
PCCPCH RSCP	dBm	n.a.			
TS ISCP, Note 1		-74	-64	-74	-64
I_{oc}	dBm / 1.28 MHz	-70			
Note 1: The TS ISCP level is a calculated value.					

Table 8.4.1.44.4.2-2

Parameter	**Unit**	**Value**	**Comment**
Threshold used frequency	dBm	-69	Applicable for event 1H, cell 1 timeslot 6
Threshold used frequency	dBm	-69	Applicable for event 1I, cell 1 timeslot 6

The UE is initially in CELL_DCH state of cell 1. System Information Block type 11 is configured according to allow measurement for intrafrequency, 1 Cell is defined and Timeslot 6 is defined for measurements. SS then sends MEASUREMENT CONTROL message to the UE to modify earlier configured intra-frequency measurement and a primary CCPCH is included in the "cells triggered" in the variable TRIGGERED_1I_EVENT and TRIGGERED_1H_EVENT.

UE shall report TRIGGERED_1H_EVENT or TRIGGERED_1I_EVENT in the different time periods during the test. SS re-adjusts the downlink transmission power settings according to columns "T2", “T3” and “T4” successively in table 8.4.1.44.4.2-1

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 CELL_DCH and camped onto cell 1. The System Information Block type 11 messages to be transmitted are different from the default settings
2	←		MEASUREMENT CONTROL	Event 1I and 1H are configured. IEs and threshold values are included
3	→		MEASUREMENT REPORT	Event 1H is triggered. The UE shall report that for cell 2 timeslot 6, ISCP is below than threshold
4				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.44.4.2-1.
5	→		MEASUREMENT REPORT	Event 1I is triggered. The UE shall report that for cell 1 timeslot 6 ISCP is above threshold
6				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.44.4.2-1.
7	→		MEASUREMENT REPORT	Event 1H is triggered. The UE shall report that for cell 2 timeslot 6, ISCP is below than threshold
8				SS re-adjusts the downlink transmission power settings according to columns "T4" in table 8.4.1.44.4.2-1.
9	→		MEASUREMENT REPORT	Event 1I is triggered. The UE shall report that for cell 1 timeslot 6 ISCP is above threshold
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 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)

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	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present (This IE shall be ignored by the UE for SIB11)
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Primary CCPCH TX Power	Not present
- Timeslot List	
- Timeslot Number	6
- Burst Type	Type 1
- Cell selection and Re-selection	Not Present (The IE shall be absent as this is the serving cell)
- Intra-frequency measurement quantity	Not present
- Intra-frequency measurement 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

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not present
- Intra-frequency measurement quantity	
- Filter Coefficient	fc0
- CHOICE Mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- Timeslot ISCP reporting indicator	TRUE
- Proposed TGSN reporting indicator	FALSE
- PCCPCH 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
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1h
- Threshold used frequency	-69 dB
- Hysteresis	0 dB
- Time to Trigger	0
- Intra-frequency event identity	1i
- Threshold used frequency	-69 dB
- Hysteresis	0 dB
- Time to Trigger	0

MEASUREMENT REPORT (Step 3)

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"
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 1
- PCCPCH 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 "1H"

MEASUREMENT REPORT (Step 5)

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"
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 1
- PCCPCH 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 "1I"

MEASUREMENT REPORT (Step 7)

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"
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 1
- PCCPCH 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 "1H"

MEASUREMENT REPORT (Step 9)

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"
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 1
- PCCPCH 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 "1I"

8.4.1.44.5 Test Requirement

The UE shall send one event 1H triggered measurement report, with a measurement reporting delay less than 400 ms from the beginning of time period T2.
The UE shall send one event 1I triggered measurement report, with a measurement reporting delay less than 400 ms from the beginning of time period T3.
The UE shall send one event 1H triggered measurement report, with a measurement reporting delay less than 400 ms from the beginning of time period T4.
The UE shall not send event 1H or 1I triggered measurement reports, as long as the reporting criteria are not fulfilled.

3GPP TSG-T1 Meeting #18
San Antonio, U.S.A, 10th – 14th February 2003
3GPP TSG-T1/SIG Meeting #27
San Antonio, U.S.A, Feb 10th - 14th, 2003

Tdoc ⌘T1-030214

T1S-030068

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **465** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to TS34.123-1 R5 Addition of test cases for RBs for interactive or background service based on TS 34.108
Source:	⌘	Samsung Electronics.
Work item code:	⌘	LCRTDD
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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:	⌘	In LCR TDD RB test cases, some RB test cases of interactive or background services are omitted in TS 34.123-1
Summary of change:	⌘	7 RAB test cases are added to chap 18.1.2 - Interactive or background / UL : 64 DL : 256 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.31. - Interactive or background / UL : 64 DL : 384 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.32. - Interactive or background / UL : 128 DL : 384 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.33. - Interactive or background / UL : 384 DL : 384 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.34. - Interactive or background / UL : 64 DL : 2048 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.35. - Interactive or background / UL : 128 DL : 2048 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.36. - Interactive or background / UL : 384 DL : 2048 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.37.
Consequences if not approved:	⌘	In low chip rate TDD, some RAB test cases can not be tested.

Clauses affected:	⌘	18.1.2

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
		Y		Test specifications		TS 34.123-2
			X	O&M Specifications		
Other comments:	⌘	Affects Rel4 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.

18.1.2.31 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.31.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH/ 10 ms TTI

18.1.2.31.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.31.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.31 for the downlink 10 ms TTI case.

18.1.2.31.1.3 Method of test

Uplink TFS:

	TFI	**RB5 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	**RB5 (256 kbps, 10ms)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.1.1.1 for test procedure.

18.1.2.31.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (3x336).
   - for sub-test 4: RB5/TF4 (4x336).
3. At step 15 the UE shall return
   - for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

- for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

18.1.2.31.2 Interactive or background / UL:64 DL:256 kbps / PS RAB / 20 ms TTI

18.1.2.31.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.31.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.31 for the downlink 20 ms TTI case.

18.1.2.31.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (256 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF0, TF1)
DL_TFC8	(TF1, TF1)
DL_TFC9	(TF2, TF1)
DL_TFC10	(TF3, TF1)
DL_TFC11	(TF4, TF1)
DL_TFC12	(TF5, TF1)
DL_TFC13	(TF6, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112

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

See 18.1.1.1 for test procedure.

18.1.2.31.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).

- for sub-test 3: RB5/TF3 (3x336).
- for sub-test 4 to 6: RB5/TF4 (4x336).

3. At step 15 the UE shall return
   - for sub-test 1 to 6: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.32 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.32.1 Interactive or background / UL:64 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.32.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.32.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.32 for the 10 ms TTI case.

18.1.2.32.1.3 Method of test

Uplink TFS:

	TFI	**RB5 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	**RB5 (384 kbps, 10ms)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: 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 achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.1.1.1 for test procedure.

18.1.2.32.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (3x336).

- for sub-test 4 and 5: RB5/TF4 (4x336).

3. At step 15 the UE shall return

- for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

- for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

18.1.2.32.2 Interactive or background / UL:64 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.32.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.32.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.32 for the 20 ms TTI case.

18.1.2.32.2.3 Method of test

Uplink TFS:

	TFI	**RB5 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	**RB5 (384 kbps, 20ms)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF0, TF1)
DL_TFC10	(TF1, TF1)
DL_TFC11	(TF2, TF1)
DL_TFC12	(TF3, TF1)
DL_TFC13	(TF4, TF1)
DL_TFC14	(TF5, TF1)
DL_TFC15	(TF6, TF1)
DL_TFC16	(TF7, TF1)
DL_TFC17	(TF8, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC9, , UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 6392	RB5: 6392
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.32.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (3x336).
   - for sub-test 4 to 8: RB5/TF4 (4x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.33 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.33.1 Interactive or background / UL:128 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.33.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.33.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.33 for the 10 ms TTI case.

18.1.2.33.1.3 Method of test

Uplink TFS:

	TFI	**RB5 (128 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 3832	RB5: 3832

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.

See 18.1.1.1 for test procedure.

18.1.2.33.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4 and 5: RB5/TF4 (8x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.33.2 Interactive or background / UL:128 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.33.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.33.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.33 for the 20 ms TTI case.

18.1.2.33.2.3 Method of test

Uplink TFS:

	TFI	**RB5 (128 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF0, TF1)
DL_TFC10	(TF1, TF1)
DL_TFC11	(TF2, TF1)
DL_TFC12	(TF3, TF1)
DL_TFC13	(TF4, TF1)
DL_TFC14	(TF5, TF1)
DL_TFC15	(TF6, TF1)
DL_TFC16	(TF7, TF1)
DL_TFC17	(TF8, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5,	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 6392	RB5: 6392
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4 UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.33.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4 to 8: RB5/TF4 (8x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.34 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.34.1 Interactive or background / UL:384 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.34.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.34.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.34 for the 10 ms TTI case.

18.1.2.34.1.3 Method of test

Uplink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF0, TF1)
UL_TFC7	(TF1, TF1)
UL_TFC8	(TF2, TF1)
UL_TFC9	(TF3, TF1)
UL_TFC10	(TF4, TF1)
UL_TFC11	(TF5, TF1)

Downlink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7	UL_TFC0, UL_TFC1, UL_TFC7, UL_TFC8	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7	UL_TFC0, UL_TFC2, UL_TFC7, UL_TFC9	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7	UL_TFC0, UL_TFC3, UL_TFC7, UL_TFC10	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7	UL_TFC0, UL_TFC4, UL_TFC7, UL_TFC11	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7	UL_TFC0, UL_TFC5, UL_TFC7, UL_TFC12	RB5: 3832	RB5: 3832
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.34.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4: RB5/TF4 (8x336).
   - for sub-test 5: RB5/TF4 (12x336).

3. At step 15 the UE shall return

- for sub-test 1 to 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.34.2 Interactive or background / UL:384 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.34.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.34.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.34. for the 20 ms TTI case

18.1.2.34.2.3 Method of test

Uplink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF6, TF0)
UL_TFC7	(TF7, TF0)
UL_TFC8	(TF8, TF0)
UL_TFC9	(TF0, TF1)
UL_TFC10	(TF1, TF1)
UL_TFC11	(TF2, TF1)
UL_TFC12	(TF3, TF1)
UL_TFC13	(TF4, TF1)
UL_TFC14	(TF5, TF1)
UL_TFC15	(TF6, TF1)
UL_TFC16	(TF7, TF1)
UL_TFC17	(TF8, TF1)

Downlink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF0, TF1)
DL_TFC10	(TF1, TF1)
DL_TFC11	(TF2, TF1)
DL_TFC12	(TF3, TF1)
DL_TFC13	(TF4, TF1)
DL_TFC14	(TF5, TF1)
DL_TFC15	(TF6, TF1)
DL_TFC16	(TF7, TF1)
DL_TFC17	(TF8, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC5, UL_TFC9, UL_TFC14	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC6	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC7	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 6392	RB5: 6392
8	DL_TFC8	UL_TFC8	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 7672	RB5: 7672
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.34.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4: RB5/TF4 (8x336).
   - for sub-test 5: RB5/TF5 (12x336).
   - for sub-test 6: RB5/TF6 (16x336).
   - for sub-test 7: RB5/TF7 (20x336).
   - for sub-test 8: RB5/TF8 (24x336).

3. At step 15 the UE shall return

- for sub-test 1 to 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.35 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.35.1 Interactive or background / UL:64 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.35.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.35.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.35 for the 10 ms TTI case.

18.1.2.35.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF0, TF1)
DL_TFC12	(TF1, TF1)
DL_TFC13	(TF2, TF1)
DL_TFC14	(TF3, TF1)
DL_TFC15	(TF4, TF1)
DL_TFC16	(TF5, TF1)
DL_TFC17	(TF6, TF1)
DL_TFC18	(TF7, TF1)
DL_TFC19	(TF8, TF1)
DL_TFC20	(TF9, TF1)
DL_TFC21	(TF10, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.35.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).

- for sub-test 3: RB5/TF3 (3x336).
- for sub-test 4 to 10: RB5/TF4 (4x336).

3. At step 15 the UE shall return
   - for sub-test 1 to 10: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.35.2 Interactive or background / UL:64 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.35.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.35.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.35 for the 20 ms TTI case.

18.1.2.35.2.3 Method of test

Uplink TFS:

	TFI	**RB5 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A
	TF11, bits	36x656	N/A
	TF12, bits	40x656	N/A
	TF13, bits	44x656	N/A
	TF14, bits	48x656	N/A
	TF15, bits	52x656	N/A
	TF16, bits	56x656	N/A
	TF17, bits	60x656	N/A
	TF18, bits	64x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)

TFCI	(RB5, DCCH)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)
DL_TFC37	(TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 23032	RB5: 23032
12	DL_TFC12	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4 UL_TFC5, UL_TFC9	RB5: 28152	RB5: 28152

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
14	DL_TFC14	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 30712	RB5: 30712
15	DL_TFC15	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4 UL_TFC5, UL_TFC9	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 40952	RB5: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.35.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (3x336).
   - for sub-test 4 to 18: RB5/TF4 (4x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.36.1 Interactive or background / UL:128 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.36.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.36.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.36 for the 10 ms TTI case.

18.1.2.36.1.3 Method of test

Uplink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)

TFCI	(RB5, DCCH)
DL_TFC11	(TF0, TF1)
DL_TFC12	(TF1, TF1)
DL_TFC13	(TF2, TF1)
DL_TFC14	(TF3, TF1)
DL_TFC15	(TF4, TF1)
DL_TFC16	(TF5, TF1)
DL_TFC17	(TF6, TF1)
DL_TFC18	(TF7, TF1)
DL_TFC19	(TF8, TF1)
DL_TFC20	(TF9, TF1)
DL_TFC21	(TF10, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.

See 18.1.1.1 for test procedure.

18.1.2.36.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4 to 10: RB5/TF4 (8x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 10: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.36.2 Interactive or background / UL:128 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.36.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.36.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.36 for the 20 ms TTI case.

18.1.2.36.2.3 Method of test

Uplink TFS:

	TFI	**RB5 (128 kbps)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A
	TF11, bits	36x656	N/A
	TF12, bits	40x656	N/A
	TF13, bits	44x656	N/A
	TF14, bits	48x656	N/A
	TF15, bits	52x656	N/A
	TF16, bits	56x656	N/A
	TF17, bits	60x656	N/A
	TF18, bits	64x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)

TFCI	(RB5, DCCH)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)
DL_TFC37	(TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 23032	RB5: 23032
12	DL_TFC12	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 28152	RB5: 28152

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
14	DL_TFC14	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 30712	RB5: 30712
15	DL_TFC15	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 40952	RB5: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.36.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4 to 18: RB5/TF4 (8x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.37.1 Interactive or background / UL:384 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.37.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.37.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.37 for the 10 ms TTI case.

18.1.2.37.1.3 Method of test

Uplink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF0, TF1)
UL_TFC7	(TF1, TF1)
UL_TFC8	(TF2, TF1)
UL_TFC9	(TF3, TF1)
UL_TFC10	(TF4, TF1)
UL_TFC11	(TF5, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)

TFCI	(RB5, DCCH)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF0, TF1)
DL_TFC12	(TF1, TF1)
DL_TFC13	(TF2, TF1)
DL_TFC14	(TF3, TF1)
DL_TFC15	(TF4, TF1)
DL_TFC16	(TF5, TF1)
DL_TFC17	(TF6, TF1)
DL_TFC18	(TF7, TF1)
DL_TFC19	(TF8, TF1)
DL_TFC20	(TF9, TF1)
DL_TFC21	(TF10, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC5	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 20472	RB5: 20472
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.37.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).

- for sub-test 4: RB5/TF3 (8x336).
- for sub-test 5 to 10: RB5/TF4 (12x336).

3. At step 15 the UE shall return
   - for sub-test 1 to 10: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.37.2 Interactive or background / UL:384 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.37.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.37.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.37 for the 20 ms TTI case.

18.1.2.37.2.3 Method of test

Uplink TFS:

	TFI	**RB5 (384 kbps, 20ms)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Uplink TFCS:

TFCI	**(RB5, DCCH)**
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF6, TF0)
UL_TFC7	(TF7, TF0)
UL_TFC8	(TF8, TF0)
UL_TFC9	(TF0, TF1)
UL_TFC10	(TF1, TF1)
UL_TFC11	(TF2, TF1)
UL_TFC12	(TF3, TF1)
UL_TFC13	(TF4, TF1)
UL_TFC14	(TF5, TF1)
UL_TFC15	(TF6, TF1)
UL_TFC16	(TF7, TF1)
UL_TFC17	(TF8, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A
	TF11, bits	36x656	N/A
	TF12, bits	40x656	N/A
	TF13, bits	44x656	N/A
	TF14, bits	48x656	N/A
	TF15, bits	52x656	N/A
	TF16, bits	56x656	N/A
	TF17, bits	60x656	N/A
	TF18, bits	64x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)

TFCI	(RB5, DCCH)
DL_TFC37	(TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC5, UL_TFC9, UL_TFC14	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC6	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC7	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC8	DL_TFC0, DL_TFC19, , UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC6	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 23032	RB5: 23032
12	DL_TFC12	UL_TFC7	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 28152	RB5: 28152
14	DL_TFC14	UL_TFC8	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 30712	RB5: 30712

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
15	DL_TFC15	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC7	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC6	DL_TFC0, DL_TFC19, , UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 40952	RB5: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been choosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.37.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4: RB5/TF4 (8336).
   - for sub-test 5: RB5/TF5 (12x336).
   - for sub-test 6: RB5/TF6 (16x336).
   - for sub-test 7: RB5/TF7 (20x336).
   - for sub-test 8 to 18: RB5/TF4 (24x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

3GPP TSG-T1 Meeting #18
San Antonio, U.S.A, 10th – 14th February 2003
3GPP TSG-T1/SIG Meeting #27
San Antonio, U.S.A, Feb 10th - 14th, 2003

Tdoc ⌘T1-030215

T1S-030069

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **466** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to TS34.123-1 R5 Addition of test cases for RBs for conventional/speech and interactive or background service based on TS 34.108
Source:	⌘	Samsung Electronics.
Work item code:	⌘	LCRTDD
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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:	⌘	In LCR TDD RB test cases, some RB test cases of conventional/speech and interactive or background services are omitted in TS 34.123-1
Summary of change:	⌘	7 RAB test cases are added to chap 18.1.2 - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Interactive or background / UL : 32 DL : 8 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.38. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Interactive or background / UL : 32 DL : 64 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.39. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Interactive or background / UL : 64 DL : 64 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.40. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Interactive or background / UL : 64 DL : 128 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.41. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Interactive or background / UL : 64 DL : 256 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.42. - 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 is added as 18.1.2.43. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Interactive or background / UL : 128 DL : 2048 kbps/PS RAB + UL:3.4 DL : 3.4 kbps

		SRBs for DCCH is added as 18.1.2.44.
Consequences if not approved:	⌘	In low chip rate TDD, some RAB test cases can not be tested.

Clauses affected:	⌘	18.1.2			
Other specs affected:	⌘	Y / N N / X Y / N N / X	Other core specifications Test specifications O&M Specifications	⌘	TS 34.123-2
Other comments:	⌘	Afftecs 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.

18.1.2.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.38.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (TC, 20 ms TTI)

18.1.2.38.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.38.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the turbo channel coding and 20 ms TTI case.

18.1.2.38.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (32 kbps)**	**DCCH**
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	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, TF0, TF1)
UL_TFC10	(TF1, TF0, TF0, TF0, TF1)
UL_TFC11	(TF2, TF1, TF1, TF0, TF1)
UL_TFC12	(TF0, TF0, TF0, TF1, TF1)
UL_TFC13	(TF1, TF0, TF0, TF1, TF1)
UL_TFC14	(TF2, TF1, TF1, TF1, TF1)
UL_TFC15	(TF0, TF0, TF0, TF2, TF1)
UL_TFC16	(TF1, TF0, TF0, TF2, TF1)
UL_TFC17	(TF2, TF1, TF1, TF2, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (8 kbps)**	**DCCH**
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1 DL_TFC7	UL_TFC1 UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC8	UL_TFC2 UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC9	UL_TFC3 UL_TFC12	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC10	UL_TFC4 UL_TFC13	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC11	UL_TFC5 UL_TFC14	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC3 DL_TFC9	UL_TFC6 UL_TFC15	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 312
7	DL_TFC4 DL_TFC10	UL_TFC7 UL_TFC16	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 312
8	DL_TFC5 DL_TFC11	UL_TFC8 UL_TFC17	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 312

NOTE: 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). As the uplink TTI for RB8 is 20 ms while the downlink TTI is 40 ms then, to achieve continous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 (the size of a 7 bit length indicator and expansion bit).

18.1.2.38.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub test.

3. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.

   - for sub-test 3 and 6: an RLC SDU on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB5, RB6 and RB7.

   - for sub-test 4 and 7: an RLC SDU on RB5 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB6 and RB7.

   - for sub-test 5 and 8: an RLC SDU on RB5, RB6, RB7 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.38.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (TC, 10 ms TTI)

18.1.2.38.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.38.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the turbo channel coding and 10 ms TTI case.

18.1.2.38.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (32 kbps)**	**DCCH**
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1 DL_TFC7	UL_TFC1 UL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC8	UL_TFC2 UL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC9	UL_TFC3 UL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC10	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC11	UL_TFC5 UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 312

NOTE: 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). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 40 ms then, to achieve continous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over four tsubsequent TTIs, i.e. UL RLC SDU SIZE has been set to four times the uplink TFS size minus 8 (the size of a 7 bit length indicator and expansion bit).

18.1.2.38.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub test.
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3: an RLC SDU on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: an RLC SDU on RB5 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB6 and RB7.
   - for sub-test 5: an RLC SDU on RB5, RB6, RB7 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.38.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (CC, 20 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the convolutional channel coding and 20 ms TTI case.

See test case 18.1.2.38.1 for test procedure and test requirement.

18.1.2.38.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (CC, 10 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the convolutional channel coding and 10 ms TTI case.

See test case 18.1.2.38.2 for test procedure and test requirement.

18.1.2.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.39.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (TC, 10 ms TTI)

18.1.2.39.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.39.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink turbo channel coding and 10 ms TTI case.

18.1.2.39.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps, 10 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1 UL_TFC7	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5 UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 952

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272

NOTE: 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). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 20 ms then, to achieve continous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).

18.1.2.39.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3: an RLC SDU on RB8 having the first 312 bits equal to the content 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 first 312 bits equal to the content 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 first 312 bits equal to the content 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 content 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 content 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 RB5, RB6, RB7 and RB8 having the same content as sent by SS.
- for sub-test 9: 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 10: 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 11: 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 12: 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 13: 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 14: 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.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.39.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (TC, 20 ms TTI)

18.1.2.39.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.39.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink turbo channel coding and 20 ms TTI case.

18.1.2.39.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (32 kbps, 20 ms TTI)**	**DCCH**
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	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, TF0, TF1)
UL_TFC10	(TF1, TF0, TF0, TF0, TF1)
UL_TFC11	(TF2, TF1, TF1, TF0, TF1)
UL_TFC12	(TF0, TF0, TF0, TF1, TF1)
UL_TFC13	(TF1, TF0, TF0, TF1, TF1)
UL_TFC14	(TF2, TF1, TF1, TF1, TF1)
UL_TFC15	(TF0, TF0, TF0, TF2, TF1)
UL_TFC16	(TF1, TF0, TF0, TF2, TF1)
UL_TFC17	(TF2, TF1, TF1, TF2, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC12	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC13	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC14	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC15	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC6, UL_TFC15	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC7, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 952

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC8, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC6, UL_TFC15	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC7, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC8, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272

NOTE: 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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. 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).

18.1.2.39.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: an RLC SDU on RB5 and RB8 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 RB5, RB6, RB7 and RB8 having the same content as sent by SS.
   - for sub-test 6: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 7: an RLC SDU on RB5 and RB8 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 RB5, RB6, RB7 and RB8 having the same content as sent by SS.
- for sub-test 9: 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 10: 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 11: 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 12: 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 13: 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 14: 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.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.39.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (CC, 10 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink convolutional channel coding and 10 ms TTI case.

See test case 18.1.2.39.1 for test procedure and test requirement.

18.1.2.39.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (CC, 20 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink convolutional channel coding and 20 ms TTI case.

See test case 18.1.2.39.2 for test procedure and test requirement.

18.1.2.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.40.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.40.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.40.

18.1.2.40.3 Method of test

See 18.1.1.2 for test procedure.

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	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, 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_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, DUL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 952

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272

NOTE: 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 the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

18.1.2.40.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
   - for sub-test 3, 6, 9 and 12: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4, 7, 10 and 13: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5, 8, 11 and 14: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.41.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.41.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.41.

18.1.2.41.3 Method of test

See 18.1.1.2 for test procedure.

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	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, 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_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3 UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TCF18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552

NOTE: 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 the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

18.1.2.41.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
   - for sub-test 3: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
   - for sub-test 6: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 8: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
- for sub-test 9: RLC SDUs 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: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 11: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 12: RLC SDUs 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: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 14: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.42.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB / 10 ms TTI

18.1.2.42.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.42.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.42 for the downlink 10 ms TTI case.

18.1.2.42.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	DCCH
TFS	TF0, bits	0x81	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (256 kbps)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, DL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, 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_TFC17	UL_TFC2, DL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, DL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC4, DL_TFC19	UL_TFC4, DL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, DL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, DL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC22	UL_TFC7, DL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, DL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, DL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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
10	DL_TFC10, DL_TFC25	UL_TFC10, DL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, DL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC27	UL_TFC12, DL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC13, DL_TFC28	UL_TFC13, DL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC29	UL_TFC14, DL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552

NOTE: 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). As the uplink TTI for RB8 is 20 ms while the downlink TTI is 10 ms then, to achieve continous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over each TTIs, i.e. UL RLC SDU SIZE has been set to the uplink TFS size under test minus 8 (the size of a 7 bit length indicator and expansion bit).

18.1.2.42.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3: an RLC SDU on RB8 having the first 312 bits equal to the content 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 first 312 bits equal to the content 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 first 312 bits equal to the content 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 content 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 content 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 RB5, RB6, RB7 and RB8 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-test 13: 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: 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 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.42.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB / 20 ms TTI

18.1.2.42.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.42.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.42 for the downlink 20 ms TTI case.

18.1.2.42.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x81	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (256 kbps, 20 ms)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A
	TF5, bits	N/A	N/A	N/A	12x336	N/A
	TF6, bits	N/A	N/A	N/A	16x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF0, TF1)
DL_TFC22	(TF1, TF0, TF0, TF0, TF1)
DL_TFC23	(TF2, TF1, TF1, TF0, TF1)
DL_TFC24	(TF0, TF0, TF0, TF1, TF1)
DL_TFC25	(TF1, TF0, TF0, TF1, TF1)
DL_TFC26	(TF2, TF1, TF1, TF1, TF1)
DL_TFC27	(TF0, TF0, TF0, TF2, TF1)
DL_TFC28	(TF1, TF0, TF0, TF2, TF1)
DL_TFC29	(TF2, TF1, TF1, TF2, TF1)
DL_TFC30	(TF0, TF0, TF0, TF3, TF1)
DL_TFC31	(TF1, TF0, TF0, TF3, TF1)
DL_TFC32	(TF2, TF1, TF1, TF3, TF1)
DL_TFC33	(TF0, TF0, TF0, TF4, TF1)
DL_TFC34	(TF1, TF0, TF0, TF4, TF1)
DL_TFC35	(TF2, TF1, TF1, TF4, TF1)
DL_TFC36	(TF0, TF0, TF0, TF5, TF1)
DL_TFC37	(TF1, TF0, TF0, TF5, TF1)
DL_TFC38	(TF2, TF1, TF1, TF5, TF1)
DL_TFC39	(TF0, TF0, TF0, TF6, TF1)
DL_TFC40	(TF1, TF0, TF0, TF6, TF1)
DL_TFC41	(TF2, TF1, TF1, TF6, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC22	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, 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_TFC23	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC24	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC4, DL_TFC25	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC26	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC27	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC28	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC29	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21 UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC30	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, 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
10	DL_TFC10, DL_TFC31	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC32	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC33	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC13, DL_TFC34	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27 UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC35	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC36	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC37	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27 UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC38	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3832
18	DL_TFC18, DL_TFC39	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, 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
19	DL_TFC19, DL_TFC40	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, 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 TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC41	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112

NOTE: 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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. 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).

18.1.2.42.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
- for sub-test 3: an RLC SDU on RB8 having the content equal to the content 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 RB5 and RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
- for sub-test 5: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
- for sub-test 6: an RLC SDU on RB8 having the content equal to the content 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 RB5 and RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
- for sub-test 8: an RLC SDU on RB5, RB6, RB7 and RB8 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-test 13: 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: 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.

- for sub-test 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; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 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 having the same content as sent by SS; and no data shall be received on RB6 and RB7.

- for sub-test 17: 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.

- for sub-test 18: 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 19: 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 20: 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 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.43 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

18.1.2.43.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.43.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.43.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.43 for the downlink 10 ms TTI case.

18.1.2.43.1.3 Method of test

See 18.1.1.2 for test procedure.

For the PS DL:384/UL:64 kbps radio bearer the downlink TTI is 10ms while the uplink TTI is 20ms. As the SS will send one DL SDU every 10 ms then the UE test loop function will return 2 UL SDUs per uplink TTI. To not cause uplink transmission buffer overflow then the UL RLC SDU size should be chosen such that the UE will transmit 2 RLC SDUs per uplink TTI. For the case when the transport format under test does not allow for 2 SDUs to fit into the transport format size without requiring concatenation then the UL RLC SDU size shall be chosen such that one SDU is returned per uplink TTI.

The following RLC parameter value is used in the RADIO BEARER SETUP message used to setup the PS DL:384/UL:64 kbps radio bearer:

Uplink RLC Transmission window size	512

NOTE The transmission window size value have been chosen to avoid that UE transmission buffer becomes full during the 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	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (384 kbps, 10 ms)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A
	TF5, bits	N/A	N/A	N/A	12x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF0, TF1)
DL_TFC19	(TF1, TF0, TF0, TF0, TF1)
DL_TFC20	(TF2, TF1, TF1, TF0, TF1)
DL_TFC21	(TF0, TF0, TF0, TF1, TF1)
DL_TFC22	(TF1, TF0, TF0, TF1, TF1)
DL_TFC23	(TF2, TF1, TF1, TF1, TF1)
DL_TFC24	(TF0, TF0, TF0, TF2, TF1)
DL_TFC25	(TF1, TF0, TF0, TF2, TF1)
DL_TFC26	(TF2, TF1, TF1, TF2, TF1)
DL_TFC27	(TF0, TF0, TF0, TF3, TF1)
DL_TFC28	(TF1, TF0, TF0, TF3, TF1)
DL_TFC29	(TF2, TF1, TF1, TF3, TF1)
DL_TFC30	(TF0, TF0, TF0, TF4, TF1)
DL_TFC31	(TF1, TF0, TF0, TF4, TF1)
DL_TFC32	(TF2, TF1, TF1, TF4, TF1)
DL_TFC33	(TF0, TF0, TF0, TF5, TF1)
DL_TFC34	(TF1, TF0, TF0, TF5, TF1)
DL_TFC35	(TF2, TF1, TF1, TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC19	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, 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_TFC20	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC21	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC22	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC23	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC5, UL_TFC17, UL_TFC18, UL_TFC15, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC24	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC25	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC26	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC27	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 (note 2)	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 TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
10	DL_TFC10, DL_TFC28	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC29	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC30	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC31	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC32	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC33	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC34	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC18, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC35	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 3832

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)

NOTE 1: 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 the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).
NOTE 2: RB8 (TF1/TF3): For sub-tests where uplink transport format TF1 (1x336) or TF3 (3x336) are used then no adoptation to the difference in downlink TTI (10 ms) and uplink TTI (20ms) is possible as this would require the UE to concatenate 2 SDUs into one PDU for TF1; or into three PDUs for TF3. For these sub-tests the UL RLC SDU size is set equal to the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).
NOTE 3: RB8 (TF2/TF4): For sub-tests where uplink transport formats TF2 (2x336) or TF4 (4x336) is used then to adopt to the difference in downlink TTI (10 ms) and uplink TTI (20ms) the UL RLC SDU size has been chosen such that 2 SDUs will be returned per uplink TTI. I.e. the UL RLC SDU size is set equal to half the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

18.1.2.43.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
   - for sub-test 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
   - for sub-test 6: RLC SDUs on RB8 having the first 312 bits equal to the content 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: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
   - for sub-test 8: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink.
   - for sub-test 9: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 10: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
   - for sub-test 11: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
   - for sub-test 12: RLC SDUs 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 13: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs 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 RB6 and RB7.
- for sub-test 14: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink.
- for sub-test 15: RLC SDUs 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 16: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs 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 RB6 and RB7.
- for sub-test 17: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the the SS; and RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.43.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.43.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.43.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.43 for the downlink 20 ms TTI case.

18.1.2.43.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x81	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (384 kbps, 20 ms)	DCCH
TFS	TF0, bits	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A
	TF5, bits	N/A	N/A	N/A	12x336	N/A
	TF6, bits	N/A	N/A	N/A	16x336	N/A
	TF7, bits	N/A	N/A	N/A	20x336	N/A
	TF8, bits	N/A	N/A	N/A	24x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF7, TF0)
DL_TFC22	(TF1, TF0, TF0, TF7, TF0)
DL_TFC23	(TF2, TF1, TF1, TF7, TF0)
DL_TFC24	(TF0, TF0, TF0, TF8, TF0)
DL_TFC25	(TF1, TF0, TF0, TF8, TF0)
DL_TFC26	(TF2, TF1, TF1, TF8, TF0)
DL_TFC27	(TF0, TF0, TF0, TF0, TF1)
DL_TFC28	(TF1, TF0, TF0, TF0, TF1)
DL_TFC29	(TF2, TF1, TF1, TF0, TF1)
DL_TFC30	(TF0, TF0, TF0, TF1, TF1)
DL_TFC31	(TF1, TF0, TF0, TF1, TF1)
DL_TFC32	(TF2, TF1, TF1, TF1, TF1)
DL_TFC33	(TF0, TF0, TF0, TF2, TF1)
DL_TFC34	(TF1, TF0, TF0, TF2, TF1)
DL_TFC35	(TF2, TF1, TF1, TF2, TF1)
DL_TFC36	(TF0, TF0, TF0, TF3, TF1)
DL_TFC37	(TF1, TF0, TF0, TF3, TF1)
DL_TFC38	(TF2, TF1, TF1, TF3, TF1)
DL_TFC39	(TF0, TF0, TF0, TF4, TF1)
DL_TFC40	(TF1, TF0, TF0, TF4, TF1)
DL_TFC41	(TF2, TF1, TF1, TF4, TF1)
DL_TFC42	(TF0, TF0, TF0, TF5, TF1)
DL_TFC43	(TF1, TF0, TF0, TF5, TF1)
DL_TFC44	(TF2, TF1, TF1, TF5, TF1)
DL_TFC45	(TF0, TF0, TF0, TF6, TF1)
DL_TFC46	(TF1, TF0, TF0, TF6, TF1)
DL_TFC47	(TF2, TF1, TF1, TF6, TF1)
DL_TFC48	(TF0, TF0, TF0, TF7, TF1)
DL_TFC49	(TF1, TF0, TF0, TF7, TF1)
DL_TFC50	(TF2, TF1, TF1, TF7, TF1)
DL_TFC51	(TF0, TF0, TF0, TF8, TF1)
DL_TFC52	(TF1, TF0, TF0, TF8, TF1)
DL_TFC53	(TF2, TF1, TF1, TF8, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC28	UL_TFC1,UL_TFC16	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, 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_TFC29	UL_TFC2,UL_TFC17	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC30	UL_TFC3,UL_TFC19	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, 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

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
4	DL_TFC4, DL_TFC31	UL_TFC4,UL_TFC19	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15,	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC32	UL_TFC5,UL_TFC20	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18 UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC33	UL_TFC6,UL_TFC21	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC34	UL_TFC7,UL_TFC22	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC35	UL_TFC8,UL_TFC23	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC36	UL_TFC9,UL_TFC24	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, 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
10	DL_TFC10, DL_TFC37	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24 UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC38	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC39	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, 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	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
13	DL_TFC13, DL_TFC40	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC41	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC42	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC43	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC44	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3832
18	DL_TFC18, DL_TFC45	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, 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
19	DL_TFC19, DL_TFC46	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112
20	DL_TFC20, DL_TFC47	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
21	DL_TFC21, DL_TFC48	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 6392

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
22	DL_TFC22, DL_TFC49	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 6392
23	DL_TFC23, DL_TFC50	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 6392
24	DL_TFC24, DL_TFC51	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 7672
25	DL_TFC25, DL_TFC52	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 7672
26	DL_TFC26, DL_TFC53	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 7672

NOTE: 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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. 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).

18.1.2.43.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3: an RLC SDU on RB8 having the content equal to the content 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 RB5 and RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.

- for sub-test 5: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.

- for sub-test 6: an RLC SDU on RB8 having the content equal to the content 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 RB5 and RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.

- for sub-test 8: an RLC SDU on RB5, RB6, RB7 and RB8 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-test 13: 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: 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.

- for sub-test 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; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 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 having the same content as sent by SS; and no data shall be received on RB6 and RB7.

- for sub-test 17: 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.

- for sub-test 18: 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 19: 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 20: 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.

- for sub-test 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; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 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 having the same content as sent by SS; and no data shall be received on RB6 and RB7.

- for sub-test 23: 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.

- for sub-test 24: 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 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-test 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 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.44.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.44.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.44.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.44 for the downlink 10 ms TTI case.

18.1.2.44.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (128 kbps)**	**DCCH**
TFS	TF0, bits	0x81	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (2048 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x656	0x148
	TF1, bits	1x39	1x103	1x60	1x656	1x148
	TF2, bits	1x81	N/A	N/A	2x656	N/A
	TF3, bits	N/A	N/A	N/A	4x656	N/A
	TF4, bits	N/A	N/A	N/A	8x656	N/A
	TF5, bits	N/A	N/A	N/A	12x656	N/A
	TF6, bits	N/A	N/A	N/A	16x656	N/A
	TF7, bits	N/A	N/A	N/A	20x656	N/A
	TF8, bits	N/A	N/A	N/A	24x656	N/A
	TF9, bits	N/A	N/A	N/A	28x656	N/A
	TF10, bits	N/A	N/A	N/A	32x656	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF7, TF0)
DL_TFC22	(TF1, TF0, TF0, TF7, TF0)
DL_TFC23	(TF2, TF1, TF1, TF7, TF0)
DL_TFC24	(TF0, TF0, TF0, TF8, TF0)
DL_TFC25	(TF1, TF0, TF0, TF8, TF0)
DL_TFC26	(TF2, TF1, TF1, TF8, TF0)
DL_TFC27	(TF0, TF0, TF0, TF9, TF0)
DL_TFC28	(TF1, TF0, TF0, TF9, TF0)
DL_TFC29	(TF2, TF1, TF1, TF9, TF0)
DL_TFC30	(TF0, TF0, TF0, TF10, TF0)
DL_TFC31	(TF1, TF0, TF0, TF10, TF0)
DL_TFC32	(TF2, TF1, TF1, TF10, TF0)
DL_TFC33	(TF0, TF0, TF0, TF0, TF1)
DL_TFC34	(TF1, TF0, TF0, TF0, TF1)
DL_TFC35	(TF2, TF1, TF1, TF0, TF1)
DL_TFC36	(TF0, TF0, TF0, TF1, TF1)
DL_TFC37	(TF1, TF0, TF0, TF1, TF1)
DL_TFC38	(TF2, TF1, TF1, TF1, TF1)
DL_TFC39	(TF0, TF0, TF0, TF2, TF1)
DL_TFC40	(TF1, TF0, TF0, TF2, TF1)
DL_TFC41	(TF2, TF1, TF1, TF2, TF1)
DL_TFC42	(TF0, TF0, TF0, TF3, TF1)
DL_TFC43	(TF1, TF0, TF0, TF3, TF1)
DL_TFC44	(TF2, TF1, TF1, TF3, TF1)
DL_TFC45	(TF0, TF0, TF0, TF4, TF1)
DL_TFC46	(TF1, TF0, TF0, TF4, TF1)
DL_TFC47	(TF2, TF1, TF1, TF4, TF1)
DL_TFC48	(TF0, TF0, TF0, TF5, TF1)
DL_TFC49	(TF1, TF0, TF0, TF5, TF1)
DL_TFC50	(TF2, TF1, TF1, TF5, TF1)
DL_TFC51	(TF0, TF0, TF0, TF6, TF1)
DL_TFC52	(TF1, TF0, TF0, TF6, TF1)
DL_TFC53	(TF2, TF1, TF1, TF6, TF1)
DL_TFC54	(TF0, TF0, TF0, TF7, TF1)
DL_TFC55	(TF1, TF0, TF0, TF7, TF1)
DL_TFC56	(TF2, TF1, TF1, TF7, TF1)
DL_TFC57	(TF0, TF0, TF0, TF8, TF1)
DL_TFC58	(TF1, TF0, TF0, TF8, TF1)
DL_TFC59	(TF2, TF1, TF1, TF8, TF1)
DL_TFC60	(TF0, TF0, TF0, TF9, TF1)
DL_TFC61	(TF1, TF0, TF0, TF9, TF1)
DL_TFC62	(TF2, TF1, TF1, TF9, TF1)
DL_TFC63	(TF0, TF0, TF0, TF10, TF1)
DL_TFC64	(TF1, TF0, TF0, TF10, TF1)
DL_TFC65	(TF2, TF1, TF1, TF10, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC34	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC35	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC36	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC4, DL_TFC37	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 632
5	DL_TFC5, DL_TFC38	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
6	DL_TFC6, DL_TFC39	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC40	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
8	DL_TFC8, DL_TFC41	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
9	DL_TFC9, DL_TFC42	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
10	DL_TFC10, DL_TFC43	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC44	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
12	DL_TFC12, DL_TFC45	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 5112
13	DL_TFC13, DL_TFC46	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 5112
14	DL_TFC14, DL_TFC47	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
15	DL_TFC15, DL_TFC48	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 7672
16	DL_TFC16, DL_TFC49	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 7672
17	DL_TFC17, DL_TFC50	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
18	DL_TFC18, DL_TFC51	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 10232
19	DL_TFC19, DL_TFC52	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 10232

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC53	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 10232
21	DL_TFC21, DL_TFC54	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 12792
22	DL_TFC22, DL_TFC55	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 12792
23	DL_TFC23, DL_TFC56	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 12792
24	DL_TFC24, DL_TFC57	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 15352
25	DL_TFC25, DL_TFC58	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 15352
26	DL_TFC26, DL_TFC59	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 15352
27	DL_TFC27, DL_TFC60	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 17912
28	DL_TFC28, DL_TFC61	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 17912

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
29	DL_TFC29, DL_TFC62	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 17912
30	DL_TFC30, DL_TFC63	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 20472
31	DL_TFC31, DL_TFC64	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 20472
32	DL_TFC32, DL_TFC65	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 20472
NOTE: 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). As the uplink TTI for RB8 is 20 ms while the downlink TTI is 10 ms then, to achieve continous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over each TTI, ie the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).						

18.1.2.44.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.

3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by 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 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 10: 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 11: 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.

- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 2552 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: an RLC SDU on RB8 having the content equal to the first 2552 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: an RLC SDU on RB8 having the content equal to the first 2552 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 15: an RLC SDU on RB8 having the content equal to the first 2552 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 16: an RLC SDU on RB8 having the content equal to the first 2552 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 17: an RLC SDU on RB8 having the content equal to the first 2552 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 18: an RLC SDU on RB8 having the content equal to the first 2552 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 19: an RLC SDU on RB8 having the content equal to the first 2552 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 20: an RLC SDU on RB8 having the content equal to the first 2552 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 21: an RLC SDU on RB8 having the content equal to the first 2552 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 22: an RLC SDU on RB8 having the content equal to the first 2552 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 23: an RLC SDU on RB8 having the content equal to the first 2552 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 24: an RLC SDU on RB8 having the content equal to the first 2552 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 25: an RLC SDU on RB8 having the content equal to the first 2552 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 26: an RLC SDU on RB8 having the content equal to the first 2552 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 27: an RLC SDU on RB8 having the content equal to the first 2552 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 28: an RLC SDU on RB8 having the content equal to the first 2552 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 29: an RLC SDU on RB8 having the content equal to the first 2552 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 30: an RLC SDU on RB8 having the content equal to the first 2552 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 31: an RLC SDU on RB8 having the content equal to the first 2552 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 32: an RLC SDU on RB8 having the content equal to the first 2552 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 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.44.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.44.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.44.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.44 for the downlink 20 ms TTI case.

18.1.2.44.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (128 kbps)**	**DCCH**
TFS	TF0, bits	0x81	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	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (2048 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x656	0x148
	TF1, bits	1x39	1x103	1x60	1x656	1x148
	TF2, bits	1x81	N/A	N/A	2x656	N/A
	TF3, bits	N/A	N/A	N/A	4x656	N/A
	TF4, bits	N/A	N/A	N/A	8x656	N/A
	TF5, bits	N/A	N/A	N/A	12x656	N/A
	TF6, bits	N/A	N/A	N/A	16x656	N/A
	TF7, bits	N/A	N/A	N/A	20x656	N/A
	TF8, bits	N/A	N/A	N/A	24x656	N/A
	TF9, bits	N/A	N/A	N/A	28x656	N/A
	TF10, bits	N/A	N/A	N/A	32x656	N/A
	TF11, bits	N/A	N/A	N/A	36x656	N/A
	TF12, bits	N/A	N/A	N/A	40x656	N/A
	TF13, bits	N/A	N/A	N/A	44x656	N/A
	TF14, bits	N/A	N/A	N/A	48x656	N/A
	TF15, bits	N/A	N/A	N/A	52x656	N/A
	TF16, bits	N/A	N/A	N/A	56x656	N/A
	TF17, bits	N/A	N/A	N/A	60x656	N/A
	TF18, bits	N/A	N/A	N/A	64x656	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF7, TF0)
DL_TFC22	(TF1, TF0, TF0, TF7, TF0)
DL_TFC23	(TF2, TF1, TF1, TF7, TF0)
DL_TFC24	(TF0, TF0, TF0, TF8, TF0)
DL_TFC25	(TF1, TF0, TF0, TF8, TF0)
DL_TFC26	(TF2, TF1, TF1, TF8, TF0)
DL_TFC27	(TF0, TF0, TF0, TF9, TF0)
DL_TFC28	(TF1, TF0, TF0, TF9, TF0)
DL_TFC29	(TF2, TF1, TF1, TF9, TF0)
DL_TFC30	(TF0, TF0, TF0, TF10, TF0)
DL_TFC31	(TF1, TF0, TF0, TF10, TF0)
DL_TFC32	(TF2, TF1, TF1, TF10, TF0)
DL_TFC33	(TF0, TF0, TF0, TF11, TF0)
DL_TFC34	(TF1, TF0, TF0, TF11, TF0)
DL_TFC35	(TF2, TF1, TF1, TF11, TF0)
DL_TFC36	(TF0, TF0, TF0, TF12, TF0)
DL_TFC37	(TF1, TF0, TF0, TF12, TF0)
DL_TFC38	(TF2, TF1, TF1, TF12, TF0)
DL_TFC39	(TF0, TF0, TF0, TF13, TF0)
DL_TFC40	(TF1, TF0, TF0, TF13, TF0)
DL_TFC41	(TF2, TF1, TF1, TF13, TF0)
DL_TFC42	(TF0, TF0, TF0, TF14, TF0)
DL_TFC43	(TF1, TF0, TF0, TF14, TF0)
DL_TFC44	(TF2, TF1, TF1, TF14, TF0)
DL_TFC45	(TF0, TF0, TF0, TF15, TF0)
DL_TFC46	(TF1, TF0, TF0, TF15, TF0)
DL_TFC47	(TF2, TF1, TF1, TF15, TF0)
DL_TFC48	(TF0, TF0, TF0, TF16, TF0)
DL_TFC49	(TF1, TF0, TF0, TF16, TF0)
DL_TFC50	(TF2, TF1, TF1, TF16, TF0)
DL_TFC51	(TF0, TF0, TF0, TF17, TF0)
DL_TFC52	(TF1, TF0, TF0, TF17, TF0)
DL_TFC53	(TF2, TF1, TF1, TF17, TF0)
DL_TFC54	(TF0, TF0, TF0, TF18, TF0)
DL_TFC55	(TF1, TF0, TF0, TF18, TF0)
DL_TFC56	(TF2, TF1, TF1, TF18, TF0)
DL_TFC57	(TF0, TF0, TF0, TF0, TF1)
DL_TFC58	(TF1, TF0, TF0, TF0, TF1)
DL_TFC59	(TF2, TF1, TF1, TF0, TF1)
DL_TFC60	(TF0, TF0, TF0, TF1, TF1)

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC61	(TF1, TF0, TF0, TF1, TF1)
DL_TFC61	(TF2, TF1, TF1, TF1, TF1)
DL_TFC63	(TF0, TF0, TF0, TF2, TF1)
DL_TFC64	(TF1, TF0, TF0, TF2, TF1)
DL_TFC65	(TF2, TF1, TF1, TF2, TF1)
DL_TFC66	(TF0, TF0, TF0, TF3, TF1)
DL_TFC67	(TF1, TF0, TF0, TF3, TF1)
DL_TFC68	(TF2, TF1, TF1, TF3, TF1)
DL_TFC69	(TF0, TF0, TF0, TF4, TF1)
DL_TFC70	(TF1, TF0, TF0, TF4, TF1)
DL_TFC71	(TF2, TF1, TF1, TF4, TF1)
DL_TFC72	(TF0, TF0, TF0, TF5, TF1)
DL_TFC73	(TF1, TF0, TF0, TF5, TF1)
DL_TFC74	(TF2, TF1, TF1, TF5, TF1)
DL_TFC75	(TF0, TF0, TF0, TF6, TF1)
DL_TFC76	(TF1, TF0, TF0, TF6, TF1)
DL_TFC77	(TF2, TF1, TF1, TF6, TF1)
DL_TFC78	(TF0, TF0, TF0, TF7, TF1)
DL_TFC79	(TF1, TF0, TF0, TF7, TF1)
DL_TFC80	(TF2, TF1, TF1, TF7, TF1)
DL_TFC81	(TF0, TF0, TF0, TF8, TF1)
DL_TFC82	(TF1, TF0, TF0, TF8, TF1)
DL_TFC83	(TF2, TF1, TF1, TF8, TF1)
DL_TFC84	(TF0, TF0, TF0, TF9, TF1)
DL_TFC85	(TF1, TF0, TF0, TF9, TF1)
DL_TFC86	(TF2, TF1, TF1, TF9, TF1)
DL_TFC87	(TF0, TF0, TF0, TF10, TF1)
DL_TFC88	(TF1, TF0, TF0, TF10, TF1)
DL_TFC89	(TF2, TF1, TF1, TF10, TF1)
DL_TFC90	(TF0, TF0, TF0, TF11, TF1)
DL_TFC91	(TF1, TF0, TF0, TF11, TF1)
DL_TFC92	(TF2, TF1, TF1, TF11, TF1)
DL_TFC93	(TF0, TF0, TF0, TF12, TF1)
DL_TFC94	(TF1, TF0, TF0, TF12, TF1)
DL_TFC95	(TF2, TF1, TF1, TF12, TF1)
DL_TFC96	(TF0, TF0, TF0, TF13, TF1)
DL_TFC97	(TF1, TF0, TF0, TF13, TF1)
DL_TFC98	(TF2, TF1, TF1, TF13, TF1)
DL_TFC99	(TF0, TF0, TF0, TF14, TF1)
DL_TFC100	(TF1, TF0, TF0, TF14, TF1)
DL_TFC101	(TF2, TF1, TF1, TF14, TF1)
DL_TFC102	(TF0, TF0, TF0, TF15, TF1)
DL_TFC103	(TF1, TF0, TF0, TF15, TF1)
DL_TFC104	(TF2, TF1, TF1, TF15, TF1)
DL_TFC105	(TF0, TF0, TF0, TF16, TF1)
DL_TFC106	(TF1, TF0, TF0, TF16, TF1)
DL_TFC107	(TF2, TF1, TF1, TF16, TF1)
DL_TFC108	(TF0, TF0, TF0, TF17, TF1)
DL_TFC109	(TF1, TF0, TF0, TF17, TF1)
DL_TFC110	(TF2, TF1, TF1, TF17, TF1)
DL_TFC111	(TF0, TF0, TF0, TF18, TF1)
DL_TFC112	(TF1, TF0, TF0, TF18, TF1)
DL_TFC113	(TF2, TF1, TF1, TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC58	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC59	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC60	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC4, DL_TFC61	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18 UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 632
5	DL_TFC5, DL_TFC62	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632
6	DL_TFC6, DL_TFC63	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, 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_TFC7, DL_TFC64	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
8	DL_TFC8, DL_TFC65	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
9	DL_TFC9, DL_TFC66	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
10	DL_TFC10, DL_TFC67	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC68	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9 UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
12	DL_TFC12, DL_TFC69	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 5112
13	DL_TFC13, DL_TFC70	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 5112
14	DL_TFC14, DL_TFC71	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
15	DL_TFC15, DL_TFC72	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 7672
16	DL_TFC16, DL_TFC73	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 7672
17	DL_TFC17, DL_TFC74	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
18	DL_TFC18, DL_TFC75	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 10232
19	DL_TFC19, DL_TFC76	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 10232

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC77	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 10232
21	DL_TFC21, DL_TFC78	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 12792
22	DL_TFC22, DL_TFC79	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 12792
23	DL_TFC23, DL_TFC80	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 12792
24	DL_TFC24, DL_TFC81	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 15352
25	DL_TFC25, DL_TFC82	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 15352
26	DL_TFC26, DL_TFC83	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 15352
27	DL_TFC27, DL_TFC84	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 17912
28	DL_TFC28, DL_TFC85	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 17912

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
29	DL_TFC29, DL_TFC86	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 17912
30	DL_TFC30, DL_TFC87	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 20472
31	DL_TFC31, DL_TFC88	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 20472
32	DL_TFC32, DL_TFC89	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 20472
33	DL_TFC33, DL_TFC90	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 23032
34	DL_TFC34, DL_TFC91	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 23032
35	DL_TFC35, DL_TFC92	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 23032
36	DL_TFC36, DL_TFC93	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 25592
37	DL_TFC37, DL_TFC94	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 25592

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
38	DL_TFC38, DL_TFC95	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 25592
39	DL_TFC39, DL_TFC96	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 28152
40	DL_TFC40, DL_TFC97	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 28152
41	DL_TFC41, DL_TFC98	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 28152
42	DL_TFC42, DL_TFC99	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 30712
43	DL_TFC43, DL_TFC100	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 30712
44	DL_TFC44, DL_TFC101	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 30712
45	DL_TFC45, DL_TFC102	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 33272
46	DL_TFC46, DL_TFC103	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 33272

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
47	DL_TFC47, DL_TFC104	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 33272
48	DL_TFC48, DL_TFC105	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 35832
49	DL_TFC49, DL_TFC106	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 35832
50	DL_TFC50, DL_TFC107	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 35832
51	DL_TFC51, DL_TFC108	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 38392
52	DL_TFC52, DL_TFC109	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 38392
53	DL_TFC53, DL_TFC110	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 38392
54	DL_TFC54, DL_TFC111	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 40952
55	DL_TFC55, DL_TFC112	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 40952

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
56	DL_TFC56, DL_TFC113	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 40952

NOTE: 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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. 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).

18.1.2.44.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by 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 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 10: 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 11: 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.

- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 2552 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: an RLC SDU on RB8 having the content equal to the first 2552 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: an RLC SDU on RB8 having the content equal to the first 2552 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 15: an RLC SDU on RB8 having the content equal to the first 2552 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 16: an RLC SDU on RB8 having the content equal to the first 2552 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 17: an RLC SDU on RB8 having the content equal to the first 2552 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 18: an RLC SDU on RB8 having the content equal to the first 2552 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 19: an RLC SDU on RB8 having the content equal to the first 2552 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 20: an RLC SDU on RB8 having the content equal to the first 2552 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 21: an RLC SDU on RB8 having the content equal to the first 2552 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 22: an RLC SDU on RB8 having the content equal to the first 2552 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 23: an RLC SDU on RB8 having the content equal to the first 2552 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 24: an RLC SDU on RB8 having the content equal to the first 2552 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 25: an RLC SDU on RB8 having the content equal to the first 2552 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 26: an RLC SDU on RB8 having the content equal to the first 2552 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 27: an RLC SDU on RB8 having the content equal to the first 2552 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 28: an RLC SDU on RB8 having the content equal to the first 2552 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 29: an RLC SDU on RB8 having the content equal to the first 2552 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 30: an RLC SDU on RB8 having the content equal to the first 2552 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 31: an RLC SDU on RB8 having the content equal to the first 2552 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 32: an RLC SDU on RB8 having the content equal to the first 2552 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 33: an RLC SDU on RB8 having the content equal to the first 2552 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 34: an RLC SDU on RB8 having the content equal to the first 2552 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 35: an RLC SDU on RB8 having the content equal to the first 2552 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 36: an RLC SDU on RB8 having the content equal to the first 2552 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 37: an RLC SDU on RB8 having the content equal to the first 2552 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 38: an RLC SDU on RB8 having the content equal to the first 2552 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 39: an RLC SDU on RB8 having the content equal to the first 2552 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 40: an RLC SDU on RB8 having the content equal to the first 2552 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 41: an RLC SDU on RB8 having the content equal to the first 2552 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 42: an RLC SDU on RB8 having the content equal to the first 2552 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 43: an RLC SDU on RB8 having the content equal to the first 2552 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 44: an RLC SDU on RB8 having the content equal to the first 2552 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 45: an RLC SDU on RB8 having the content equal to the first 2552 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 46: an RLC SDU on RB8 having the content equal to the first 2552 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 47: an RLC SDU on RB8 having the content equal to the first 2552 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 48: an RLC SDU on RB8 having the content equal to the first 2552 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 49: an RLC SDU on RB8 having the content equal to the first 2552 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 50: an RLC SDU on RB8 having the content equal to the first 2552 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 51: an RLC SDU on RB8 having the content equal to the first 2552 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 52: an RLC SDU on RB8 having the content equal to the first 2552 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 53: an RLC SDU on RB8 having the content equal to the first 2552 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 54: an RLC SDU on RB8 having the content equal to the first 2552 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 55: an RLC SDU on RB8 having the content equal to the first 2552 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 56: an RLC SDU on RB8 having the content equal to the first 2552 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 15b the UE shall send at least one MEASUREMENT REPORT message.

3GPP TSG-T1 Meeting #18
San Antonio, U.S.A, 10th – 14th February 2003
3GPP TSG-T1/SIG Meeting #27
San Antonio, U.S.A, Feb 10th - 14th , 2003

Tdoc ⌘T1-030216

T1S-030070

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **467** ⌘**rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to TS34.123-1 R5 Addition of test cases for RBs for conventional/speech and streaming.unknown or conversational/unknown service based on TS 34.108
Source:	⌘	Samsung Electronics.
Work item code:	⌘	TEI
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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:	⌘	In LCR TDD RB test cases, some RB test cases of conventional/speech and Streaming/Unknown or Conversational/Unknown services are omitted in TS 34.123-1
Summary of change:	⌘	3 RAB test cases and two void section are added to chap 18.1.2 - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Streaming/Unknown/ UL : 57.6 DL : 57.6 kbps/CS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.45. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Streaming/Unknown/ UL : 0 DL : 64 kbps/CS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.46. - Conversational/speech /UL : 12.2 DL : 12.2 Kbps/CS RAB + Conversational/Unknown/ UL : 64 DL : 64 kbps/CS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.49. - 2 void sections are added for consistency with FDD and WB-TDD RAB test cases.
Consequences if not approved:	⌘	In low chip rate TDD, some RAB test cases can not be tested.

Clauses affected:	⌘	18.1.2

☒ Y ☐ N

Other specs affected:	⌘		X	Other core specifications	⌘	TS 34.123-2
		Y		Test specifications		
			X	O&M Specifications		
Other comments:	⌘	Affects 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.

18.1.2.45 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.45.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.45.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.45.

18.1.2.45.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (57.6 kbps)**	**DCCH**
TFS	TF0, bits	0x81	0x103	0x60	0x576	0x148
	TF1, bits	1x39	1x103	1x60	1x576	1x148
	TF2, bits	1x81	N/A	N/A	2x576	N/A
	TF3, bits	N/A	N/A	N/A	3x576	N/A
	TF4, bits	N/A	N/A	N/A	4x576	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)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (57.6 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x576	0x148
	TF1, bits	1x39	1x103	1x60	1x576	1x148
	TF2, bits	1x81	N/A	N/A	2x576	N/A
	TF3, bits	N/A	N/A	N/A	3x576	N/A
	TF4, bits	N/A	N/A	N/A	4x576	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, DL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, DL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3,UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 576
4	DL_TFC4, DL_TFC19	UL_TFC4, DL_TFC19	DL_TFC0, DL_TFC15, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3 UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 576
5	DL_TFC5, DL_TFC20	UL_TFC5, DL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 576
6	DL_TFC6, DL_TFC21	UL_TFC6, DL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 1152	RB5: No data RB6: No data RB7: No data RB8: 1152
7	DL_TFC7, DL_TFC22	UL_TFC7, DL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 1152	RB5: 39 RB6: No data RB7: No data RB8: 1152
8	DL_TFC8, DL_TFC23	UL_TFC8, DL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 1152	RB5: 81 RB6: 103 RB7: 60 RB8: 1152
9	DL_TFC9, DL_TFC24	UL_TFC9, DL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1728	RB5: No data RB6: No data RB7: No data RB8: 1728
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1728	RB5: 39 RB6: No data RB7: No data RB8: 1728

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, DL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1728	RB5: 81 RB6: 103 RB7: 60 RB8: 1728
12	DL_TFC12, DL_TFC27	UL_TFC12, DL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC26	RB5: 39 RB6: 103 RB7: 60 RB8: 2304	RB5: No data RB6: No data RB7: No data RB8: 2304
13	DL_TFC13, DL_TFC28	UL_TFC13, DL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2304	RB5: 39 RB6: No data RB7: No data RB8: 2304
14	DL_TFC14, DL_TFC29	UL_TFC14, DL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2304	RB5: 81 RB6: 103 RB7: 60 RB8: 2304
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test .						

18.1.2.45.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified in the actual sub test.
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3, 6, 9 and 12: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4, 7, 10 and 13: an RLC SDU on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5, 8, 11 and 14: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.46 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.46.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.46.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.46.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 64 kbps,, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.1.15.1 (Streaming/unknown/UL:14.4 kbps) is used in uplink.

18.1.2.46.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (14.4 kbps)**	**DCCH**
TFS	TF0, bits	0x81	0x103	0x60	0x576	0x148
	TF1, bits	1x39	1x103	1x60	1x576	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (64 kbps)**	**DCCH**
TFS	TF0, bits	1x0	0x103	0x60	0x320	0x148
	TF1, bits	1x39	1x103	1x60	1x320	1x148
	TF2, bits	1x81	N/A	N/A	2x320	N/A
	TF3, bits	N/A	N/A	N/A	4x320	N/A
	TF4, bits	N/A	N/A	N/A	8x320	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 320 (note 2)
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 320 (note 2)
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 320 (note 2)
6	DL_TFC6, DL_TFC21	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 640 (note 3)
7	DL_TFC7, DL_TFC22	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 640 (note 3)
8	DL_TFC8, DL_TFC23	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 640 (note 3)
9	DL_TFC9, DL_TFC24	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 1280 (note 4)

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
10	DL_TFC10, DL_TFC25	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9 UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 1280 (note 4)
11	DL_TFC11, DL_TFC26	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 1280 (note 4)
12	DL_TFC12, DL_TFC27	UL_TFC3 UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 2560 (note 5)
13	DL_TFC13, DL_TFC28	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 2560 (note 5)
14	DL_TFC14, DL_TFC29	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 2560 (note 5)

NOTE 1: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
NOTE 2: RB8: SS is using a DL RLC SDU with 320 bits as test data (=DL RLC PDU size for DL/TF1). UE will return one RLC PDU. SS creates an UL RLC SDU from the first 320 bits of the received RLC PDU.
NOTE 3: RB8: SS is using a DL RLC SDU size of 640 bits as test data (=DL RLC PDU size for DL/TF2). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.
NOTE 4: RB8: SS is using a DL RLC SDU size of 1280 bits as test data (=DL RLC PDU size for DL/TF3). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.
NOTE 5: RB8: SS is using a DL RLC SDU size of 2560 bits as test data (=DL RLC PDU size for DL/TF4). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.
As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test

18.1.2.46.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified in the actual sub test.
3. At step 15 the UE shall return
   - for sub-test 3, 6, 9 and 12: no data on RB5, RB6 and RB7.

- for sub-test 1, 4, 7, 10 and 13: an RLC SDU on RB5 having the same content as sent by the SS; and no data shall be received on RB6 or RB7.
- for sub-test 2, 5, 8, 11 and 14: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by the SS.
- for sub-test 1 to 2: no data on RB8.
- for sub-test 3 to 5: an RLC SDU on RB8 having the same content as sent by the SS.
- for sub-test 6 to 14: an RLC SDU on RB5 having the same content as the first 576 bits of the RLC SDU sent by the SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.47 Void

18.1.2.48 Void

18.1.2.49 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.49.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI

18.1.2.49.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.49.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.49 for the 20 ms TTI case.

18.1.2.49.1.3 Method of test

See 18.1.1.2 for test procedure.

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB8):

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

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	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	2x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	2x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC7	UL_TFC1, DL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC8	UL_TFC2, DL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC9	UL_TFC3, DL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: No data RB6: No data RB7: No data RB8: 2x640
4	DL_TFC4, DL_TFC10	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: 2x640
5	DL_TFC5, DL_TFC11	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: 2x640
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.49.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
   - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
   - for sub-test 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
   - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.49.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI

18.1.2.49.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.49.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.49 for the 40 ms TTI case.

18.1.2.49.2.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB8):

Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer discard	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (RAB subflow #1)**	**RB6 (RAB subflow #2)**	**RB7 (RAB subflow #3)**	**RB8 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x81	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	4x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	4x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC7	UL_TFC1, DL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC8	UL_TFC2, DL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC9	UL_TFC3, DL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: No data RB6: No data RB7: No data RB8: 4x640
4	DL_TFC4, DL_TFC10	UL_TFC4, DL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: 4x640
5	DL_TFC5, DL_TFC11	UL_TFC5, DL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: 4x640

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.

18.1.2.49.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by 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 sent by SS; and no data shall be received on RB8.
   - for sub-test 3: four RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
   - for sub-test 4: an RLC SDU on RB5 and four RLC SDUs on RB8 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 RB5, RB6 and RB7; and four RLC SDUs on RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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San Antonio, US, 10th – 14th February 2003
3GPP TSG-T1/SIG Meeting #27
San Antonio, U.S.A, Feb 10th - 14th, 2003

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CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **468** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to TS34.123-1 R5 Addition of test cases for RBs for conventional/unknown and interactive or background service based on TS 34.108
Source:	⌘	Samsung Electronics.
Work item code:	⌘	TEI
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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:	⌘	In LCR TDD RB test cases, some RB test cases of conventional/unknown and or Conversational/Unknown or Interactive or Background services are omitted in TS 34.123-1
Summary of change:	⌘	4 RAB test cases and two void section are added to chap 18.1.2 - Conversational/unknown /UL : 64 DL : 64 Kbps/CS RAB + Conversational/Unknown/ UL : 64 DL : 64 kbps/CS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.50. - Conversational/unknown /UL : 64 DL : 64 Kbps/CS RAB + Interactive or Background/ UL : 64 DL : 64 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.51. - Conversational/unknown /UL : 64 DL : 64 Kbps/CS RAB + Interactive or Background/ UL : 64 DL : 128 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.52. - Conversational/unknown /UL : 64 DL : 64 Kbps/CS RAB + Interactive or Background/ UL : 128 DL : 128 kbps/PS RAB + UL:3.4 DL : 3.4 kbps SRBs for DCCH is added as 18.1.2.53.
Consequences if not approved:	⌘	In low chip rate TDD, some RAB test cases can not be tested.

Clauses affected:	⌘	18.1.2

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
		Y		Test specifications		TS 34.123-2
			X	O&M Specifications		
Other comments:	⌘	Affects 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.

18.1.2.50 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.50.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20 ms TTI

18.1.2.50.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.50.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.50 for the 20 ms TTI case.

18.1.2.50.1.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5 and RB6):

	RB5 (64 kbps)	**RB6 (64 kbps)**
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard	 FALSE 100ms	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .		

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (64 kbps)**	**RB6 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	2x640	2x640	1x148
	TF2, bits	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF0, TF1, TF0)
UL_TFC3	(TF1, TF1, TF0)
UL_TFC4	(TF0, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	RB6 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	2x640	2x640	1x148
	TF2, bits	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF0, TF1, TF0)
DL_TFC3	(TF1, TF1, TF0)
DL_TFC4	(TF0, TF0, TF1)
DL_TFC5	(TF1, TF0, TF1)
DL_TFC6	(TF0, TF1, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC5	UL_TFC1, DL_TFC5	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 640 RB6: 640	RB5: 2x640 RB6: No data
2	DL_TFC2, DL_TFC6	UL_TFC2, DL_TFC6	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 640 RB6: 640	RB5: No data RB6: 2x640
3	DL_TFC3, DL_TFC7	UL_TFC3, DL_TFC7	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 640 RB6: 640	RB5: 2x640 RB6: 2x640

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.

18.1.2.50.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.

3. At step 15 the UE shall return

   - for sub-test 1: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.

   - for sub-test 2: two RLC SDUs on RB6 having the same content as sent by SS; and no data shall be received on RB5.

   - for sub-test 3: two RLC SDUs on RB5 and RB6 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.50.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40 ms TTI

18.1.2.50.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.50.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.50 for the 40 ms TTI case.

18.1.2.50.2.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5 and RB6):

	RB5 (64 kbps)	**RB6 (64 kbps)**
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard	 FALSE 100ms	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .		

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (64 kbps)**	**RB6 (64 kbps)**	**DCCH**
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	4x640	4x640	1x148
	TF2, bits	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF0, TF1, TF0)
UL_TFC3	(TF1, TF1, TF0)
UL_TFC4	(TF0, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	RB6 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	4x640	4x640	1x148
	TF2, bits	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF0, TF1, TF0)
DL_TFC3	(TF1, TF1, TF0)
DL_TFC4	(TF0, TF0, TF1)
DL_TFC5	(TF1, TF0, TF1)
DL_TFC6	(TF0, TF1, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC5	UL_TFC1, DL_TFC5	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 640 RB6: 640	RB5: 4x640 RB6: No data
2	DL_TFC2, DL_TFC6	UL_TFC2, DL_TFC6	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 640 RB6: 640	RB5: No data RB6: 4x640
3	DL_TFC3, DL_TFC7	UL_TFC3, DL_TFC7	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 640 RB6: 640	RB5: 4x640 RB6: 4x640

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.

18.1.2.50.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.

3. At step 15 the UE shall return

   - for sub-test 1: four RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.

   - for sub-test 2: four RLC SDUs on RB6 having the same content as sent by SS; and no data shall be received on RB5.

   - for sub-test 3: four RLC SDUs on RB5 and RB6 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.51 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.51.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:64 DL:64 kbps / PS RAB

18.1.2.51.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.51.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51 for the 20 ms TTI case.

18.1.2.51.1.3 Method of test

See 18.1.1.2 for test procedure.

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer discard	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps, 20 ms TTI)	RB6 (I/B 64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps, 20 ms TTI)	RB6 (I/B 64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 952
4	DL_TFC4, DL_TFC14	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
5	DL_TFC5, DL_TFC15	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
8	DL_TFC8, DL_TFC18	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 2x640 RB6: 952
9	DL_TFC9, DL_TFC19	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 1272
NOTE: 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 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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

18.1.2.51.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
   - for sub-test 1, 2, 3, 4: RLC SDUs on RB6 having the same content as sent by the SS; and no data shall be received on RB5.
   - for sub-test 5: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6.
   - for sub-test 6, 7, 8 and 9: RLC SDUs on RB5 and RB6 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.51.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI + Interactive or background / UL:64 DL:64 kbps / PS RAB

18.1.2.51.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.51.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51 for the 40 ms TTI case.

18.1.2.51.2.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (Conv. 64 kbps)**	**RB6 (I/B 64 kbps)**	**DCCH**
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, RB6, DCCH)**
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 64 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 952
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC5, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC6, UL_TFC10, UL_TFC16	RB5: 640 RB6: 312	RB5: 4x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 4x640 RB6: 952
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: 1272

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TB size .

18.1.2.51.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 5: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 6, 7, 8 and 9: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.52 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.52.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:64 DL:128 kbps / PS RAB

18.1.2.52.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.52.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.52 for the 20 ms TTI case.

18.1.2.52.1.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (Conv. 64 kbps)**	**RB6 (I/B 64 kbps)**	**DCCH**
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, RB6, DCCH)**
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 1272
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 2552
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 2x640 RB6: 1272
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 2552

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TB size.

18.1.2.52.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 5: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 6: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
   - For sub-test 3: RLC SDU on RB6 having the content equal to the first 952 bits of the test data sent by the SS in downlink;
   - For sub-test 4: RLC SDU on RB6 having the content equal to the first 1272 bits of the test data sent by the SS in downlink;
   - for sub-test 8: an RLC SDU on RB6 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.
   - for sub-test 9: an RLC SDU on RB6 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.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.52.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI + Interactive or background / UL:64 DL:128 kbps / PS RAB

18.1.2.52.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.52.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51 for the 40 ms TTI case.

18.1.2.52.2.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard	 FALSE 100ms
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	**RB5 (Conv. 64 kbps)**	**RB6 (I/B 64 kbps)**	**DCCH**
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Uplink TFCS:

TFCI	**(RB5, RB6, DCCH)**
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 1272
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 2552
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: No data

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 4x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 4x640 RB6: 1272
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC15, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: 2552
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TB size .						

18.1.2.52.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 5: four RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 6: four RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
   - For sub-test 3: RLC SDU on RB6 having the content equal to the first 652 bits of the test data sent by the SS in downlink;

- For sub-test 4: RLC SDU on RB6 having the content equal to the first 1272 bits of the test data sent by the SS in downlink;
- for sub-test 8: an RLC SDU on RB6 having the content equal to the first 652 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS.
- for sub-test 9: an RLC SDU on RB6 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.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.53 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.53.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:128 DL:128 kbps / PS RAB

18.1.2.53.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.53.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.53 for the 20 ms TTI case.

18.1.2.53.1.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC	
TM RLC	
Segmentation indication	FALSE
Transmission RLC discard	
CHOICE *SDU Discard Mode*	
Timer based no explicit	
Timer_discard	100ms
Downlink RLC	
TM RLC	
Segmentation indication	FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)

TFCI	(RB5, RB6, DCCH)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 2552	RB5: No data RB6: 2552
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 1272
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 2552	RB5: 2x640 RB6: 2552

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test.

18.1.2.53.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 5: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 6, 7, 8 and 9: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.53.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI + Interactive or background / UL:128 DL:128 kbps / PS RAB

18.1.2.53.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.53.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.53 for the 40 ms TTI case.

18.1.2.53.2.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC	
TM RLC	
Segmentation indication	FALSE
Transmission RLC discard	
CHOICE *SDU Discard Mode*	
Timer based no explicit	
Timer_discard	100ms
Downlink RLC	
TM RLC	
Segmentation indication	FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, UL_TFC11	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, UL_TFC12	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, UL_TFC13	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
4	DL_TFC4, UL_TFC14	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 2552	RB5: No data RB6: 2552
5	DL_TFC5, UL_TFC15	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: No data
6	DL_TFC6, UL_TFC16	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5 UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 4x640 RB6: 312
7	DL_TFC7, UL_TFC17	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: 632
8	DL_TFC8, UL_TFC18	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 4x640 RB6: 1272	RB5: 4x640 RB6: 1272
9	DL_TFC9, UL_TFC19	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 2552	RB5: 4x640 RB6: 2552

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test.

18.1.2.53.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
   - for sub-test 5: four RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 6, 7, 8 and 9: four RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

3GPP TSG-T1 Meeting #18
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San Antonio, U.S.A, Feb 10th - 14th, 2003

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CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **469** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to TS34.123-1 R5 Addition of test cases for RB for interactive or /background and streaming/unknown service and test case for RB for combinations on S-CCPCH based on 34.108
Source:	⌘	Samsung Electronics.
Work item code:	⌘	TEI
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	REL-5

Use one 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 one 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:	⌘	In LCR TDD RB test cases, some RB test case for interactive or/background and streaming/unknown service based on 34.108 is omitted. And RB test case for combinations on S-CCPCH based on 34.108 is omitted.
Summary of change:	⌘	1 RAB test case is added to chap 18.1.2 - Interactive or /background/ UL : 64 kbps DL : 128 kbps / PS RAB + Streaming/ unknown/ UL : 0 DL: 64 kbps /CS RAB + UL: 3.4 DL : 3.4 kbps SRBs for DCCH A new chapter is introduced as 18.1.3 as "Combinations on SCCPCH" 1 RAB test case is added to chap 18.1.3 - Stand-alone 32 kbps SRB for PCCH is added as 18.1.3.1.
Consequences if not approved:	⌘	In low chip rate TDD, some RAB test cases can not be tested.

Clauses affected:	⌘	18.1.2, 18.1.3			
Other specs Affected:	⌘	**Y** / **N**	Other core specifications	⌘	
		N / X			
		Y /	Test specifications		TS 34.123-2

	X	O&M Specifications

Other comments: ⌘ Affects on 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.

18.1.2.54 Interactive or background / UL:64 DL:128 kbps / PS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.54.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.54.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.54.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 64 kbps, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.1.15.1 (Streaming/unknown/UL:14.4 kbps) is used in uplink.

18.1.2.54.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (I/B 64 kbps)	RB6 (Str. 14.4 kbps)	DCCH
TFS	TF0, bits	0x336	0x576	0x148
	TF1, bits	1x336	1x576	1x148
	TF2, bits	2x336	N/A	N/A
	TF3, bits	3x336	N/A	N/A
	TF4, bits	4x336	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF0, TF0)
UL_TFC3	(TF3, TF0, TF0)
UL_TFC4	(TF4, TF0, TF0)
UL_TFC5	(TF0, TF1, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF2, TF1, TF0)
UL_TFC8	(TF3, TF1, TF0)
UL_TFC9	(TF4, TF1, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF1, TF0, TF1)
UL_TFC12	(TF2, TF0, TF1)
UL_TFC13	(TF3, TF0, TF1)
UL_TFC14	(TF4, TF0, TF1)
UL_TFC15	(TF0, TF1, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF2, TF1, TF1)
UL_TFC18	(TF3, TF1, TF1)
UL_TFC19	(TF4, TF1, TF1)

Downlink TFS:

	TFI	RB5 (I/B 128 kbps)	RB6 (Str. 64 kbps)	DCCH
TFS	TF0, bits	0x336	0x320	0x148
	TF1, bits	1x336	1x320	1x148
	TF2, bits	2x336	2x320	N/A
	TF3, bits	4x336	4x320	N/A
	TF4, bits	8x336	8x320	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF0, TF0)
DL_TFC3	(TF3, TF0, TF0)
DL_TFC4	(TF4, TF0, TF0)
DL_TFC5	(TF0, TF1, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF2, TF1, TF0)
DL_TFC8	(TF3, TF1, TF0)
DL_TFC9	(TF4, TF1, TF0)
DL_TFC10	(TF0, TF2, TF0)
DL_TFC11	(TF1, TF2, TF0)
DL_TFC12	(TF2, TF2, TF0)
DL_TFC13	(TF3, TF2, TF0)
DL_TFC14	(TF4, TF2, TF0)
DL_TFC15	(TF0, TF3, TF0)
DL_TFC16	(TF1, TF3, TF0)
DL_TFC17	(TF2, TF3, TF0)
DL_TFC18	(TF3, TF3, TF0)
DL_TFC19	(TF4, TF3, TF0)
DL_TFC20	(TF0, TF4, TF0)
DL_TFC21	(TF1, TF4, TF0)
DL_TFC22	(TF2, TF4, TF0)
DL_TFC23	(TF3, TF4, TF0)
DL_TFC24	(TF4, TF4, TF0)
DL_TFC25	(TF0, TF0, TF1)
DL_TFC26	(TF1, TF0, TF1)
DL_TFC27	(TF2, TF0, TF1)
DL_TFC28	(TF3, TF0, TF1)
DL_TFC29	(TF4, TF0, TF1)
DL_TFC30	(TF0, TF1, TF1)
DL_TFC31	(TF1, TF1, TF1)
DL_TFC32	(TF2, TF1, TF1)
DL_TFC33	(TF3, TF1, TF1)
DL_TFC34	(TF4, TF1, TF1)
DL_TFC35	(TF0, TF2, TF1)
DL_TFC36	(TF1, TF2, TF1)
DL_TFC37	(TF2, TF2, TF1)
DL_TFC38	(TF3, TF2, TF1)
DL_TFC39	(TF4, TF2, TF1)
DL_TFC40	(TF0, TF3, TF1)
DL_TFC41	(TF1, TF3, TF1)
DL_TFC42	(TF2, TF3, TF1)
DL_TFC43	(TF3, TF3, TF1)
DL_TFC44	(TF4, TF3, TF1)
DL_TFC45	(TF0, TF4, TF1)
DL_TFC46	(TF1, TF4, TF1)
DL_TFC47	(TF2, TF4, TF1)
DL_TFC48	(TF3, TF4, TF1)
DL_TFC49	(TF4, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC26	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 312 RB6: 576	RB5: 312 RB6: No data
2	DL_TFC2, DL_TFC27	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 632 RB6: 576	RB5: 632 RB6: No data
3	DL_TFC3, DL_TFC28	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 952 RB6: 576	RB5: 1272 RB6: No data
4	DL_TFC4, DL_TFC29	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 1272 RB6: 576	RB5: 2552 RB6: No data
5	DL_TFC5, DL_TFC30	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 320 (note 2)
6	DL_TFC6, DL_TFC31	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 320 (note 2)
7	DL_TFC7, DL_TFC32	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5 UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 320 (note 2)
8	DL_TFC8, DL_TFC33	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5 UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 320 (note 2)
9	DL_TFC9, DL_TFC34	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 320 (note 2)
10	DL_TFC10, DL_TFC35	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 640 (note 3)

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
11	DL_TFC11, DL_TFC36	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 640 (note 3)
12	DL_TFC12, DL_TFC37	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5 UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 640 (note 3)
13	DL_TFC13, DL_TFC38	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 640 (note 3)
14	DL_TFC14, DL_TFC39	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 640 (note 3)
15	DL_TFC15, DL_TFC40	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 1280 (note 4)
16	DL_TFC16, DL_TFC41	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 1280 (note 4)
17	DL_TFC17, DL_TFC42	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 1280 (note 4)
18	DL_TFC18, DL_TFC43	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 1280 (note 4)

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
19	DL_TFC19, DL_TFC44	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 1280 (note 4)
20	DL_TFC20, DL_TFC45	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 2560 (note 5)
21	DL_TFC21, DL_TFC46	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 2560 (note 5)
22	DL_TFC22, DL_TFC47	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 2560 (note 5)
23	DL_TFC23, DL_TFC48	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5 UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 2560 (note 5)
24	DL_TFC24, DL_TFC49	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 2560 (note 5)

NOTE 1: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
NOTE 2: RB6: SS is using a DL RLC SDU with 320 bits as test data (=DL RLC PDU size for DL/TF1). UE will return one RLC PDU. SS creates an UL RLC SDU from the first 320 bits of the received RLC PDU.
NOTE 3: RB6: SS is using a DL RLC SDU size of 640 bits as test data (=DL RLC PDU size for DL/TF2). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.
NOTE 4: RB6: SS is using a DL RLC SDU size of 1280 bits as test data (=DL RLC PDU size for DL/TF3). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.
NOTE 5: RB6: SS is using a DL RLC SDU size of 2560 bits as test data (=DL RLC PDU size for DL/TF4). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.
RB5: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test.

18.1.2.54.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
   - for sub-test 1, 2, 6, 7, 11, 12, 16, 17, 21, 22: an RLC SDU on RB5 having the same content as sent by the SS.
   - for sub-test 5, 10, 15 and 20: no data shall be received on RB5.
   - for sub-test 1 to 4: no data shall be received on RB6.
   - for sub-test 5 to 9: an RLC SDU on RB6 having the same content as sent by the SS.
   - for sub-test 10, 11, 12, 15, 16, 17, 20, 21 and 22: an RLC SDU on RB5 having the same content as the first 576 bits of the RLC SDU sent by the SS.
   - For sub-test 3,8,13,18,23: an RLC SDU on RB5 having the content equal to the first 952 bits of the test data sent by the SS in downlink;
   - For sub-test 4,9,14,19,24: an RLC SDU on RB5 having the content equal to the first 1272 bits of the test data sent by the SS in downlink;
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.3 Combinations on SCCPCH

18.1.3.1 Stand-alone signalling RB for PCCH

Impicitely tested.

NOTE The stand-alone signalling radio bearer for PCCH in TS 34.108, clause 6.11.5.4.4.1 is used in RRC test case 8.1.2.2.