Source: **T1**

Title: **CR to TS 34.123-1 v5.0.1 related to table format**

Agenda item: **5.1.3**

Document for: **Approval**

This document contains 1 CR to TS 34.123-1 v5.0.1. This CR has been agreed by T1 and is put forward to TSG T for approval.

NOTE: TS 34.123-1 R99, Rel-4 and Rel-5 and TS 34.123-1 Rel-4 were merged at T#13. This means that test cases for both releases are included in TS 34.123-1 Rel-4 and therefore this is the only release being maintained.

CR related to corrections to RRC test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	294	-	Rel-5	Clause 8, editorial changes to table format	D	5.0.1	5.1.0	T1-020555	TEI	R99, Rel-4, Rel-5

3GPP TSG T WG1 #16 **T1-020555**
Yokohama, Japan
29 July - 2 August 2002

3GPP TSG- T1 SIG Meeting #24 ***T1S-020532***
Yokohama, Japan, 29th – 1st Aug 2002

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **294** ⌘ **rev** **-** ⌘ Current version: **5.0.1** ⌘

*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:	⌘	Clause 8, editorial changes to table format
Source:	⌘	ETSI MCC
Work item code:	⌘	TEI
Date:	⌘	19/07/2002
Category:	⌘	**D**
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:	⌘	Due to the format of some of the tables, the alignment of information elements and values was confusing when pres CRs
Summary of change:	⌘	Different rows are used for different information elements NOTE: Please pay special attention to tables hightlighted in yellow.
Consequences if not approved:	⌘	Risk of not aligment between information elements and the corresponding values.

Clauses affected:	⌘	Clause 8

		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.

8 Radio Resource Control RRC

8.1 RRC Connection Management Procedure

8.1.1 Paging

8.1.1.1 Paging for Connection in idle mode

8.1.1.1.1 Definition

8.1.1.1.2 Conformance requirement

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

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

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

1> if the IE "Used paging identity" is a CN identity:

2> compare the IE "UE identity" with all of its allocated CN UE identities:

2> if one match is found:

3> indicate reception of paging; and

3> forward the IE "CN domain identity", the IE "UE identity" and the IE "Paging cause" to the upper layers.

1> otherwise:

2> ignore that paging record.

:

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

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

1> set the variable ESTABLISHMENT_CAUSE to the cause for establishment indicated by upper layers;

1> perform an RRC connection establishment procedure, according to subclause 8.1.3;

1> if the RRC connection establishment procedure was not successful:

2> indicate failure to establish the signalling connection to upper layers and end the procedure.

1> when the RRC connection establishment procedure is completed successfully:

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

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

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

1> when the cell update procedure completed successfully:

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

The UE shall, in the INITIAL DIRECT TRANSFER message:

1> set the IE "NAS message" as received from upper layers; and

1> set the IE "CN domain identity" as indicated by the upper layers; and

1> set the IE "Intra Domain NAS Node Selector" as follows:

2> derive the IE "Intra Domain NAS Node Selector" from TMSI/PMTSI, IMSI, or IMEI; and

2> provide the coding of the IE "Intra Domain NAS Node Selector" according to the following priorities:

1. derive the routing parameter for IDNNS from TMSI (CS domain) or PTMSI (PS domain) whenever a valid TMSI/PTMSI is available;

2. base the routing parameter for IDNNS on IMSI when no valid TMSI/PTMSI is available;

3. base the routing parameter for IDNNS on IMEI only if no (U)SIM is inserted in the UE.

1> calculate the START according to subclause 8.5.9 for the CN domain as set in the IE "CN Domain Identity"; and

1> include the calculated START value for that CN domain in the IE "START".

In CELL_FACH state, the UE shall:

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

1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

The UE shall:

1> transmit the INITIAL DIRECT TRANSFER message on the uplink DCCH using AM RLC on signalling radio bearer RB3;

1> when the INITIAL DIRECT TRANSFER message has been submitted to lower layers for transmission:

2> confirm the establishment of a signalling connection to upper layers; and

2> add the signalling connection with the identity indicated by the IE "CN domain identity" in the variable ESTABLISHED_SIGNALLING_CONNECTIONS.

1> when the successful delivery of the INITIAL DIRECT TRANSFER message has been confirmed by RLC:

2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.2 and 8.1.8, 3GPP TS 25.211 clause 5.3.3.10 (FDD), 3GPP TS25.221 (TDD), 3GPP TS 25.304 clause 8.

8.1.1.1.3 Test purpose

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

8.1.1.1.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

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

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

Expected sequence

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

Specific Message Contents

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

~~Information Element~~	~~Value/remark~~
~~CN common GSM-MAP NAS system information~~	~~LAC~~
~~CN domain system information list~~	~~Only 1 entry~~
~~- CN domain system information~~	
~~- CN domain identity~~	~~Supported Domain (PS Domain or CS Domain)~~
~~- CHOICE CN Type~~	~~GSM-MAP~~
~~- CN domain specific NAS system information~~	~~1E 01(CS) or 00 00(PS)~~
~~- CN domain specific DRX cycle length coefficient~~	~~7~~
~~UE Timers and constants in idle mode~~	
~~- T300~~	~~4000 milliseconds~~
~~- N300~~	~~7~~
~~- T312~~	~~10 seconds~~
~~- N312~~	~~1~~

Information Element	**Value/remark**
CN common GSM-MAP NAS system information	LAC
CN domain system information list	Only 1 entry
- CN domain system information	
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	1E 01(CS) or 00 00(PS)
- CN domain specific DRX cycle length coefficient	7
UE Timers and constants in idle mode	
- T300	4000 milliseconds
- N300	7
- T312	10 seconds
- N312	1

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

~~Information Element~~	~~Value/remark~~
~~CN domain system information list~~	~~Only 1 entry~~
~~CN domain system information~~	
~~- CN domain identity~~	~~Supported Domain (PS Domain or CS Domain)~~
~~- CHOICE CN Type~~	~~ANSI-41~~
~~- CN domain specific NAS system information~~	~~Default~~
~~- CN domain specific DRX cycle length coefficient~~	~~7~~
~~UE Timers and constants in idle mode~~	
~~- T300~~	~~4000 milliseconds~~
~~- N300~~	~~7~~
~~- T312~~	~~10 sec~~
~~- N312~~	~~1~~

Information Element	**Value/remark**
CN domain system information list	Only 1 entry
CN domain system information	
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE CN Type	ANSI-41
- CN domain specific NAS system information	Default
- CN domain specific DRX cycle length coefficient	7
UE Timers and constants in idle mode	
- T300	4000 milliseconds
- N300	7
- T312	10 sec
- N312	1

PAGING TYPE 1 (Step 2)

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

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

PAGING TYPE 1 (Step 3)

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

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

RRC CONNECTION REQUEST (Step 4)

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

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

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

Information Element	Value/remark
Message Type	
Integrity check info	Not present
CN domain identity	CS domain or PS domain
Intra Domain NAS Node Selector	
- CHOICE version	R99
-- CHOICE CN type	GSM-MAP
--- CHOICE Routing basis	IMSI (response to IMSI paging)
---- Routing parameter	Bit string (10) consisting of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant..
--- Entered parameter	False
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

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

Information Element	Value/remark
Message Type	
Integrity check info	Not present
CN domain identity	CS domain or PS domain
Intra Domain NAS Node Selector	
- CHOICE version	ANSI-41 : Bitstring(14), all bits set to 0
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

8.1.1.1.5 Test requirement

After step 2 the UE shall not transmit on the uplink CCCH in order to establish a RRC connection.

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

8.1.1.2 Paging for Connection in connected mode (CELL_PCH)

8.1.1.2.1 Definition

8.1.1.2.2 Conformance requirement

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

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

:

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

1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:

2> if the optional IE "CN originated page to connected mode UE" is included:

3> indicate reception of paging; and

3> forward the IE "CN domain identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.

2> otherwise:

3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.

2> ignore any other remaining IE "Paging record" that may be present in the message.

1> otherwise:

2> ignore that paging record.

If the CELL UPDATE CONFIRM message:

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

the UE shall:

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

Reference

3GPP TS 25.331 clause 8.1.2, 8.3.1.7.

8.1.1.2.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE 1 message which indicates that the paging has originated from UTRAN. To verify that the UE performs cell update procedure after entering the CELL_FACH state.

8.1.1.2.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH state (state 6-12) as specified in clause 7.4 of TS 34.108, with a valid U-RNTI already assigned by the SS.

Test Procedure

SS transmits SYSTEM INFORMATION BLOCK TYPE 1 or 13 messages, depending on the CN type supported by the UE. The SS transmits a PAGING TYPE 1 message, which includes an unmatched U-RNTI. The UE does not change its state. Then SS transmits a PAGING TYPE 1 message with a matched identifier but originates from the CN instead of UTRAN. The UE shall not change state after receiving this message. The SS transmits a PAGING TYPE 1 message, which includes a matched U-RNTI. Then the UE enters the CELL_FACH state and performs the cell updating procedure.

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

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SYSTEM INFORMATION BLOCK TYPE 13 or SYSTEM INFORMATION BLOCK TYPE 1	Transmit these messages on the BCCH, in addition to the normal BCCH transmissions. See specific message contents
2		←	PAGING TYPE 1	The SS transmits a message including an unmatched identifier. UE shall not respond to the paging.
3		←	PAGING TYPE 1	The SS transmits a message includes a matched identifier but with the used paging identity being a CN identity, UE shall not respond to the paging.
4		←	PAGING TYPE 1	The SS transmits the message with used paging identity being a UTRAN identity and including the UE's assigned U-RNTI
5		→	CELL UPDATE	The UE enters the CELL_FACH state. UE performs cell updating procedure. The CELL UPDATE message shall contain the value "Cell Update Cause" set to "paging response".
6		←	CELL UPDATE CONFIRM	See message content.
7		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

PAGING TYPE 1 (Step 2)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Set to an arbitrary 16-bit string which is different from the SRNC identity assigned.~~
~~- S-RNTI~~	~~Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.~~
~~- CN originated page to connected mode UE~~	~~Not Present~~
~~BCCH modification info~~	~~Not Present~~

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Set to an arbitrary 16-bit string which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

PAGING TYPE 1 (Step 3)

Same as the PAGING TYPE 1 message as in step 3 of clause 8.1.1.1.4.

PAGING TYPE 1 (Step 4)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Set to the same SRNC identity as previously assigned.~~
~~- S-RNTI~~	~~Set to the same S-RNTI as previously assigned.~~
~~- CN originated page to connected mode UE~~	~~Not Present~~
~~BCCH modification info~~	~~Not Present~~

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Set to the same SRNC identity as previously assigned.
- S-RNTI	Set to the same S-RNTI as previously assigned.
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

SYSTEM INFORMATION BLOCK TYPE 13

Use the same SYSTEM INFORMATION BLOCK TYPE 13 message as specified in clause 8.1.1.1.4.

SYSTEM INFORMATION BLOCK TYPE 1

Use the same SYSTEM INFORMATION BLOCK TYPE 1 message as specified in clause 8.1.1.1.4.

CELL UPDATE CONFIRM (Step 6)

Use the message sub-type in default message content defined in [9] (TS 34.108) Clause 9, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

8.1.1.2.5 Test requirement

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

After step 3 the UE shall not respond to the PAGING TYPE 1 message sent in step 3.

After step 4 the UE shall enter the CELL FACH state and send a CELL UPDATE message with "Cell Update Cause" IE set to "paging response".

After step 6 the UE shall be in the CELL_FACH state and shall transmit UTRAN MOBILITY INFORMATION CONFIRM message.

8.1.1.3 Paging for Connection in connected mode (URA_PCH)

8.1.1.3.1 Definition

8.1.1.3.2 Conformance requirement

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

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

:

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

1> if the IE "Used paging identity" is a UTRAN identity and if this U-RNTI is the same as the U-RNTI allocated to the UE:

2> if the optional IE "CN originated page to connected mode UE" is included:

3> indicate reception of paging; and

3> forward the IE "CN domain identity", the IE "Paging cause" and the IE "Paging record type identifier" to the upper layers.

2> otherwise:

3> perform a cell update procedure with cause "paging response" as specified in subclause 8.3.1.2.

2> ignore any other remaining IE "Paging record" that may be present in the message.

1> otherwise:

2> ignore that paging record.

If the CELL UPDATE CONFIRM message:

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

the UE shall:

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

Reference

3GPP TS 25.331 clause 8.1.2, 8.3.1.7.

8.1.1.3.3 Test purpose

To confirm that the UE enters the CELL_FACH state after it receives a PAGING TYPE 1 message in which the IE "Used paging identity" is set to "UTRAN identity", and the UE takes the U-RNTI value assigned to it in the IE "U-RNTI".

8.1.1.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The SS transmits a PAGING TYPE 1 message, which includes an unmatched U-RNTI. The UE does not change its current state. The SS transmits a PAGING TYPE 1 message which includes a matched U-RNTI. Then the UE listens to it and enters the CELL_FACH state to transmit a CELL UPDATE message using uplink CCCH in respond to the paging.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PAGING TYPE 1	The SS transmits the message that includes an unmatched identifier, but UE does not change its state.
2	←		PAGING TYPE 1	The SS transmits the message that includes a matched identifier.
3	→		CELL UPDATE	The UE enters the CELL_FACH state.
4	←		CELL UPDATE CONFIRM	See message content.
5	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

PAGING TYPE 1 (Step 1)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Set to an unused SRNC identity which is different from the SRNC identity assigned.~~
~~- S-RNTI~~	~~Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.~~
~~- CN originated page to connected mode UE~~	~~Not Present~~
~~BCCH modification info~~	~~Not Present~~

Information Element	**Value/remark**
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Set to an unused SRNC identity which is different from the SRNC identity assigned.
- S-RNTI	Set to an arbitrary 20-bit string which is different from the S-RNTI assigned.
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

PAGING TYPE 1 (Step 2)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Set to the previously assigned SRNC identity~~
~~- S-RNTI~~	~~Set to previously assigned S-RNTI~~
~~- CN originated page to connected mode UE~~	~~Not Present~~
~~BCCH modification info~~	~~Not Present~~

Information Element	**Value/remark**
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Set to the previously assigned SRNC identity
- S-RNTI	Set to previously assigned S-RNTI
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE CONFIRM (Step 4)

Use the message sub-type in default message content defined in [9] (TS 34.108) Clause 9, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 5)

Only the message type is checked.

8.1.1.3.5 Test requirement

After step 1 the UE shall not respond to the paging.

After step 2 the UE shall enter the CELL FACH state, and transmit CELL UPDATE message to initiate the cell updating procedure with the paging cause set to "paging response".

After step 4 the UE shall be in the CELL_FACH state and shall transmit UTRAN MOBILITY INFORMATION CONFIRM message.

8.1.1.4 Paging for notification of BCCH modification in idle mode

8.1.1.4.1 Definition

8.1.1.4.2 Conformance requirement

When a system information block on the BCCH is modified, the PAGING TYPE 1 message can be sent on the PCCH to inform UE in the idle mode about the changes, which are currently taking place. The PAGING TYPE 1 message includes the IE "BCCH Modification Information". Upon receiving this notification from the UTRAN, the UE shall read the relevant MIB and/or SIB(s) subsequently during idle mode.

Reference

3GPP TS 25.331 clause 8.1. 2.

8.1.1.4.3 Test purpose

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

8.1.1.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The SS transmits a PAGING TYPE 1 message. This message addresses the UE using its IMSI and the "paging cause" IE set to a terminating call type that is supported by the UE. The UE shall respond with RRC CONNECTION REQUEST message. Then SS shall transmit RRC CONNECTION REJECT message to UE.

The SS transmits a PAGING TYPE 1 message on the paging occasions assigned to the UE. The message shall include the IE "BCCH Modification Information" indicating the time when the first modified master information block is available. Before the starting time, SS continuously broadcast the original MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on the BCCH mapped to BCH transport channel. SS maintains this status until the SFN which corresponds to the modification time is reached. Then it transmits the new master information block followed by the new SYSTEM INFORMATION BLOCK TYPE 5 message. In the new SIB TYPE 5 message, the IE "Available Signature" is different when compared to the original SIB TYPE 5 message.

At the paging occasion, SS transmits a new PAGING TYPE 1 message. This message addresses the UE using its IMSI and the "paging cause" IE set to a terminating call type that is supported by the UE. The UE shall respond with RRC CONNECTION REQUEST message. Then SS shall transmit RRC CONNECTION REJECT message to UE.

Expected sequence

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

Specific Message Contents

PAGING TYPE 1 (Step 1 and 4)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~CN identity~~
~~- Paging Cause~~	~~Terminating Call with one of the supported services~~
~~- CN Domain Identity~~	~~Supported Domain (PS Domain or CS Domain)~~
~~- CHOICE UE Identity~~	~~TMSI~~
~~- IMSI~~	~~Same as registered TMSI or P-TMSI~~
	~~Not Present~~
~~BCCH modification info~~	

Information Element	**Value/remark**
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	CN identity
- Paging Cause	Terminating Call with one of the supported services
- CN Domain Identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	TMSI
- IMSI	Same as registered TMSI or P-TMSI
BCCH modification info	Not Present

RRC CONNECTION REJECT (Step 1b)

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

PAGING TYPE 1 (Step 2)

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

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

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 5 (Step 3)

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

Information Element	Value/remark
- PRACH system information - PRACH info - CHOICE mode - Available Signature	 FDD '1111 1111 0000 0000'B

RRC CONNECTION REJECT

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

8.1.1.4.5 Test requirement

After step 1 the UE shall transmit RRC CONNECTION REQUEST messages in response to the PAGING TYPE 1 messages sent in step 1, using an allowed signature according to original IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 5.

After step 4 the UE shall transmit RRC CONNECTION REQUEST messages in response to the PAGING TYPE 1 messages sent in step 4, using an allowed signature according to modified IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 5.

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

8.1.1.5.1 Definition

8.1.1.5.2 Conformance requirement

When a system information block on the BCCH is modified, the message PAGING TYPE 1 can be sent on the PCCH to inform UE in the CELL_PCH state about this change. This message includes the IE "BCCH Modification Information". Upon receiving this notification from the UTRAN, the UE shall read the relevant MIB and/or SIB(s) subsequently while in CELL_PCH state, in addition to any actions caused by the IE "Paging record" occurrences in the message.

Reference

3GPP TS 25.331 clause 8.1. 2.

8.1.1.5.3 Test purpose

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

8.1.1.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The SS transmits a PAGING TYPE 1 message on the paging occasions assigned to the UE. The paging identity is equal to the U-RNTI assigned earlier. The UE shall respond with a CELL UPDATE message and set IE "cell update cause" to "paging response". The PAGING TYPE 1 message shall also include the IE "BCCH Modification Information" indicating the time when the first modified master information block is available. Before the starting time, SS continuously broadcast the original MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on the BCCH mapped to BCH transport channel. SS maintains this status until the SFN,

which corresponds to the modification time, is reached. Then it transmits the new master information block followed by the new SYSTEM INFORMATION BLOCK TYPE 6 message. In the new SIB TYPE 6 message, the IE "Available Signature" is different when compared to the original SIB TYPE 6 message. At the paging occasion, SS transmits a new PAGING TYPE 1 message. This message addresses the UE using its U-RNTI. The UE shall respond with a CELL UPDATE message and set IE "cell update cause" to "paging response". The SS shall transmit a CELL UPDATE CONFIRM message.

Expected sequence

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

Specific Message Contents

PAGING TYPE 1 (Step 2)

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

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

CELL UPDATE (Step 2a)

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

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

CELL UPDATE CONFIRM (Step 2b)

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

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

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 6 (Step 3)

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

Information Element	Value/remark
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'1111 1111 0000 0000'B

PAGING TYPE 1 (Step 4)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	~~Equal to the U-RNTI assigned earlier.~~
~~- SRNC Identity~~	
~~- S-RNTI~~	
~~- CN originated page to connected mode UE~~	~~Not Present~~
~~BCCH modification info~~	~~Not Present~~

Information Element	**Value/remark**
Message Type	
Paging record list	Only 1 entry
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	Equal to the U-RNTI assigned earlier.
- SRNC Identity	
- S-RNTI	
- CN originated page to connected mode UE	Not Present
BCCH modification info	Not Present

CELL UPDATE (Step 5)

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

Information Element	Value/remark
U-RNTI	Checked to see if it is set to the same values as in step 4
- SRNC identity	
- S-RNTI	
Cell update cause	Paging response

CELL UPDATE CONFIRM (Step 6)

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

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

8.1.1.5.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response", using an allowed signature according to original IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 6.

After step 4 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response", using an allowed signature according to modified IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 6.

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

8.1.1.6.1 Definition

8.1.1.6.2 Conformance requirement

When a system information block on the BCCH is modified, the UTRAN can send a PAGING TYPE 1 message on the PCCH to inform UE about the changes while the UE is in the URA_PCH state. This message includes the IE "BCCH Modification Information". When receiving this message in URA_PCH state, the UE shall read the relevant MIB and/or SIB(s).

Reference

3GPP TS 25.331 clause 8.1. 2.

8.1.1.6.3 Test purpose

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

8.1.1.6.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The SS transmits a PAGING TYPE 1 message on the paging occasions assigned to the UE. The message shall include the IE "BCCH Modification Information" indicating the time when the first modified master information block is available. Before the starting time, SS continuously broadcast the original MASTER INFORMATION BLOCK and various types of SYSTEM INFORMATION BLOCK on the BCCH mapped to BCH transport channel. SS maintains this status until the SFN which corresponds to the modification time is reached. Then it transmits the new master information block followed by the new SYSTEM INFORMATION BLOCK TYPE 6 message. In the new SIB TYPE 5 message, the IE "Available Signature" is different when compared to the original SIB TYPE 6 message. At the next paging occasion, SS transmits a new PAGING TYPE 1 message. This message addresses the UE using its U-RNTI and the "paging cause" IE set to a terminating call type that is supported by the UE. The UE shall respond with a CELL UPDATE message and set IE "cell update cause" to "paging response". The SS shall transmit a CELL UPDATE CONFIRM message.

Expected sequence

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

Specific Message Contents

PAGING TYPE 1 (Step 2)

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

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

MASTER INFORMATION BLOCK (Step 3)

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION BLOCK TYPE 6 (Step 3)

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

Information Element	Value/remark
- PRACH system information - PRACH info - CHOICE mode - Available Signature	 FDD '1111 1111 0000 0000'B

PAGING TYPE 1 (Step 4)

~~Information Element~~	~~Value/remark~~
~~Message Type~~ ~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~- CN originated page to connected mode UE~~ ~~BCCH modification info~~	 ~~Only 1 entry~~ ~~UTRAN identity~~ ~~Equal to the U-RNTI assigned earlier.~~ ~~Not Present~~ ~~Not Present~~

Information Element	**Value/remark**
Message Type Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI - CN originated page to connected mode UE BCCH modification info	 Only 1 entry UTRAN identity Equal to the U-RNTI assigned earlier. Not Present Not Present

CELL UPDATE (Step 5)

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

Information Element	Value/remark
U-RNTI - SRNC identity - S-RNTI Cell update cause	Checked to see if it is set to the same values as in step 4 Paging response

CELL UPDATE CONFIRM (Step 6)

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

Information Element	Value/Remarks
RRC State indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

8.1.1.6.5 Test requirement

After step 4, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response", using an allowed signature according to modified IE "Available signature" in SYSTEM INFORMATION BLOCK TYPE 6.

8.1.1.7 Paging for Connection in connected mode (CELL_DCH)

8.1.1.7.1 Definition

8.1.1.7.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UE in CELL_DCH state using the dedicated control channel (DCCH). The UE listens to it and responds to this message accordingly.

When UE receives an invalid PAGING TYPE 2 message, UE shall perform procedure specific error handling.

Reference

3GPP TS 25.331 clause 8.1.11.

8.1.1.7.3 Test purpose

To confirm that the UE responds to a PAGING TYPE 2 message which includes the IE "Paging Cause" and the IE "Paging Record Type Identifier".

To confirm that the UE responds with a RRC STATUS message after it has received an invalid PAGING TYPE 2 message.

8.1.1.7.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_DCH state (state 6-9 or state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE, after executing a location registration or attach procedure followed by the release of the TMSI of P-TMSI allocated. The UE has been registered in both CS and PS domains.

Test Procedure

The SS transmits an invalid PAGING TYPE 2 message. UE shall respond by transmitting a RRC STATUS message on the uplink DCCH using RLC-AM mode. Finally, SS transmits a PAGING TYPE 2 message, which includes a matched Paging Record Type Identifier. Then the UE shall responds to this message by the transmission of an INITIAL DIRECT TRANSFER message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2	←		PAGING TYPE 2	See message content.
3	→		RRC STATUS	The UE shall respond by reporting the protocol error to the SS.
4	←		PAGING TYPE 2	SS pages the UE with a matched identifier and with a valid "paging cause" IE from a new CN Domain.
5	→		INITIAL DIRECT TRANSFER	The UE shall respond to the paging message sent in step 4.

Specific Message Contents

PAGING TYPE 2 (Step 2)

SS sends a message containing a protocol error causing the UE to perform procedure specific error handling.

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Paging Cause	Set to value "Spare"
CN Domain Identity	CS
Paging Record Type Identifier	Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

RRC STATUS (Step 3)

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

~~Information Element~~	~~Value/remark~~
~~Identification of received message~~	
~~- Received message type~~	~~PAGING TYPE 2~~
~~- RRC transaction identifier~~	~~Checked to see if the value is identical to the same IE in the PAGING TYPE 2 message.~~
~~Protocol error information~~	
~~- Protocol Error Cause~~	~~Information element value not comprehended~~

Information Element	Value/remark
Identification of received message	
- Received message type	PAGING TYPE 2
- RRC transaction identifier	Checked to see if the value is identical to the same IE in the PAGING TYPE 2 message.
Protocol error information	
- Protocol Error Cause	Information element value not comprehended

PAGING TYPE 2 (Step 4)

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

~~Information Element~~	~~Values/Remarks~~
~~Paging cause~~	~~Terminating Call supported by the UE~~
~~CN domain identity~~	~~Domain supported by the UE~~
~~Paging record type identifier~~	~~Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.~~

Information Element	Value/remark
Paging cause	Terminating Call supported by the UE
CN domain identity	Domain supported by the UE
Paging record type identifier	Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

INITIAL DIRECT TRANSFER (Step 5) – for UEs supporting GSM-MAP core networks

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	CS domain or PS domain
Intra Domain NAS Node Selector	
- CHOICE version	R99
-- CHOICE CN type	GSM
--- CHOICE Routing basis	IMSI (response to IMSI paging)
---- Routing parameter	Bit string (10) consisting of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
--- Entered parameter	FALSE
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

INITIAL DIRECT TRANSFER (Step 5) – for UEs supporting ANSI-41 core networks

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	CS domain or PS domain
Intra Domain NAS Node Selector	
- CHOICE version	ANSI-41 : Bitstring(14), all bits set to 0
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

8.1.1.7.5 Test requirement

After step 2 the UE shall respond to the paging message by transmitting RRC STATUS on the DCCH, stating the protocol error as " Information element value not comprehended ".

After step 4 the UE shall respond to the paging message by transmitting an INITIAL DIRECT TRANSFER message on the uplink DCCH.

8.1.1.8 Paging for Connection in connected mode (CELL_FACH)

8.1.1.8.1 Definition

8.1.1.8.2 Conformance requirement

This procedure is used to transmit a PAGING TYPE 2 message from the network to selected UE in CELL_FACH state using the dedicated control channel (DCCH). The UE shall listen to it and responds to this message accordingly.

Reference

3GPP TS 25.331 clause 8.1.11.

8.1.1.8.3 Test purpose

To confirm that the UE responds to a PAGING TYPE 2 message, which includes a matching value for IE "Paging Record Type Identifier".

8.1.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH state (state 6-11) as specified in clause 7.4 of TS 34.108. The UE has been registered in both CS and PS domains.

Test Procedure

The SS transmits a PAGING TYPE 2 message. Then the UE shall respond by transmitting an upper layer message to answer this page.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2	←		PAGING TYPE 2	The SS transmits the message includes a matched identifier.
3	→		INITIAL DIRECT TRANSFER	The UE responds by sending an upper layer message.

Specific Message Content

PAGING TYPE 2 (Step 2)

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

~~Information Element~~	~~Values/Remarks~~
~~Paging cause~~ ~~CN domain identity~~ ~~Paging record type identifier~~	~~Terminating Call supported by the UE~~ ~~CS~~ ~~Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.~~

Information Element	Value/remark
Paging cause CN domain identity Paging record type identifier	Terminating Call supported by the UE CS Set to "IMSI (GSM-MAP)" for UEs supporting GSM-MAP core network type or "IMSI (DS-41)" for UEs supporting ANSI-41 core network type.

INITIAL DIRECT TRANSFER (Step 3) – for UEs supporting GSM-MAP core networks

Only the message type IE for this message is checked.

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	CS domain
Intra Domain NAS Node Selector	
- CHOICE version	R99
-- CHOICE CN type	GSM
--- CHOICE Routing basis	Local (P)TMSI
---- Routing parameter	The TMSI/P-TMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
--- Entered parameter	FALSE
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

INITIAL DIRECT TRANSFER (Step 3) – for UEs supporting ANSI-41 core networks

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	CS domain
Intra Domain NAS Node Selector	
- CHOICE version	ANSI-41 : Bitstring(14), all bits set to 0
NAS message	Not checked
START	Not checked
Measured results on RACH	Not checked

8.1.1.8.5 Test requirement

After step 2 the UE shall respond to the PAGING TYPE 2 message by transmitting an INITIAL DIRECT TRANSFER message on the uplink DCCH.

8.1.2 RRC Connection Establishment

8.1.2.1 RRC Connection Establishment in CELL_DCH state: Success

8.1.2.1.1 Definition

8.1.2.1.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message. This message is to be transmitted on the uplink CCCH and shall include the IE "Initial UE identity" and the IE "Measured results on RACH".

2. After the UE receives an RRC CONNECTION SETUP message which includes the same value of the IE "initial UE identity", radio resource parameters (i.e. Signalling radio bearers and multiplexing info) and U-RNTI, UE then configures the layer 2 and layer 1 so as to support the DCCH according to the radio resource parameters specified. The procedure successfully ends when the network receives an RRC CONNECTION SETUP COMPLETE message on the uplink DCCH.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.1.3 Test purpose

To confirm that the UE leaves the Idle Mode and correctly establishes signalling radio bearers on the DCCH. To confirm that the UE indicates the requested UE radio access capabilities and UE system specific capabilities (may be used by UTRAN e.g. to configure inter RAT- measurements).

8.1.2.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

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

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	By outgoing call operation. See specific message contents.
2	←		RRC CONNECTION SETUP	This message is not addressed to the UE. See specific message contents.
3	→		RRC CONNECTION REQUEST	UE shall re-transmit the request message again after a time out of T300 from step 1.
4	←		RRC CONNECTION SETUP	See specific message contents.
5				The UE configures the layer 2 and layer 1.
6	→		RRC CONNECTION SETUP COMPLETE	See specific message contents.

Specific Message Content

System Information Block type 11 (FDD)

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

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

RRC CONNECTION REQUEST (Step 1)

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

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

RRC CONNECTION SETUP (Step 2)

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

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

RRC CONNECTION SETUP (Step 4)

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

RRC CONNECTION SETUP COMPLETE (Step 6)

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

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

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

8.1.2.1.5 Test requirement

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

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

8.1.2.2 RRC Connection Establishment: Success after T300 timeout

8.1.2.2.1 Definition

8.1.2.2.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode. The UE shall transmit an RRC CONNECTION REQUEST message which includes the IE "Initial UE identity". This message shall be sent on the uplink CCCH.

   When there are more than one PRACHs available, the UE shall select one PRACH randomly and transmit an RRC CONNECTION REQUEST message by use of selected PRACH.

2. In the case of a failure to establish the RRC connection at the expiry of timer T300, the UE retries to establish the RRC connection until V300 is greater than N300

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.2.3 Test purpose

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

8.1.2.2.4 Method of test

Initial Condition

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

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

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

Test Procedure

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

Expected sequence

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

Specific Message Contents

PAGING TYPE 1 (Step 1)

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

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

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

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

- PRACH system information	2PRACHs
- PRACH info (PRACH No.1)	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	64
- Preamble scrambling code number	0
- Puncturing Limit	1.00
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- RLC size	360
- Number of TB and TTI List	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	20 ms
- Type of channel coding	Convolutional
- Coding Rate	1/2
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete
- TFCS addition information	
- CHOICE CTFC Size	2 bit
- CTFC information	0
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factor
- Power offset Pp-m	0dB
- CTFC information	1
- Reference TFC ID	0
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	11
- Gain factor ßd	15
- Reference TFC ID	0
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	Not Present

- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
CHOICE mode	FDD
- Primary CPICH DL TX power	31
- Constant value	–10
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	4
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	3
- STTD indicator	FALSE
- AICH transmission timing	0
- PRACH info (PRACH No.2)	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	64
- Preamble scrambling code number	1
- Puncturing Limit	1.00
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- RLC size	360
- Number of TB and TTI List	
- Number of Transport blocks	1
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	20 ms
- Type of channel coding	Convolutional
- Coding Rate	1/2
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete
- TFCS addition information	
- CHOICE CTFC Size	2 bit
- CTFC information	0

- Power offset information	
- CHOICE Gain Factors	Computed Gain Factor
- Power offset Pp-m	0 dB
- CTFC information	1
- Reference TFC ID	0
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	11
- Gain factor ßd	15
- Reference TFC ID	0
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	Not Present
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
CHOICE mode	FDD
- Primary CPICH DL TX power	31
- Constant value	–10
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	4
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	4
- STTD indicator	FALSE
- AICH transmission timing	0

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

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

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

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

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

- PRACH system information	2PRACHs
- PRACH info (PRACH No.1)	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- SYNC_UL info	
- SYNC_UL codes bitmap	'11110000'B
- $PRX_{UpPCHdes}$	10
- Power Ramping Step	3
- Max SYNC_UL Transmissions	8
- Mmax	32
- PRACH Definition	
- Timeslot Number	
- CHOICE TDD option	1.28 Mcps TDD
- Timeslot number	1
- PRACH Channelisation Code	
- Channelisation Code List	
- Channelisation Code	8/1
- Midamble shift and burst type	
- CHOICE TDD option	1.28 Mcps TDD
- Midamble Allocation Mode	Default
- Midamble Configuration	8
- Midamble Shift	Not Present
- FPACH info	
- Timeslot number	6
- Channelisation code	16/16
- Midamble Shift and burst type	
- CHOICE TDD option	1.28 Mcps TDD
- Midamble Allocation Mode	Default
- Midamble Configuration	16
- Midamble Shift	Not Present
- WT	4
- PNBSCH allocation	Not Present
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Transport Time Interval	Not Present
- Number of Transport Blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	10 ms
- Type of channel coding	Convolutional
- Coding Rate	½
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	Not Present
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#0)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'11110000'B (ASC#1)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD

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

- Channelisation code	16/15
- Midamble Shift and burst type	
- CHOICE TDD option	1.28 Mcps TDD
- Midamble Allocation Mode	Default
- Midamble Configuration	16
- Midamble Shift	Not Present
- WT	4
- PNBSCH allocation	Not Present
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	
- RLC size	168
- Number of TB and TTI List	
- Transport Time Interval	Not Present
- Number of Transport Blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	10 ms
- Type of channel coding	Convolutional
- Coding Rate	½
- Rate matching attribute	150
- CRC size	16
- RACH TFCS	Not Present
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#0)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#1)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#2)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#3)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#4)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#5)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#6)
- CHOICE subchannel size	Size1
- ASC Setting	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- Available SYNC_UL codes indices	'00001111'B (ASC#7)
- CHOICE subchannel size	Size1
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)

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

RRC CONNECTION SETUP (Step 6)

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

Information Element	Value/remark
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Critical extensions	'01'H

RRC CONNECTION REQUEST (Step 7)

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

Information Element	Value/remark
Protocol Error Indicator	Check to see if set to TRUE

8.1.2.2.5 Test requirement

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

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

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

8.1.2.3 RRC Connection Establishment: Failure (V300 is greater than N300)

8.1.2.3.1 Definition

8.1.2.3.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message. This message shall include the IE "Initial UE identity" on the uplink CCCH.

2. In the case of a failure to establish the RRC connection after (N300+1) attempts, the UE goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.3.3 Test purpose

To confirm that the UE stops retrying to establish the RRC connection if V300 is greater than N300 and goes back to idle mode.

8.1.2.3.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

Before the test starts, SS initializes an internal counter K to 0. The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation. SS shall not respond to any RRC CONNECTION REQUEST message, instead the counter K is increased by 1 every time such a message is received. To arrive at the verdict, the SS checks that a total of (N300+1) such messages are received.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initializes counter K to 0 and then prompts the operator to make an outgoing call.
2	→		RRC CONNECTION REQUEST	
3				SS increments K by 1.
4				If K is greater than N300, goes to step 5 else proceed to step 2.
5				SS monitor the uplink CCCH for a time period enough for UE to goes back to idle state. The exact amount of time to wait shall be derived from TS related to cell selection. If any uplink transmission is detected, the test fails.

Specific Message Contents

None

8.1.2.3.5 Test requirement

After step 5, counter K shall be equal to (N300+1) and there shall be no uplink transmission in the monitoring period specified in step 5.

8.1.2.4 RRC Connection Establishment: Reject ("wait time" is not equal to 0)

8.1.2.4.1 Definition

8.1.2.4.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message. This message shall include the IE "Initial UE identity" and is to be sent on the uplink CCCH.

2. After the UE receives an RRC CONNECTION REJECT message which includes IE "wait time" not set to 0, and neither IE "frequency info" nor IE "system info" is present, the UE shall wait for a period specified in the IE "wait time". Thereafter re-transmit an RRC CONNECTION REQUEST message to attempt to establish the RRC connection again.

3. After the UE receives an RRC CONNECTION REJECT message which includes IE "wait time" not set to 0, and either IE "frequency info" or IE "system info" is available in the message, the UE shall attempt to perform cell reselection using these information. Thereafter re-transmit an RRC CONNECTION REQUEST message to attempt to establish the RRC connection again.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.4.3 Test purpose

To confirm that the UE retries to establish the RRC connection after the "wait time" lapses, if the UE receives an RRC CONNECTION REJECT message which includes the IE "wait time" not set to 0.

To confirm that the UE performs a cell reselection when receiving an RRC CONNECTION REJECT message, containing relevant frequency information of the target cell to be re-selected.

8.1.2.4.4 Method of test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active and suitable for camping, but cell 1 is transmitted using a larger power. Cell 1 and cell 2 are being transmitted from different 2 UARFCNs. The transmission power of cell 2 is 15 dB smaller than cell 1.

Table 8.1.2.4

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

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

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by an outgoing call operation in cell 1. SS rejects the first request by transmitting an RRC CONNECTION REJECT message which indicates a non-zero wait time. In this message, frequency information for cell 2 is available. SS then waits for RRC CONNECTION REQUEST message on the uplink CCCH of cell 2. SS will also monitor the uplink of cell 1

simultaneously to ensure that all transmission activities from cell 1 have ceased. When the UE has successfully camp onto cell 2, it shall send an RRC CONNECTION REQUEST with the same establishment cause as its previous attempt in cell 1. SS responds with an RRC CONNECTION REJECT message, indicating a non-zero "wait time" and omitting the IE "Redirection Info". The UE shall observe the wait time period indicated. After the wait time has elapsed, the UE shall re-transmit RRC CONNECTION REQUEST again. Finally, SS transmits an RRC CONNECTION SETUP message to establish an RRC connection with the UE, and the UE replies with an RRC CONNECTION SETUP COMPLETE message and enters CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	SS prompts the operator to make an outgoing call in cell 1.
2		←	RRC CONNECTION REJECT	This message shall includes the IE "wait time" set to 15 seconds and IE "frequency info" set to the UARFCN of cell 2.
3				SS waits for a period of time sufficient for UE to reselect to cell 2. At the same time, it monitors the uplink of cell 1 to make sure that all transmissions have ceased.
4		→	RRC CONNECTION REQUEST	UE shall attempt to re-start an RRC connection establishment procedure in cell 2. The establishment cause shall remain unchanged.
5		←	RRC CONNECTION REJECT	This message shall include the IE "wait time" set to 15 seconds, but with IE "Redirection Info" absent.
6		→	RRC CONNECTION REQUEST	SS waits until the duration specified in IE "wait time" has elapsed and then listens to the uplink CCCH for a second RRC CONNECTION REQUEST message.
7		←	RRC CONNECTION SETUP	SS sends the message to UE to setup an RRC connection with the UE.
8				The UE shall configure the layer 2 and layer 1 in order to access the uplink and downlink DCCH assigned.
9		→	RRC CONNECTION SETUP COMPLETE	

Specific Message Contents

RRC CONNECTION REQUEST (Step 1)

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

~~Information Element~~	~~Value/remark~~
~~Initial UE Identity~~	~~Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI~~
~~Establishment Cause~~	~~Must be "Originating Call"~~

Information Element	Value/remark
Initial UE Identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Must be "Originating Call"

RRC CONNECTION REJECT (Step 2) - FDD

Use the same message type found in Annex A, with the following exception.

~~Information Element~~	~~Value/remark~~
~~Wait time~~	~~15 seconds~~
~~Redirection Info~~	
~~Frequency Info~~	
~~CHOICE mode~~	~~FDD~~
~~UARFCN uplink (Nu)~~	~~Not present~~
~~UARFCN downlink (Nd)~~	~~Set to the UARFCN for uplink carrier of cell 2~~

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
Frequency Info	
CHOICE mode	FDD
UARFCN uplink (Nu)	Not present
UARFCN downlink (Nd)	Set to the UARFCN for uplink carrier of cell 2

RRC CONNECTION REJECT (Step 2) – TDD

~~Information Element~~	~~Value/remark~~
~~Wait time~~	~~15 seconds~~
~~Redirection Info~~	
~~Frequency Info~~	
~~CHOICE Mode~~	~~TDD~~
~~UARFCN (Nt)~~	~~Set to a different UARFCN from the carrier of cell 1~~

Information Element	Value/remark
Wait time	15 seconds
Redirection Info	
Frequency Info	
CHOICE Mode	TDD
UARFCN (Nt)	Set to a different UARFCN from the carrier of cell 1

RRC CONNECTION REQUEST (Step 4 and step 6)

Same requirement as in step 1.

RRC CONNECTION REJECT (Step 5)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Wait time	15 seconds

8.1.2.4.5 Test requirement

After step 3 the UE shall have successfully re-selected to cell 2, using information transmitted in IE "frequency info" of RRC CONNECTION REJECT message. UE shall trigger the start of RRC connection establishment by transmitting RRC CONNECTION REQUEST. The establishment cause shall be similar to the message sent in step 1.

After step 5 the UE shall observe the period specified in IE "wait time" of an RRC CONNECTION REJECT message and not transmit an RRC CONNECTION REQUEST message in this period.

After step 7 the UE shall transmit an RRC CONNECTION SETUP COMPLETE message to SS on uplink DCCH and then establish an RRC connection.

8.1.2.5 RRC Connection Establishment: Reject ("wait time" is not equal to 0 and V300 is greater than N300)

8.1.2.5.1 Definition

8.1.2.5.2 Conformance requirement

The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message. This message shall include the IE "Initial UE identity" and is to be sent on the uplink CCCH.

After the UE receives an RRC CONNECTION REJECT message which includes IE "wait time" not set to 0, and neither IE "frequency info" nor IE "system info" is present, the UE shall wait for a period specified in the IE "wait time". Thereafter it re-transmits an RRC CONNECTION REQUEST message to attempt to establish the RRC connection again. In the case of a failure to establish the RRC connection after (N300+1) attempts, the UE goes back to idle mode.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.5.3 Test purpose

To confirm that the UE retries to establish the RRC connection after the "wait time" elapses if the UE receives an RRC CONNECTION REJECT message which specifies a non-zero IE "wait time".

To confirm that the UE stops retrying to establish the RRC connection if V300 is greater than N300 and goes back to idle mode.

8.1.2.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

Before the test starts, SS initializes an internal counter K to 0. The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH, triggered by an outgoing data call operation. SS rejects all requests by transmitting an RRC CONNECTION REJECT message which indicates a non-zero wait time and the counter K is increased by 1 every time such a message is received. To arrive at the verdict, the SS checks that a total of (N300+1) such messages are received and the UE enters idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initializes counter K to 0 and then prompts the operator to make an outgoing data call.
2	→		RRC CONNECTION REQUEST	Shall be sent on CCCH and contain the correct establishment cause.
3	←		RRC CONNECTION REJECT	This message includes the IE "wait time" set to 15 seconds.
4				SS increments K by 1.
5				If K is greater than N300, goes to step 6. Else SS waits for 15 sec before proceeding to step 2.
6				SS monitor the uplink CCCH for a time period enough for UE to goes back to idle state. The exact amount of time to wait shall be derived from TS related to cell selection. If any uplink transmission is detected, the test fails.

Specific Message Contents

RRC CONNECTION REQUEST (Step 2)

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

~~Information Element~~	~~Value/remark~~
~~Initial UE Identity~~	~~Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI~~
~~Establishment Cause~~	~~Must be "Originating Call"~~

Information Element	Value/remark
Initial UE Identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Must be "Originating Call"

RRC CONNECTION REJECT (Step 3)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Wait time	15 seconds

8.1.2.5.5 Test requirement

After step 6, counter K shall be equals to (N300+1) and there shall be no uplink transmission in the monitoring period specified in step 6.

8.1.2.6 RRC Connection Establishment: Reject ("wait time" is set to 0)

8.1.2.6.1 Definition

8.1.2.6.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode and transmits an RRC CONNECTION REQUEST message on the uplink CCCH.

2. In the case of a failure to establish the RRC connection by the reception of a RRC CONNECTION REJECT message which contains IE "wait time" equals to 0, the UE shall go back to idle mode immediately.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.6.3 Test purpose

To confirm that the UE goes back to idle mode, if the SS transmits an RRC CONNECTION REJECT message which includes IE "wait time" set to 0. To confirm that the UE ignores an RRC CONNECT REJECT message not addressed to it. To confirm that the UE is capable of handling an erroneous RRC CONNECTION REJECT message correctly.

8.1.2.6.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by making an outgoing call. After the SS receives this message, it transmits an RRC CONNECTION REJECT message which is not addressed to the UE. The UE shall disregard this message and proceed to re-transmit RRC CONNECTION REQUEST message upon T300 timer expiry. SS answers the second RRC CONNECTION REQUEST message by transmitting an invalid RRC CONNECTION REJECT message. The UE shall continue to send the third RRC CONNECTION REQUEST message upon expiry of T300 timer. Next, the SS sends a legal RRC CONNECTION REJECT message which includes IE "wait time" which is set to '0'. To confirm that the UE goes back to idle mode immediately after receiving the reject message, SS shall monitor the uplink CCCH for the next 60 seconds and verify that there is no further transmission in the uplink direction.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	Test operator is prompted to make an out-going call,
2	←		RRC CONNECTION REJECT	IE "Initial UE identity" contains an identity different from any of the UE identities available.
3	→		RRC CONNECTION REQUEST	UE shall send this message after T300 expires.
4	←		RRC CONNECTION REJECT	
5	→		RRC CONNECTION REQUEST	UE shall send this message after T300 expires.
6	←		RRC CONNECTION REJECT	IE "wait time" is set to 0.
7				The UE goes back to idle mode.

Specific Message Contents

RRC CONNECTION REQUEST (Step 1, 3 and 5)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~Initial UE Identity~~	~~Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI~~
~~Establishment Cause~~	~~Checked to see if set to one of the supported originating call types~~
~~Protocol Error Indicator~~	~~Checked to see if set to "FALSE"~~
~~Measured Results on RACH~~	~~Checked to see if it is absent~~

Information Element	**Value/remark**
Message Type	
Initial UE Identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Checked to see if set to one of the supported originating call types
Protocol Error Indicator	Checked to see if set to "FALSE"
Measured Results on RACH	Checked to see if it is absent

RRC CONNECTION REJECT (Step 2)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Initial UE Identity	Set to the same type as in RRC CONNECTION REQUEST message (step 1) but with a different value.

RRC CONNECTION REJECT (Step 4)

Information Element	Value/remark
All IEs	Not Present

RRC CONNECTION REJECT (Step 6)

Use the same message type found in Annex A, with the following exception.

~~Information Element~~	~~Value/remark~~
~~Initial UE Identity~~	~~Same as the type and value defined in RRC CONNECTION REQUEST message (step 5)~~
~~Reject Cause~~	~~Congestion~~
~~Wait time~~	~~0 second~~

Information Element	**Value/remark**
Initial UE Identity	Same as the type and value defined in RRC CONNECTION REQUEST message (step 5)
Reject Cause	Congestion
Wait time	0 second

8.1.2.6.5 Test requirement

After step 2 the UE shall transmit an RRC CONNECTION REQUEST message on uplink CCCH upon expiry of T300 timer.

After step 4 the UE shall re-transmit an RRC CONNECTION REQUEST message on the uplink CCCH upon expiry of T300 timer.

After step 6 the UE shall stop sending an RRC CONNECTION REQUEST message, go back to idle mode immediately and not transmit in the uplink direction again.

8.1.2.7 RRC Connection Establishment in CELL_FACH state: Success

8.1.2.7.1 Definition

8.1.2.7.2 Conformance requirement

During the RRC connection establishment, the UTRAN might assign common physical resource to the UE using an RRC CONNECTION SETUP message. When no information about the physical channels accessible is available from the message, the UE shall utilize the PRACH and S-CCPCH information transmitted on the BCCH and then enter CELL_FACH state. Subsequently, the UE shall establish the required signalling radio bearers with the UTRAN using common physical resources.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.7.3 Test Purpose

To confirm that the UE is able to enter CELL_FACH state and setup signalling radio bearers using common physical channels. To confirm that the UE indicates the requested UE radio access capabilities (used by UTRAN to decide which RAB to establish) and UE system specific capabilities (may be used by UTRAN to configure inter RAT-measurements).

8.1.2.7.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by attempting to make an outgoing call. After the SS receives this message, it assigns the necessary radio resources and U-RNTI to be used by the UE, and then transmits an RRC CONNECTION SETUP message to the UE within timer T300. SS then waits for the UE to transmit an RRC CONNECTION SETUP COMPLETE message on the DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	Test operator is requested to make an outgoing call. The UE shall transmit this message, indicating the correct establishment cause. See specific message contents.
2	←		RRC CONNECTION SETUP	See specific message contents.
3				The UE shall configure the layer 2 and layer 1.
4	→		RRC CONNECTION SETUP COMPLETE	UE shall send this message on the DCCH, carried by the assigned PRACH resources. See specific message contents. FDD

Specific Message Content

RRC CONNECTION REQUEST

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

~~Information Element~~	~~Value/remark~~
~~Initial UE identity~~	~~Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI~~
~~Establishment Cause~~	~~Originating Interactive Call or Originating Background Call or Originating Streaming Call~~

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Originating Interactive Call or Originating Background Call or Originating Streaming Call

RRC CONNECTION SETUP

For this message, the contents of the message to be used are basically identical to the message sub-type entitled "RRC CONNECTION SETUP message (Transition to CELL_FACH)" found in TS 34.108, clause 9 with the following exception:

~~Information Element~~	~~Value/remark~~
~~Capability update requirement~~	
~~UE radio access FDD capability update requirement~~	~~TRUE~~
~~UE radio access TDD capability update requirement~~	~~FALSE~~
~~System specific capability update requirement list~~	~~gsm~~

Information Element	Value/remark
Capability update requirement	
UE radio access FDD capability update requirement	TRUE
UE radio access TDD capability update requirement	FALSE
System specific capability update requirement list	gsm

RRC CONNECTION SETUP COMPLETE

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

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

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

8.1.2.7.5 Test requirements

After step 3 the UE shall establish the RRC connection, and transmit RRC CONNECTION SETUP COMPLETE message on the DCCH using PRACH physical resource specified in system information block messages.

8.1.2.8 Void

8.1.2.9 RRC Connection Establishment: Success after Physical channel failure and Failure after Invalid configuration

8.1.2.9.1 Definition

8.1.2.9.2 Conformance requirement

1. The RRC connection establishment is initiated by the UE, which leaves the idle mode. The UE shall transmit an RRC CONNECTION REQUEST message which includes the IE "Initial UE identity". This message shall be sent on the uplink CCCH.

2. In the case of a failure to establish the RRC connection due to a physical channel failure after the UE receives an RRC CONNECTION SETUP message, the UE retries to establish the RRC connection until V300 is greater than N300

3. In the case of a RRC CONNECTION SETUP message is received by UE causes invalid configuration, the UE retries to establish the RRC connection until V300 is greater than N300.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.9.3 Test purpose

To confirm that the UE retries to establish the RRC connection until V300 is greater than N300 when a physical channel failure occurs because SS does not configure the physical channel that is specified in the transmitted RRC CONNECTION SETUP message. To confirm that the UE retries to establish the RRC connection until V300 is greater than N300 when the transmitted RRC CONNECTION SETUP message causes invalid configuration in the UE.

8.1.2.9.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

Before the test starts, an internal counter K in SS is initialised to a value = 0. Following this, the UE shall transmit an RRC CONNECTION REQUEST message to the SS on the uplink CCCH, after the operator attempts to make an outgoing call. SS increments K every time such a message is received. Then, SS shall send a RRC CONNECTION SETUP message that contains an invalid configuration. UE shall then send RRC CONNECTION REQUEST message to SS again. This cycle is repeated until K reaches N300+1. When K is equal to N300+1, the SS again transmits an RRC CONNECTION SETUP message including an invalid configuration. Upon receiving this message the UE shall not send another RRC CONNECTION REQUEST message.

Next the SS re-initialises the internal counter K to value = 0, after which the operator attempts to make another outgoing call. Following this, the UE shall transmit an RRC CONNECTION REQUEST message to the SS on the uplink CCCH. SS increments K every time such a message is received. SS transmits an RRC CONNECTION SETUP message to make the UE configure the physical channel in order to communicate on the DCCH but SS does not configure the physical channel. Then the UE detects the physical channel failure and transmits an RRC CONNECTION REQUEST message. This cycle is repeated until K reaches N300+1. When K is equal to N300+1, the SS transmits the RRC CONNECTION SETUP message and configures the physical channel. The UE shall detect "in-sync" from physical layer and then acknowledge the establishment of RRC connection by sending the RRC CONNECTION SETUP COMPLETE message on uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS initialises counter K to 0. Operator is asked to make an outgoing call and SS starts to wait for RRC CONNECTION REQUEST on uplink CCCH.
2	→		RRC CONNECTION REQUEST	See specific message contents.
2a				SS increments K by 1 for every RRC CONNECTION REQUEST message received in step 2
2b	←		RRC CONNECTION SETUP	See specific message contents.
3				SS checks to see if K is equal to N300+1. If so, goes to step 3a. Else, continues to execute step 2.
3a				SS waits to verify that the UE does not send any further RRC CONNECTION REQUEST message
3b				SS re-initialises counter K to 0. Operator is asked to make another outgoing call and SS starts to wait for RRC CONNECTION REQUEST on uplink CCCH.
3c	→		RRC CONNECTION REQUEST	See specific message contents.
3d				SS increments K by 1 for every RRC CONNECTION REQUEST message received in step 3c
3e				SS checks to see if K is equal to N300+1. If so, goes to step 6. Else, continues to execute step 4
4	←		RRC CONNECTION SETUP	Use the default message with the same message sub-type specified in clause 9 in TS 34.108. SS does not configure the physical channel.
5				The next step is step 3c.
6	←		RRC CONNECTION SETUP	Use the default message with the same message sub-type specified in clause 9 in TS 34.108. SS configures the physical channel.
7				The UE configures the layer 1 and layer 2.
8	→		RRC CONNECTION SETUP COMPLETE	Use the default message with the same message sub-type specified in clause 9 in TS 34.108.

Specific Message Contents

RRC CONNECTION REQUEST (Step 2 & step 3c, K=0)

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

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Originating Interactive Call or Originating Background Call or Originating Streaming Call

RRC CONNECTION REQUEST (Step 2 & step 3c, K>0)

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

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Originating Interactive Call or Originating Background Call or Originating Streaming Call
Protocol error indicator	TRUE

RRC CONNECTION SETUP (Step 2b)

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

Information Element	Value/remark
RRC State Indicator	CELL_DCH
~~Uplink DPCH info~~	~~Not present~~
Uplink DPCH info	Not present

8.1.2.9.5 Test requirement

After step 3a the UE shall not send any further RRC CONNECTION REQUEST message.

After step 8 the UE shall transmit an RRC CONNECTION SETUP COMPLETE message and establish an RRC connection.

8.1.3 RRC Connection Release

8.1.3.1 RRC Connection Release in CELL_DCH state: Success

8.1.3.1.1 Definition

8.1.3.1.2 Conformance requirement

1. The UE shall receive and act on an RRC CONNECTION RELEASE message in states CELL_DCH and CELL_FACH. Furthermore this procedure can interrupt any ongoing procedures with the UE in the above listed states.

   When the UE receives the first RRC CONNECTION RELEASE message, it shall:

   …

   - in state CELL_DCH:

     - initialise the counter V308 to zero;

…

- submit an RRC CONNECTION RELEASE COMPLETE message to the lower layers for transmission using UM RLC on the DCCH to the UTRAN;

…

- start timer T308 when the RRC CONNECTION RELEASE COMPLETE message is sent on the radio interface.

2. When in state CELL_DCH and the timer T308 expires, the UE shall:

- increment V308 by one;
- if V308 is equal to or smaller than N308:
  - retransmit the RRC CONNECTION RELEASE COMPLETE message, without incrementing "Uplink RRC Message sequence number" for signalling radio bearer RB1 in the variable INTEGRITY_PROTECTION_INFO;
- if V308 is greater than N308:
  - release all its radio resources;

  …
  - enter idle mode;
  - perform the actions specified in TS 25.331 clause 8.5.2 when entering idle mode;
  - and the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.4.3, 8.1.4.6

8.1.3.1.3 Test purpose

To verify:

1. that the UE when receiving an RRC CONNECTION RELEASE message transmits N308+1 RRC CONNECTION RELEASE COMPLETE messages before release of radio resources and entering into idle mode
2. that the time between UE transmissions of the RRC CONNECTION RELEASE COMPLETE message is equal to the value of the T308 timer.

8.1.3.1.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH state (state 6-1 or state 6-3) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE

Test Procedure

The UE is brought to the CELL_DCH state by prompting the operator to initiate an outgoing call. After the DCCH is established, SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the connection. SS then waits for the UE to transmit an RRC CONNECTION RELEASE COMPLETE message using unacknowledged mode. SS checks to see if N308 + 1 such messages has been received at each expiry of T308 timer.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state after a successful RRC connection establishment by virtue of the operator making an outgoing call.
2	←		RRC CONNECTION RELEASE	SS disconnect the connection established. The value in IE "N308" is arbitrarily chosen from 1 to 8.
3	→		RRC CONNECTION RELEASE COMPLETE	SS waits for the arrival of N308 + 1 such message with an interarrival time of T308, using unacknowledged mode.
4				SS verifies that the UE release its L2 signalling radio bearer and dedicated resources and enters idle mode.

Specific Message Content

RRC CONNECTION RELEASE (Step 2)

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

Information Element	Value/remark
N308	Arbitrarily chosen between 1 and 8

8.1.3.1.5 Test requirement

After step 2 the UE shall transmit N308 + 1 RRC CONNECTION RELEASE COMPLETE messages. The time between the transmissions shall be equal to the T308 timer value.

After step 3 the UE shall initiate the release of the L2 signalling radio bearer and dedicated resources and enter idle mode.

8.1.3.2 RRC Connection Release using on DCCH in CELL_FACH state: Success

8.1.3.2.1 Definition

8.1.3.2.2 Conformance requirement

In CELL_FACH state, the RRC layer entity in the network may issue an RRC CONNECTION RELEASE message using unacknowledged mode on the DCCH. Upon the reception of this message, the UE transmits an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to UTRAN on the DCCH and goes back to idle mode after it receives an RLC confirmation from the UTRAN.

Reference

3GPP TS 25.331 clause 8.1.4.

8.1.3.2.3 Test purpose

To confirm that the UE releases the L2 signalling radio bearer and resources and goes back to the idle state after it receives an RRC CONNECTION RELEASE message on downlink DCCH from the SS. It shall transmit an RRC CONNECTON RELEASE COMPLETE message using acknowledged mode on uplink DCCH to the SS.

8.1.3.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH state (state 6-2 or state 6-4) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is brought to an initial state of CELL_FACH. After the successful establishment of the RRC connection, the SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the radio link. When the UE receives this message the UE transmits an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS. Finally, SS checks that the UE performs proper release of all radio resources and then goes back to idle mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_FACH state.
2	←		RRC CONNECTION RELEASE	SS sends this message using unacknowledged mode RLC operations on the uplink DCCH.
3	→		RRC CONNECTION RELEASE COMPLETE	The UE transmits this message using acknowledged mode.
4				The UE releases L2 signalling radio bearer and radio resources. Then the UE goes to idle mode.

Specific Message Contents

None.

8.1.3.2.5 Test requirement

After step 2 the UE shall transmit an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode then it shall receive a response for this message from the SS-RLC.

After step 3 the UE shall release its L2 signalling radio bearers and radio resources, then it shall go back to idle mode.

8.1.3.3 RRC Connection Release using on CCCH in CELL_FACH state: Success

8.1.3.3.1 Definition

8.1.3.3.2 Conformance requirement

In CELL_FACH state, the RRC layer entity in the network may issue an RRC CONNECTION RELEASE message using unacknowledged mode on the CCCH. Upon the reception of this message, the UE shall release the RRC connection immediately, without replying with a RRC CONNECTION RELEASE COMPLETE message on the uplink.

Reference

3GPP TS 25.331 clause 8.1.4.

8.1.3.3.3 Test purpose

To confirm that the UE releases all its radio resources upon the reception of a RRC CONNECTION RELEASE message on the downlink CCCH, without transmitting RRC CONNECTION RELEASE COMPLETE message on the uplink.

8.1.3.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH state (state 6-2 or state 6-4) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is brought to an initial state of CELL_FACH. After the successful establishment of the RRC connection, SS transmits an RRC CONNECTION RELEASE message on the downlink CCCH. The UE shall terminate the RRC connection and release all radio resources allocated to it. SS monitors the uplink DCCH and CCCH to verify that no transmission is detected.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_FACH state.
2	←		RRC CONNECTION RELEASE	SS transmits this message with the contents identical to that found in TS 34.108 clause 9 on downlink CCCH.
3				SS waits for a period equivalent to 60 seconds. The UE shall not send any response message on uplink direction during this period. It shall release the radio resources allocated and return to idle mode.

Specific Message Contents

None.

8.1.3.3.5 Test requirement

After step 2 the UE shall release all its radio resources, return to idle mode, without transmitting RRC CONNECTION RELEASE COMPLETE message on the uplink direction.

8.1.3.4 RRC Connection Release in CELL_FACH state: Failure

8.1.3.4.1 Definition

8.1.3.4.2 Conformance requirement

In case of RRC connection release from CELL_FACH state, the RRC layer entity in the network issues an RRC CONNECTION RELEASE message using unacknowledged mode on the DCCH. When the UE does not succeed to transmit the RRC CONNECTION RELEASE COMPLETE message using acknowledged mode, it shall release all its radio resources, enter idle mode and the procedure ends on the UE side.

Reference

3GPP TS 25.331 clause 8.1.4

8.1.3.4.3 Test purpose

To confirm that the UE releases all its radio resources and enters idle mode when the UE does not succeed in transmitting the RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS (i.e. the UE-RLC cannot receive acknowledgement for the transmission of the RRC CONNECTION RELEASE COMPLETE message from SS).

8.1.3.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH state (state 6-2 or state 6-4) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the RRC connection has been established, the SS transmits an RRC CONNECTION RELEASE message to the UE to disconnect the radio link. When the UE receives this message the UE transmits an RRC CONNECTION RELEASE COMPLETE message using acknowledged mode to the SS. The SS ignores the message and does not transmit a STATUS PDU of RLC for this message. SS checks to see that UE continues to release all its radio resources and then enters idle mode.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought into CELL_FACH state by asking the operator to perform an outgoing call attempt.
2	←		RRC CONNECTION RELEASE	SS ask to disconnect the radio link
3	→		RRC CONNECTION RELEASE COMPLETE	The UE transmits this message using acknowledged mode. The SS ignores this message and shall not transmit a STATUS PDU of RLC for this message.
4				SS checks to make sure that UE releases its all radio resources and enter idle mode.

Specific Message Contents

None

8.1.3.4.5 Test requirement

After step 3 the UE shall release its L2 signalling radio bearers and radio resources then it shall go to idle mode.

8.1.3.5 RRC Connection Release in CELL_FACH state: Invalid message

8.1.3.5.1 Definition

8.1.3.5.2 Conformance requirement

In CELL_FACH state, the RRC layer entity in UTRAN may issue an RRC CONNECTION RELEASE message using unacknowledged mode on the DCCH. If an invalid RRC CONNECTION RELEASE message is received by the UE, the UE shall activate the appropriate error-handling mechanism and report the error to the UTRAN.

Reference

3GPP TS 25.331 clause 8.1.4

8.1.3.5.3 Test purpose

When the UE receives an invalid RRC CONNECTION RELEASE message on the downlink DCCH, it shall transmit an RRC STATUS message that includes the appropriate error cause on the uplink DCCH.

8.1.3.5.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is initially at idle mode. The System Information Block type 11 messages are modified with respect to the default In the System Information type 11 messages, reporting of CPICH RSCP is required for intra-frequency reporting when transmitting RACH messages.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14.The UE shall transmit a RRC CONNECTION REQUEST message on the uplink CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH physical channels for uplink and downlink usage. UE shall then enter CELL_FACH state. SS starts timer T305 and waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measurement reading of current cell CPICH RSCP values in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH.SS transmits an invalid RRC CONNECTION RELEASE message on the DCCH to request to disconnect the RRC connection. The UE shall transmit an RRC STATUS message on the uplink DCCH, which includes the IE "Protocol Error Information". This IE shall contain "Protocol error information" IE which is set to "ASN.1 violation or encoding error". Then SS waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measurement reading of current cell CPICH RSCP values in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		Master Information Block System Information Block type 1, System Information Block type 11	The UE is idle mode and camped onto cell 1. System Information Block type 1 and 11 to be transmitted are different from the default settings (see specific message contents)
2	↔		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				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 readings of CPICH RSCP for current cell.
7	←		CELL UPDATE CONFIRM	
8	←		RRC CONNECTION RELEASE	See specific message contents for this message
9	→		RRC STATUS	The IE "Protocol error cause" found in IE "Protocol error information" shall be set to "ASN.1 violation or encoding error". This message is sent using acknowledge mode.
10				SS waits for 5 minutes (for the expiry of T305 timer).
11	→		CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the readings of CPICH RSCP for current cell.
12	←		CELL UPDATE CONFIRM	

Specific Message Contents

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value tag	2

System Information Block type 1 (Step 1)

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

System Information Block type 11 (Step 1)

Information Element	Value/Remark
SIB12 indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
- Intra-frequency Measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Periodic Reporting
- CHOICE report criteria	Intra-frequency measurementreporting criteria

Information Element	Value/Remark
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	20.0 dB
- Cells forbidden to affect reporting range	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	-85 dBm
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	0msec
- Amount of reporting	Infinity
- Reporting interval	12 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
- Intra-frequency Measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Periodic Reporting
- CHOICE report criteria	Intra-frequency measurementreporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	20.0 dB

- Cells forbidden to affect reporting range	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	-85 dBm
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	0msec
- Amount of reporting	Infinity
- Reporting interval	12 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

CELL UPDATE (Step 6 and 11)

~~Information Element~~	~~Value/Remarks~~
~~U-RNTI~~	~~Check to see if set to same U-RNTI value assigned in the execution of procedure P6.~~
~~Cell update cause~~	~~Check to see if set to 'Periodic cell updating'~~
~~Protocol error indicator~~	~~Check to see if set to 'FALSE'~~
~~Measured results on RACH~~	
~~- Measurement result for current cell~~	
~~- CHOICE measurement quantity~~	~~Check to see if set to 'CPICH RSCP'~~
~~- CPICH RSCP~~	~~Checked to see if set to within an acceptable range.~~
~~- Measurement results for monitored cells~~	~~Checked to see if this IE is absent.~~
~~Protocol error information~~	~~Check to see if set to 'FALSE'~~

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI value assigned in the execution of procedure P6.
Cell update cause	Check to see if set to 'Periodic cell updating'
Protocol error indicator	Check to see if set to 'FALSE'
Measured results on RACH	
- Measurement result for current cell	
- CHOICE measurement quantity	Check to see if set to 'CPICH RSCP'
- CPICH RSCP	Checked to see if set to within an acceptable range.
- Measurement results for monitored cells	Checked to see if this IE is absent.
Protocol error information	Check to see if set to 'FALSE'

RRC CONNECTION RELEASE (Step 8)

Information Element	Value/remark
All IEs	Not Present

RRC STATUS (Step 9)

Check to see if the same message type found in clause A is received, with the following exceptions:

Information Element	Value/remark
Protocol error information ~~Protocol error cause~~ Protocol error cause	 ~~ASN.1 violation or encoding error~~ ASN.1 violation or encoding error

8.1.3.5.5 Test requirement

After step 5 and 10, the UE shall initiate cell update procedure by transmitting CELL UPDATE message on CCCH. In this message, IE "cell update cause" shall be set to "periodic cell updating". It shall include IE "measured results on RACH", containing the measurement value for current cell CPICH RSCP.

After step 8 the UE shall transmit an RRC STATUS message which includes the appropriate cause values in IE "Protocol error information".

8.1.3.6 RRC Connection Release in CELL_DCH state (Frequency band modification): Success

8.1.3.6.1 Definition

8.1.3.6.2 Conformance requirement

If the UE first receives an RRC CONNECTION RELEASE message in CELL_DCH state, it shall:

- initialize the counter V308 to zero;
- submit an RRC CONNECTION RELEASE COMPLETE message to the lower layers for transmission using UM RLC on the DCCH to the UTRAN;
- start timer T308 when the RRC CONNECTION RELEASE COMPLETE message is sent on the radio interface.

If the timer T308 expires, the UE shall:

- increment V308 by one;
- if V308 is equal to or smaller than N308:
  - retransmit the RRC CONNECTION RELEASE COMPLETE message;
- if V308 is greater than N308:
  - release all its radio resources;
  - enter idle mode;
  - perform cell-selection according to TS25.304;
  - procedure end;

Reference

3GPP TS 25.331 clause 8.1.4.

8.1.3.6.3 Test purpose

To confirm that when the UE receives an RRC CONNECTION RELEASE message the UE transmits N308+1 RRC CONNECTION RELEASE COMPLETE messages using UM on DCCH.

To confirm that the UE enters into idle mode with performing cell-selection and selecting new cell configured by SS.

8.1.3.6.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

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

Test Procedure

Table 8.1.3.6

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-55	Off	-55

Table 8.1.3.6 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.6. The SS switches its downlink transmission power settings to columns "T1" and transmits MEASUREMENT CONTROL message and add cell 6 into the IE "inter-frequency cell info". The SS modify contents of SIB3 in cell 1 and cell 6. The SS transmits an RRC CONNECTION RELEASE message. After the SS transmits an RRC CONNECTION RELEASE message to the UE, the SS waits for the UE to transmit RRC CONNECTION RELEASE COMPLETE messages using UM on DCCH and checks to see if N308+1 such messages has been received. The UE leaves connected mode and enters idle mode in cell 1. The UE shall perform cell reselection and camp on cell 6 after reading the system information. The SS calls for generic procedure C.3 to check that UE is in Idle state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.6.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.1.3.6.
3	←		MEASUREMENT CONTROL	The SS specifies inter-frequency measurement for cell 6.
4	←		System Information Block type 3	The SS modifies SIB 3 in cell 6.
5	←		System Information Block type 3	The SS modifies SIB 3 in cell 1 to indicate that the cell is barred.
6				The SS waits for 5 s.
7	←		RRC CONNECTION RELEASE	
8	→		RRC CONNECTION RELEASE COMPLETE	The SS waits for the arrival of N308+1 such messages send on UM RLC.
9				The UE releases signalling radio bearer and dedicated resources. Then the UE goes to idle mode in cell 1.
10				The UE select s cell 6 and camp on it.
11				The SS waits for 15 s after receiving the last RRC CONNECTION RELEASE COMPLETE message.
12	←→		CALL C.1	If the test result of C.1 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	350
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- COICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 [s]

- Reporting cell status - CHOICH reported cell - Maximum number of reported cells - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency	 Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 -85dbm 0.0

System Information Block type 3 (Step 4)

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

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0110B

System Information Block type 3 (Step 5)

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

Information Element	Value/remark
- Cell Access Restriction	
- Cell barred	Barred
- Intra-frequency cell re-selection indicator	Not allowed
- T_{barred}	10[s]
- Cell Reserved for operator use	Not reserved
- Cell Reservation Extension	Not reserved
- Access Class Barred List	
- Access Class Barred0	barred
- Access Class Barred1	barred
- Access Class Barred2	barred
- Access Class Barred3	barred
- Access Class Barred4	barred
- Access Class Barred5	barred
- Access Class Barred6	barred
- Access Class Barred7	barred
- Access Class Barred10	barred
- Access Class Barred11	barred
- Access Class Barred12	barred
- Access Class Barred13	barred
- Access Class Barred14	barred
- Access Class Barred15	barred

RRC CONNECTION RELEASE (Step 6)

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

Information Element	Value/remark
N308	Arbitrarily chosen between 1 and 8

8.1.3.6.5 Test requirement

After step 6 the UE shall start to transmit N308 + 1 times RRC CONNECTION RELEASE COMPLETE messages using UM on DCCH.

After step 11 the UE shall be in Idle mode in cell 6.

8.1.4 Void

8.1.5 UE capability

8.1.5.1 UE Capability in CELL_DCH state: Success

8.1.5.1.1 Definition

8.1.5.1.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network that is supported by the UE or if the UTRAN needs an update of the UE's UMTS capability information or of its inter-system classmark.

2. When the UE receives a UE CAPABILITY ENQUIRY message, the UE transmits a UE CAPABILITY INFORMATION message on the uplink DCCH. Then the UTRAN transmits a UE CAPABILITY INFORMATION CONFIRM message.

3. If during the execution of UE capability update procedure, an invalid UE CAPABILITY INFORMATION CONFIRM is received, the UE shall respond with RRC STATUS message and decide whether to re-transmit UE CAPABILITY INFORMATION message by comparing its internal counter against N304.

Reference

3GPP TS 25.331 clauses 8.1.6 and 8.1.7.

8.1.5.1.3 Test purpose

To confirm that the UE transmits a UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicates an invalid message reception when invalid UE CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.

8.1.5.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. The SS transmits a UE CAPABILITY ENQUIRY message containing an unexpected critical message extension. After receiving such a message, the UE shall report the error using RRC STATUS message with the appropriate error cause specified. Then SS transmits a correct UE CAPABILITY ENQUIRY message, the UE receives this message and transmits a UE CAPABILITY INFORMATION message on the uplink DCCH which includes the requested capabilities. The SS transmits a UE CAPABILITY INFORMATION CONFIRM message to the UE to complete the UE capability enquiry procedure.

Then SS initiates another UE capability enquiry procedure. The UE shall reply with a UE CAPABILITY INFORMATION message on the uplink DCCH. When SS receives this message, it transmits a UE CAPABILITY INFORMATION CONFIRM message containing an unexpected critical message extension. The UE shall detect an error and send an RRC STATUS message to report this event. After submitting this message to lower layers for transmission, the UE shall re-transmit a UE CAPABILITY INFORMATION message on the uplink DCCH after the expiry of restarted T304. SS completes this test by transmitting an error-free UE CAPABILITY INFORMATION CONFIRM message similar to the message sent in step 6.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state after an outgoing call has been established successfully.
2	←		UE CAPABILITY ENQUIRY	See specific message contents for this message
3	→		RRC STATUS	See specific message contents for this message
4	←		UE CAPABILITY ENQUIRY	See specific message contents for this message.
5	→		UE CAPABILITY INFORMATION	See specific message contents for this message.
6	←		UE CAPABILITY INFORMATION CONFIRM	Use default message.
7	←		UE CAPABILITY ENQUIRY	Same as in step 4.
8	→		UE CAPABILITY INFORMATION	Shall be the same message content as in step 5.
9	←		UE CAPABILITY INFORMATION CONFIRM	See specific message contents for this message
10	→		RRC STATUS	UE shall detect an error and then transmit this message.
11	→		UE CAPABILITY INFORMATION	UE shall re-transmit this message after the restarted T304 expires.
12	←		UE CAPABILITY INFORMATION CONFIRM	SS sends an error-free message to acknowledge the receipt of the uplink message.

Specific Message Contents

UE CAPABILITY ENQUIRY (Step 2)

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

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Critical extensions	'01'H

RRC STATUS (Step 3)

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

Information Element	Value/remark
Identification of received message - Received message type - RRC transaction identifier Protocol Error Information - Protocol Error Cause	 UE Capability Enquiry Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY ENQUIRY message. Message extension not comprehended

Information Element	Value/remark
Identification of received message - Received message type - RRC transaction identifier Protocol Error Information - Protocol Error Cause	 UE Capability Enquiry Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY ENQUIRY message. Message extension not comprehended

UE CAPABILITY ENQUIRY (Steps 4)

Use the UE CAPABILITY ENQUIRY message as defined in [9] (TS 34.108) Clause 9, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~Capability update requirement~~ ~~- UE radio access FDD capability update requirement~~ ~~- UE radio access TDD capability update requirement~~ ~~- System specific capability update requirement list~~	 ~~TRUE~~ ~~FALSE~~ ~~Gsm~~

Information Element	Value/remark
Capability update requirement - UE radio access FDD capability update requirement - UE radio access TDD capability update requirement - System specific capability update requirement list	 TRUE FALSE Gsm

UE CAPABILITY INFORMATION (Step 5)

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

Information Element	Value/remark
UE system specific capability	Presence and value will be checked. Stated capability must be compatible with 34.123-2 (ICS statements) and the user settings

UE CAPABILITY INFORMATION CONFIRM (Step 9)

SS sends a message containing a critical extension not defined for the protocol release supported by the UE, as indicated in the IE "Access stratum release indicator". Use the UE CAPABILITY INFORMATION CONFIRM message as defined in [9] (TS 34.108) Clause 9, with the following addition:

Information Element	Value/remark
Critical extensions	'01'H

RRC STATUS (Step 10)

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

~~Information Element~~	~~Value/remark~~
~~Identification of received message~~ ~~- Received message type~~ ~~- RRC transaction identifier~~ ~~Protocol Error Information~~ ~~- Protocol Error Cause~~	 ~~UE Capability Information Confirm~~ ~~Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY INFORMATION CONFIRM message.~~ ~~Message extension not comprehended~~

Information Element	**Value/remark**
Identification of received message - Received message type - RRC transaction identifier Protocol Error Information - Protocol Error Cause	 UE Capability Information Confirm Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY INFORMATION CONFIRM message. Message extension not comprehended

8.1.5.1.5 Test requirement

After step 2, the UE shall transmit a RRC STATUS message on the uplink DCCH, reporting the error with protocol error cause set to "Message extension not comprehended" correct transaction identifier.

After step 4 and 7 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH to respond to the UE CAPABILITY ENQUIRY message with correct contents.

After step 9, the UE shall transmit a RRC STATUS message on the uplink DCCH. The protocol error cause shall be set to "Message extension not comprehended" and the transaction identifier set to the same value as used in the UE CAPABILITY ENQUIRY message of step 7.

After step 10, the UE shall re-transmit the UE CAPABILITY INFORMATION message with a similar content as in step 8 after the expiry of restarted T304.

8.1.5.2 UE Capability in CELL_DCH state: Success after T304 timeout

8.1.5.2.1 Definition

8.1.5.2.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network that is supported by the UE, if the UTRAN needs an update of the UE's UMTS capability information or of its inter-system classmark.

2. After the UE receives a UE CAPABILITY ENQUIRY message, it transmits a UE CAPABILITY INFORMATION message on the uplink DCCH. If it fails to receive a UE CAPABILITY INFORMATION CONFIRM message, the UE re-transmits another UE CAPABILITY INFORMATION message after T304 expires until V304 is greater than N304.

Reference

3GPP TS 25.331 clause 8.1.6 and 8.1.7.

8.1.5.2.3 Test purpose

To confirm that the UE re-transmits a UE CAPABILITY INFORMATION message until V304 is greater than N304, after the expiry of timer T304 when the UE cannot receive a UE CAPABILITY INFORMATION CONFIRM message in response to a UE CAPABILITY INFORMATION message.

8.1.5.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is brought to CELL_DCH state. When the SS transmits a UE CAPABILITY ENQUIRY message which includes the "Capability update requirement" IE, the UE shall reply with a UE CAPABILITY INFORMATION message on the uplink DCCH which includes the "UE radio access capability" IE. The SS does not transmit a UE CAPABILITY INFORMATION CONFIRM message to the UE, resulting in the T304 timer to expire. SS shall observe that the UE attempts to transmit a UE CAPABILITY INFORMATION message again. The UE shall re-transmit N304 times, and SS transmits a UE CAPABILITY INFORMATION CONFIRM message to answer the last request and completes this test procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state. SS sets internal counter K =0
2	←		UE CAPABILITY ENQUIRY	Including the IE "Capability update requirement".
3	→		UE CAPABILITY INFORMATION	Including the "UE radio access capability".
4				If K is equal to N304, then proceed to step 6.
5				The SS does not transmit a response and wait for T304 timer to expire. K=K+1 and goes to step 3.
6	←		UE CAPABILITY INFORMATION CONFIRM	Use default message contents

Specific Message Contents

None

8.1.5.2.5 Test requirement

After step 3 the UE shall re-transmits a UE CAPABILITY INFORMATION message on the uplink DCCH, after each expiry of timer T304. The UE CAPABILITY INFORMATION message shall contain IE "UE radio access capability" indicating the settings found in PIC/PIXIT statements. After (N304) re-transmissions, the UE shall receive a UE CAPABILITY INFORMATION CONFIRM message.

8.1.5.3 UE Capability in CELL_DCH state: Failure (After N304 re-transmissions)

8.1.5.3.1 Definition

8.1.5.3.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network that is supported by the UE if the UTRAN needs an update of the UE's UMTS capability information or of its inter-system classmark.

2. If UE re-transmits UE CAPABILITY INFORMATION in excess of N304 times, the UE initiates the cell update procedure.

Reference

3GPP TS 25.331 clauses 8.1.6 and 8.1.7.

8.1.5.3.3 Test purpose

To confirm that the UE stops retrying to transmit a UE CAPABILITY INFORMATION message if V304 is greater than N304. It then initiates cell update procedure.

8.1.5.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is brought to CELL_DCH state. When the SS transmits a UE CAPABILITY ENQUIRY message which includes the "Capability update requirement" IE, the UE receives this message and transmits a UE CAPABILITY INFORMATION message on the uplink DCCH which includes the "UE radio access capability" IE. The SS does not respond with a UE CAPABILITY INFORMATION CONFIRM message but keeps a count on the number of messages received. When the T304 timer expires, the UE shall transmit a UE CAPABILITY INFORMATION message again. After sending (N304+1) messages, the UE shall stop sending UE CAPABILITY INFORMATION messages and initiates the cell update procedure. SS allows UE to return to "connected state" by issuing CELL UPDATE CONFIRM message on the downlink DCCH. Then UE shall reconfigured its physical channel according to the CELL UPDATE CONFIRM message and respond with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts from CELL_DCH state. SS sets counter K to 0
2	←		UE CAPABILITY ENQUIRY	Use default message
3	→		UE CAPABILITY INFORMATION	Use default message
4				The SS does not transmit a response and allows T304 timer to expire. SS increments counter K If K is greater than N304, proceeds to step 5 else returns to 3.
5	→		CELL UPDATE	The UE assumes that radio link failure has occurred and transmits this message which includes IE "Cell update cause" set to "radio link failure".
6	←		CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
7				The SS configure the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

CELL UPDATE CONFIRM (Step 6) - FDD

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 5
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Reference to TS34.108 clause 5.1 Test frequencies
- UARFCN downlink(Nd)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	33dBm
CHOICE Mode	FDD
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	2
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

CELL UPDATE CONFIRM (Step 6) – 3.84 Mcps TDD

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 5
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	Not Present
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common timeslot info	Not Present (default)
- Downlink DPCH timeslots and codes	Not Present (default)
- UL CCTrCH TPC List	Not Present (default)

CELL UPDATE CONFIRM (Step 6) – 1.28 Mcps TDD

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 5
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD indicator	FALSE
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common timeslot info	Not Present (default)
- Downlink DPCH timeslots and codes	Not Present (default)
- UL CCTrCH TPC List	Not Present (default)

8.1.5.3.5 Test requirement

After step 2, the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH. The UE shall re-transmit this message for N304 times.

After step 4, the UE shall initiate the cell update procedure.

After step 6, UE shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after it has configured L1 according to the CELL UPDATE CONFIRM message in step 6.

8.1.5.4 UE Capability in CELL_FACH state: Success

8.1.5.4.1 Definition

8.1.5.4.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network(s) supported by the UE. UTRAN initiates this procedure when it needs an update of the UE's UMTS capability information or of its inter-system classmark.

2. When the UE receives a UE CAPABILITY ENQUIRY message, the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH.

3. If during the execution of UE capability update procedure, an invalid UE CAPABILITY INFORMATION CONFIRM is received, the UE shall respond with RRC STATUS message and decide whether to re-transmit UE CAPABILITY INFORMATION message by comparing its internal counter against N304.

Reference

3GPP TS 25.331 clauses 8.1.6 and 8.1.7.

8.1.5.4.3 Test purpose

To confirm that the UE transmits a UE CAPABILITY INFORMATION message after it receives a UE CAPABILITY ENQUIRY message from the SS. To confirm that the UE indicates an invalid message reception when invalid UE

CAPABILITY ENQUIRY and UE CAPABILITY INFORMATION CONFIRM messages are received. The UE shall transmit RRC STATUS message with the correct error cause value to SS.

8.1.5.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH state (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to the CELL_FACH state after a successful outgoing call attempt. The SS transmits a UE CAPABILITY ENQUIRY message containing an unexpected critical message extension. After receiving such a message, the UE shall report an error using RRC STATUS message with the appropriate error cause specified. Then SS transmits a UE CAPABILITY ENQUIRY message which includes the IE "Capability update requirement". After UE receives this message, it transmits a UE CAPABILITY INFORMATION message on the uplink DCCH, which includes the requested capabilities. The SS transmits a UE CAPABILITY INFORMATION CONFIRM message to the UE to complete the UE capability enquiry procedure.

Then SS initiates another UE capability enquiry procedure. The UE shall reply with a UE CAPABILITY INFORMATION message on the uplink DCCH. When SS receives this message, it transmits a UE CAPABILITY INFORMATION CONFIRM message containing an unexpected critical message extension. The UE shall detect an error and send an RRC STATUS message to report this event. After submitting this message to lower layers for transmission, the UE shall re-transmit a UE CAPABILITY INFORMATION message on the uplink DCCH upon the expiry of restarted T304. SS completes this test by sending an error-free UE CAPABILITY INFORMATION CONFIRM message similar to the message sent in step 6.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state after an outgoing call has been established successfully.
2	←		UE CAPABILITY ENQUIRY	See specific message contents for this message
3	→		RRC STATUS	See specific message contents for this message.
4	←		UE CAPABILITY ENQUIRY	Use default message.
5	→		UE CAPABILITY INFORMATION	Use default message.
6	←		UE CAPABILITY INFORMATION CONFIRM	Use default message.
7	←		UE CAPABILITY ENQUIRY	Same as in step 4.
8	→		UE CAPABILITY INFORMATION	The message content shall be the same as in step 5.
9	←		UE CAPABILITY INFORMATION CONFIRM	See specific message contents for this message
10	→		RRC STATUS	UE shall detect an error and then transmit this message on uplink DCCH.
11	→		UE CAPABILITY INFORMATION	UE shall re-transmit this message after the restarted T304 expires.
12	←		UE CAPABILITY INFORMATION CONFIRM	SS sends an error-free message to acknowledge the receipt of the uplink message.

Specific Message Contents

UE CAPABILITY ENQUIRY (Step 2)

Use the UE CAPABILITY ENQUIRY message as defined in [9] (TS 34.108) Clause 9, with the following exceptions:

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Critical extensions	'01'H

RRC STATUS (Step 3)

Check to is the same message type found in TS 34.108, clause 9 is received, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~Identification of received message~~	
~~- Received message type~~	~~UE Capability Enquiry~~
~~RRC transaction identifier~~	~~Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY ENQUIRY message.~~
~~Protocol Error Information~~	
~~- Protocol Error Cause~~	~~Message extension not comprehended~~

Information Element	**Value/remark**
Identification of received message	
- Received message type	UE Capability Enquiry
RRC transaction identifier	Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY ENQUIRY message.
Protocol Error Information	
- Protocol Error Cause	Message extension not comprehended

UE CAPABILITY INFORMATION CONFIRM (Step 9)

SS sends a message containing a critical extension not defined for the protocol release supported by the UE, as indicated in the IE "Access stratum release indicator". Use the UE CAPABILITY INFORMATION CONFIRM message as defined in [9] (TS 34.108) Clause 9, with the following addition:

Information Element	Value/remark
Critical extensions	'01'H

RRC STATUS (Step 10)

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

~~Information Element~~	~~Value/remark~~
~~Identification of received message~~ ~~- Received message type~~ ~~- RRC transaction identifier~~ ~~Protocol Error Information~~ ~~- Protocol Error Cause~~	 ~~UE Capability Information Confirm~~ ~~Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY INFORMATION CONFIRM message.~~ ~~Message extension not comprehended~~

Information Element	**Value/remark**
Identification of received message - Received message type - RRC transaction identifier Protocol Error Information - Protocol Error Cause	 UE Capability Information Confirm Checked to see if the value is identical to the same IE in the downlink UE CAPABILITY INFORMATION CONFIRM message. Message extension not comprehended

8.1.5.4.5 Test requirement

After step 2, the UE shall transmit a RRC STATUS message on the uplink DCCH, reporting the error with protocol error cause set to "Message extension not comprehended" correct transaction identifier.

After step 4 and 7 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH to respond to the downlink UE CAPABILITY ENQUIRY message with correct contents.

After step 9, the UE shall transmit a RRC STATUS message on the uplink DCCH. The protocol error cause shall be set to "Message extension not comprehended" and the transaction identifier set to the same value as used in the UE CAPABILITY ENQUIRY message of step 7.

After step 10, the UE shall re-transmit the UE CAPABILITY INFORMATION message with a similar content as in step 8 upon the expiry of restarted T304.

8.1.5.5 UE Capability in CELL_FACH state: Success after T304 timeout

8.1.5.5.1 Definition

8.1.5.5.2 Conformance requirement

1. The UE CAPABILITY ENQUIRY message is sent by the UTRAN to request the UE to transmit its capability information related to any radio access network(s) supported by the UE. UTRAN initiates this action when it needs an update of the UE's UMTS capability information or of its inter-system classmark.

2. After the UE receives a UE CAPABILITY ENQUIRY message, it transmits a UE CAPABILITY INFORMATION message on the uplink DCCH. If it fails to receive a UE CAPABILITY INFORMATION CONFIRM message, the UE re-transmits another UE CAPABILITY INFORMATION message until its internal counter V304 is greater than N304.

Reference

3GPP TS 25.331 clauses 8.1.6 and 8.1.7.

8.1.5.5.3 Test purpose

To confirm that the UE re-transmits a UE CAPABILITY INFORMATION message until V304 is greater than N304, after the expiry of timer T304 when it fails to receive a downlink UE CAPABILITY INFORMATION CONFIRM message in response to the uplink UE CAPABILITY INFORMATION message sent.

8.1.5.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH state (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_FACH state. When the SS transmits a UE CAPABILITY ENQUIRY message which includes the IE "Capability update requirement", the UE shall reply with a UE CAPABILITY INFORMATION message on the uplink DCCH that contains the IE "UE radio access capability". The SS waits and does not transmit a UE CAPABILITY INFORMATION CONFIRM message to the UE, resulting in the T304 timer to expire. SS shall observe that the UE attempts to transmit a UE CAPABILITY INFORMATION message again. The UE shall re-transmit N304 times, and SS transmits a UE CAPABILITY INFORMATION CONFIRM message to answer the last request and completes this test procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state. SS sets internal counter K =0
2	←		UE CAPABILITY ENQUIRY	Including the IE "Capability update requirement".
3	→		UE CAPABILITY INFORMATION	Including the IE "UE radio access capability".
4				If K equals N304, then proceeds to step 6. Else, continue with step 5.
5				The SS does not transmit a response and wait for T304 timer to expire. K=K+1 and goes to step 3.
6	←		UE CAPABILITY INFORMATION CONFIRM	Use default message contents

Specific Message Contents

None

8.1.5.5.5 Test requirement

After step 3 the UE shall re-transmit a UE CAPABILITY INFORMATION message on the uplink DCCH, after each expiry of timer T304. The UE CAPABILITY INFORMATION message shall contain IE "UE radio access capability" with the value matching those stated in the ICS/IXIT statements. After (N304) re-transmissions, the UE shall receive a UE CAPABILITY INFORMATION CONFIRM message.

8.1.6 Direct Transfer

8.1.6.1 Direct Transfer in CELL DCH state (invalid message reception and no signalling connection exists)

8.1.6.1.1 Definition

8.1.6.1.2 Conformance requirement

The UE shall transmit an RRC STATUS message stating the value "ASN.1 violation or encoding error" in IE "Protocol error cause" when the UE receives a DOWNLINK DIRECT TRANFER message, which does not include any IEs except IE "Message Type". The UE shall transmit an RRC STATUS message including the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state" when the UE receives a DOWNLINK DIRECT TRANSFER message, with invalid IE"CN domain identity".

Reference

3GPP TS 25.331 clause 8.1.9.

8.1.6.1.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which does not include any IEs except IE "Message Type". To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which includes an invalid IE "CN domain identity".

8.1.6.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in the CELL_DCH state. The SS transmits an invalid DOWNLINK DIRECT TRANSFER message to the UE. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "ASN.1 violation or encoding error" shall also be indicated in IE "Protocol error cause". The SS transmits a DOWNLINK DIRECT TRANSFER message that contains an invalid IE "CN domain identity" to the UE. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "Message not compatible with receiver state" shall also be indicated in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		DOWNLINK DIRECT TRANSFER	Only message type is provided.
2	→		RRC STATUS	
3	←		DOWNLINK DIRECT TRANSFER	
4	→		RRC STATUS	

Specific Message Contents

DOWNLINK DIRECT TRANSFER (Step 1)

Information Element	Value/remark
All IEs	Not Present

RRC STATUS (Step 2)

Check to see if same message type found in Annex A is received, with the following exceptions:

Information Element	Value/remark
Protocol error information - Protocol error cause	ASN.1 violation or encoding error

DOWNLINK DIRECT TRANSFER (Step 3)

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

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain as unselected domain Arbitrary message.

RRC STATUS (Step 4)

Check to see if same message type found in Annex A is received, with the following exceptions:

Information Element	Value/remark
Message Type Identification of received messag type - Received message type - RRC transaction identifier Protocol error information – Protocol error cause	 DOWNLINK DIRECT TRANSFER Same value in the DOWNLINK DIRECT TRANSFER message in step 3. Message not compatible with receiver state

8.1.6.1.5 Test requirement

After step 1 the UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 3 the UE shall transmit a n RRC STATUS message on the DCCH using AM RLC setting "Message not compatible with receiver state" in IE "Protocol error cause".

8.1.6.2 Direct Transfer in CELL FACH state (invalid message reception and no signalling connection exists)

8.1.6.2.1 Definition

8.1.6.2.2 Conformance requirement

The UE shall transmit an RRC STATUS message stating the value "ASN.1 violation or encoding error" in IE "Protocol error cause" when the UE receives a DOWNLINK DIRECT TRANSFER message, which does not include any IEs except IE "Message Type". The UE shall transmit an RRC STATUS message including the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state" when the UE receives a DOWNLINK DIRECT TRANSFER message, with invalid IE "CN domain identity".

Reference

3GPP TS 25.331 clause 8.1.9.

8.1.6.2.3 Test purpose

To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which does not include any IEs except IE "Message Type". To confirm that the UE transmits an RRC STATUS message on the DCCH using AM RLC if it receives a DOWNLINK DIRECT TRANSFER message which includes an invalid IE "CN domain identity".

8.1.6.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a DOWNLINK DIRECT TRANSFER message to the UEand does not include all IEs except IE "Message Type". The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "ASN.1 violation or encoding error" shall also be indicated in IE "Protocol error cause". The SS transmits a DOWNLINK DIRECT TRANSFER message that contains an invalid IE "CN domain identity" to the UE. The UE shall transmit an RRC STATUS message on the DCCH using AM RLC. The error type "Message not compatible with receiver state" shall also be indicated in IE "Protocol error cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		DOWNLINK DIRECT TRANSFER	Only message type is provided
2	→		RRC STATUS	
3	←		DOWNLINK DIRECT TRANSFER	
4	→		RRC STATUS	

Specific Message Contents

DOWNLINK DIRECT TRANSFER (Step 1)

Information Element	Value/remark
All IEs	Not Present

RRC STATUS (Step 2)

Check to see if the same message type found in Annex A is received, with the following exceptions:

Information Element	Value/remark
Protocol error information – Protocol error cause	ASN.1 violation or encoding error

DOWNLINK DIRECT TRANSFER (Step 3)

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain as unselected domain Arbitrary message.

RRC STATUS (Step 4)

Check to see if the same message type found in Annex A is received, with the following exceptions:

Information Element	Value/remark
Identification of received message type - Received message type - RRC transaction identifier Protocol error information – Protocol error cause	 DOWNLINK DIRECT TRANSFER Same value in the DOWNLINK DIRECT TRANSFER message in step 3. Message not compatible with receiver state

8.1.6.2.5 Test requirement

After step 1 the UE shall transmit an RRC STATUS message on the DCCH using AM RLC setting "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 3 the UE shall transmit a n RRC STATUS message on the DCCH using AM RLC setting "Message not compatible with receiver state" in IE "Protocol error cause".

8.1.7 Security mode command

8.1.7.1 Security mode command in CELL_DCH state (CS Domain)

8.1.7.1.1 Definition

8.1.7.1.2 Conformance requirement

1. This procedure is used to trigger or start of ciphering or to command the restart of ciphering with the new ciphering configuration for the signalling radio bearers and any radio bearers of a particular CN Domain. It is also used to start integrity protection or modify integrity protection configuration for the signalling radio bearers.

2. When the UE receives a SECURITY MODE COMMAND message from the UTRAN, which indicates a downlink activation time for each effected SRB and RB, and new ciphering mode configuration, the UE shall apply the old ciphering configuration, for a particular SRB or RB, before the stated downlink activation time. It shall start to decipher using the new ciphering configuration at the downlink activation time.

3. After the UE has transmitted a SECURITY MODE COMPLETE message using the new integrity protection configuration which includes uplink activation time, it shall start to cipher transmission in the uplink using the new configuration at the respective uplink activation time for each SRB or RB.

Reference

3GPP TS 25.331 clauses 8.1.12, 8.6.3.4, 8.6.3.5.

8.1.7.1.3 Test purpose

To confirm that the UE activates the new ciphering configurations after the stated activation time. To confirm that after the UE receives a SECURITY MODE COMMAND message, it transmits a SECURITY MODE COMPLETE message to the UTRAN using the old ciphering configuration together with the application of the new integrity protection configuration. To confirm that UE send SECURITY MODE FAILURE message when SS transmits a SECURITY

MODE COMMAND message that causes an invalid configuration. To confirm that the UE sends a SECURITY MODE FAILURE message when the UE receives an invalid SECURITY MODE COMMAND message.

8.1.7.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS initiates an Authentication procedure, which will result in the generation of a new security keyset (CK/IK). The SS transmits a SECURITY MODE COMMAND message which contains an unexpected critical message extension. The UE shall respond by sending SECURITY MODE FAILURE message on the DCCH. Then SS transmits a SECURITY MODE COMMAND message with IE's "Ciphering mode info" and "Integrity protection mode info both omitted". Again the UE shall not trigger any ciphering algorithm and it shall respond by sending SECURITY MODE FAILURE message on the DCCH. Next, the SS transmits a valid SECURITY MODE COMMAND message which includes the correct downlink activation times and "Integrity check info" IE. Then the UE shall check the integrity check info and shall start to configure ciphering in downlink according to the first valid SECURITY MODE COMMAND message. The UE shall transmit a SECURITY MODE COMPLETE message which contains the correct uplink activation times and also "Integrity check info" IE using the new integrity protection configuration. The SS records the uplink ciphering activation time for RB 2. Next, the SS transmits UE CAPABILITY ENQUIRY message repeatedly on the downlink DCCH using RLC-AM mode. The UE shall respond to each downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS then send UE CAPABILITY INFORMATION CONFIRM message to the UE. This cycle repeats itself until both the uplink and downlink ciphering activation time for RB 2 has elapsed. SS checks all uplink UE CAPABILITY INFORMATION messages are integrity-protected by UIA algorithm, and that the messages contain the correct values for "Integrity check info" IE. This can be verified in the SS through the reception of a correctly ciphered and integrity-protected UE CAPABILITY INFORMATION message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on DCH_state.
1a	←		AUTHENTICATION REQUEST	MM message which will result in the generation of a new security keyset
1b	→		AUTHENTICATION RESPONSE	MM
2	←		SECURITY MODE COMMAND	See message content.
3	→		SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "Protocol Error" and IE "Protocol Error Information" shall be set to "Message extension not comprehended".
4	←		SECURITY MODE COMMAND	See message content.
5	→		SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "invalid configuration".
6	←		SECURITY MODE COMMAND	See specific message contents.
7			Void	
8			Void	
9	→		SECURITY MODE COMPLETE	SS verifies that this message is sent using the old ciphering configuration. SS records the uplink ciphering activation time for RB 2.
10	←		UE CAPABILITY ENQUIRY	SS repeats step 10, 11 and 12 until its internal uplink and downlink RLC SN have both surpassed the uplink and downlink ciphering activation time specified for RB2. This message is sent on the downlink DCCH using RLC-AM.
11	→		UE CAPABILITY INFORMATION	UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
12	←		UE CAPABILITY INFORMATION CONFIRM	

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

~~Information Element~~	~~Value/remark~~
~~Integrity check info~~ ~~Message authentication code~~ ~~RRC Message sequence number~~ ~~Critical extensions~~	 ~~Calculated result in SS~~ ~~Next RRC SN~~ ~~'01'H~~

Information Element	Value/remark
Integrity check info Message authentication code RRC Message sequence number Critical extensions	 Calculated result in SS Next RRC SN '01'H

SECURITY MODE FAILURE (Step 3)

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

~~Information Element~~	~~Value/remark~~
~~Failure cause~~ ~~Failure cause~~ ~~Protocol error information~~ ~~Protocol error cause~~	 ~~Protocol error~~ ~~Message extension not comprehended~~

Information Element	Value/remark
Failure cause Failure cause Protocol error information Protocol error cause	 Protocol error Message extension not comprehended

SECURITY MODE COMMAND (Step 4)

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~ ~~Integrity check info~~ ~~Message authentication code~~ ~~RRC Message sequence number~~ ~~Security Capability~~ ~~Ciphering mode info~~ ~~Ciphering mode command~~ ~~Integrity protection mode info~~ ~~CN domain identity~~	~~0~~ ~~Calculated result in SS~~ ~~Next RRC SN~~ ~~Same as originally sent by UE (and stored in SS)~~ ~~Not Present~~ ~~Not Present~~ ~~CS Domain~~

Information Element	Value/remark
RRC transaction identifier Integrity check info Message authentication code RRC Message sequence number Security Capability Ciphering mode info Ciphering mode command Integrity protection mode info CN domain identity	0 Calculated result in SS Next RRC SN Same as originally sent by UE (and stored in SS) Not Present Not Present CS Domain

SECURITY MODE FAILURE (Step 5)

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

Information Element	Value/remark
Failure cause ~~Failure cause~~ Failure cause	 ~~Invalid configuration~~ Invalid configuration

SECURITY MODE COMMAND (Step 6)

See notes below for the value of Y.

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~X~~
~~Integrity check info~~	
~~Message authentication code~~	~~Calculated result in SS~~
~~RRC Message sequence number~~	~~Next RRC SN~~
~~Security Capability~~	~~Same as originally sent by UE (and stored in SS)~~
~~Ciphering mode info~~	
~~Ciphering mode command~~	~~Start/restart~~
~~Ciphering algorithm~~	~~UEA1~~
~~Activation time for DPCH~~	~~Current CFN + 225~~
~~Radio bearer downlink ciphering activation time info~~	
~~RB Identity~~	~~1~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~RB Identity~~	~~2~~
~~RLC sequence number~~	~~Current RLC SN + 4~~
~~RB Identity~~	~~3~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~RB Identity~~	~~4~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~Integrity protection mode info~~	
~~Integrity protection mode command~~	~~Modify~~
~~Downlink integrity protection activation info~~	~~Current RRC SN for SRB0 + 2~~ ~~Current RRC SN for SRB1 + 2~~ ~~Current RRC SN for SRB2 + 2~~ ~~Current RRC SN for SRB3 + 2~~ ~~Current RRC SN for SRB4 + 2~~
~~Integrity protection algorithm~~	~~UIA1~~
~~CN domain identity~~	~~CS Domain~~

Information Element	**Value/remark**
RRC transaction identifier	X
Integrity check info	
Message authentication code	Calculated result in SS
RRC Message sequence number	Next RRC SN
Security Capability	Same as originally sent by UE (and stored in SS)
Ciphering mode info	
Ciphering mode command	Start/restart
Ciphering algorithm	UEA1
Activation time for DPCH	Current CFN + 225
Radio bearer downlink ciphering activation time info	
RB Identity	1
RLC sequence number	Current RLC SN + Y
RB Identity	2
RLC sequence number	Current RLC SN + 4
RB Identity	3
RLC sequence number	Current RLC SN + Y
RB Identity	4
RLC sequence number	Current RLC SN + Y
Integrity protection mode info	
Integrity protection mode command	Modify
Downlink integrity protection activation info	Current RRC SN for SRB0 + 2 Current RRC SN for SRB1 + 2 Current RRC SN for SRB2 + 2 Current RRC SN for SRB3 + 2 Current RRC SN for SRB4 + 2
Integrity protection algorithm	UIA1
CN domain identity	CS Domain

Note X = 0 (Step 6), and Y= 1 (Step 6)

SECURITY MODE COMPLETE (Step 9)

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	
~~- Message Authentication code~~	~~Checked to see if present~~
~~- RRC Message sequence number~~	~~Checked to see if present~~
~~Uplink integrity protection activation info~~	
~~- RRC message sequence number list~~	~~Check to see if the RRC SN for RB 0 to RB 4 are present~~
~~Radio bearer uplink ciphering activation info~~	
~~- RB Identity other than RB2~~	~~Check to see if the RLC SN for RB1, 3 and 4 are present~~
~~- RB Identity~~	~~2~~
~~- RLC sequence number~~	~~SS records this value. See step 10 in 'expected sequence'~~

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	
- Message Authentication code	Checked to see if present
- RRC Message sequence number	Checked to see if present
Uplink integrity protection activation info	
- RRC message sequence number list	Check to see if the RRC SN for RB 0 to RB 4 are present
Radio bearer uplink ciphering activation info	
- RB Identity other than RB2	Check to see if the RLC SN for RB1, 3 and 4 are present
- RB Identity	2
- RLC sequence number	SS records this value. See step 10 in 'expected sequence'

8.1.7.1.5 Test requirement

After step 2 the UE shall transmit a SECURITY MODE FAILURE message to report the protocol error detected in the first SECURITY MODE COMMAND message.

After step 4 the UE shall transmit a SECURITY MODE FAILURE message to report on the invalid configuration detected in the second SECURITY MODE COMMAND message.

After step 8 the SS checks that the SECURITY MODE COMPLETE message is received ciphered using the old configuration and that the calculated "integrity check info" IE is correct.

After step 9 SS verifies that all uplink signalling messages on RB2 are integrity protected with UIA1 algorithm.

After uplink ciphering activation time has lapsed, SS verifies that the UE CAPABILITY INFORMATION message received is integrity protected with UIA algorithm and ciphered with the new ciphering configuration and algorithm indicated in the SECURITY MODE COMMAND (Step 6) message.

After downlink ciphering activation time has lapsed, SS shall apply ciphering to all downlink messages using the new configuration. At least one more cycle between step 10 and step 12 shall be repeated correctly after activation time on both directions has lapsed and the messages on both direction shall be ciphered and integrity protected..

8.1.7.1b Security mode command in CELL_DCH state (PS Domain)

8.1.7.1b.1 Definition

8.1.7.1b.2 Conformance requirement

1. This procedure is used to trigger the start of ciphering or to command the restart of ciphering with the new ciphering configuration for the signalling radio bearers and any radio bearers of a particular CN Domain. It is also used to start integrity protection or modify integrity protection configuration for the signalling radio bearers.

2. When the UE receives a SECURITY MODE COMMAND message from the UTRAN, which indicates a downlink activation time for each effected SRB and RB, and new ciphering mode configuration, the UE shall

apply the old ciphering configuration, for each particular SRB or RB, before the stated downlink activation time. It shall start to decipher using the new ciphering configuration at the downlink activation time.

3. After the UE has transmitted a SECURITY MODE COMPLETE message using the new integrity protection configuration which includes uplink activation time, it shall start to cipher transmission in the uplink using the new configuration at the respective uplink activation time for each SRB or RB.

Reference

3GPP TS 25.331 clauses 8.1.12, 8.6.3.4, 8.6.3.5.

8.1.7.1b.3 Test purpose

To confirm that the UE activates the new ciphering configurations after the stated activation time. To confirm that after the UE receives a SECURITY MODE COMMAND message, it transmits a SECURITY MODE COMPLETE message to the UTRAN using the old ciphering configuration together with the application of the new integrity protection configuration. To confirm that UE send SECURITY MODE FAILURE message when SS transmits a SECURITY MODE COMMAND message that causes an invalid configuration. To confirm that the UE sends a SECURITY MODE FAILURE message when UE receives an invalid SECURITY MODE COMMAND message.

8.1.7.1b.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS initiates an Authentication and Ciphering procedure, which will result in the generation of a new security keyset (CK/IK). The SS transmits a SECURITY MODE COMMAND message which contains an unexpected critical message extension . The UE shall respond by sending SECURITY MODE FAILURE message on the DCCH. Then SS transmits a SECURITY MODE COMMAND message with IEs "Ciphering mode info" and "Integrity protection mode info both omitted". Again the UE shall not trigger any ciphering algorithm and it shall respond by sending SECURITY MODE FAILURE message on the DCCH. Next, the SS transmits a valid SECURITY MODE COMMAND message which includes the correct downlink activation times and "Integrity check info" IE. Following that, the SS immediately transmits another valid SECURITY MODE COMMAND message to the UE. Then the UE shall check the integrity check info and shall start to configure ciphering in downlink according to the first valid SECURITY MODE COMMAND message. Then UE shall transmit a SECURITY MODE COMPLETE message which contains the correct uplink activation times and also "Integrity check info" IE using the new integrity protection configuration. SS records the uplink ciphering activation time for RB 2. Next, the SS transmits UE CAPABILITY ENQUIRY message repeatedly on the downlink DCCH using RLC-AM mode. The UE shall respond to each downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS then send UE CAPABILITY INFORMATION CONFIRM message to the UE. This cycle repeats itself until both the uplink and downlink ciphering activation time for RB 2 has elapsed. SS checks all uplink UE CAPABILITY INFORMATION messages are integrity-protected by UIA algorithm, and that the messages contain the correct values for "Integrity check info" IE. This can be verified in the SS through the reception of a correctly ciphered and integrity-protected UE CAPABILITY INFORMATION message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				RRC connected state on DCH_state.
1a	←		AUTHENTICATION AND CIPHERING REQUEST	GMM message which will result in the generation of a new security keyset
1b	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
2	←		SECURITY MODE COMMAND	See message content.
3	→		SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "Protocol Error" and IE "Protocol Error Information" shall be set to "Message extension not comprehended".
4	←		SECURITY MODE COMMAND	See message content.
5	→		SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "invalid configuration".
6	←		SECURITY MODE COMMAND	See specific message contents.
7	→		SECURITY MODE COMPLETE	SS verifies that this message is sent using the old ciphering configuration. SS records the uplink ciphering activation time for RB 2.
8	←		UE CAPABILITY ENQUIRY	SS repeats step 8, 9 and 10 until its internal uplink and downlink RLC SN have both surpassed the uplink and downlink ciphering activation time specified for RB2. This message is sent on the downlink DCCH using RLC-AM.
9	→		UE CAPABILITY INFORMATION	UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
10	←		UE CAPABILITY INFORMATION CONFIRM	

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

~~Information Element~~	~~Value/remark~~
~~Integrity check info~~ ~~Message authentication code~~ ~~RRC Message sequence number~~ ~~Critical extensions~~	 ~~Calculated result in SS~~ ~~Next RRC SN~~ ~~'01'H~~

Information Element	**Value/remark**
Integrity check info Message authentication code RRC Message sequence number Critical extensions	 Calculated result in SS Next RRC SN '01'H

SECURITY MODE FAILURE (Step 3)

The same message found in [9] (TS 34.108) Clause 9 shall be transmitted by the UE on the uplink DCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~Failure cause~~ ~~Failure cause~~ ~~Protocol error information~~ ~~Protocol error cause~~	 ~~Protocol error~~ ~~Message extension not comprehended~~

Information Element	Value/remark
Failure cause Failure cause Protocol error information Protocol error cause	 Protocol error Message extension not comprehended

SECURITY MODE COMMAND (Step 4)

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~ ~~Integrity check info~~ ~~Message authentication code~~ ~~RRC Message sequence number~~ ~~Security Capability~~ ~~Ciphering mode info~~ ~~Integrity protection mode info~~ ~~CN domain identity~~	~~0~~ ~~Calculated result in SS~~ ~~Next RRC SN~~ ~~Same as originally sent by UE (and stored in SS)~~ ~~Not Present~~ ~~Not Present~~ ~~PS Domain~~

Information Element	Value/remark
RRC transaction identifier Integrity check info Message authentication code RRC Message sequence number Security Capability Ciphering mode info Integrity protection mode info CN domain identity	0 Calculated result in SS Next RRC SN Same as originally sent by UE (and stored in SS) Not Present Not Present PS Domain

SECURITY MODE FAILURE (Step 5)

The same message found in [9] (TS 34.108) Clause 9 shall be transmitted by the UE on the uplink DCCH, with the exception of the following IEs:

Information Element	Value/remark
Failure cause ~~Failure cause~~	 ~~Invalid configuration~~
Failure cause	Invalid configuration

SECURITY MODE COMMAND (Step 6)

See notes below for the value of Y.

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~X~~
~~Integrity check info~~	
~~Message authentication code~~	~~Calculated result in SS~~
~~RRC Message sequence number~~	~~Next RRC SN~~
~~Security Capability~~	~~Same as originally sent by UE (and stored in SS)~~
~~Ciphering mode info~~	
~~Ciphering mode command~~	~~Start/restart~~
~~Ciphering algorithm~~	~~UEA1~~
~~Activation time for DPCH~~	~~Not Present~~
~~Radio bearer downlink ciphering activation time info~~	
~~RB Identity~~	~~1~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~RB Identity~~	~~2~~
~~RLC sequence number~~	~~Current RLC SN + 4~~
~~RB Identity~~	~~3~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~RB Identity~~	~~4~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~RB Identity~~	~~20~~
~~RLC sequence number~~	~~Current RLC SN + Y~~
~~Integrity protection mode info~~	
~~Integrity protection mode command~~	~~Modify~~
~~Downlink integrity protection activation info~~	
	~~Current RRC SN for SRB0 + 2~~ ~~Current RRC SN for SRB1 + 2~~ ~~Current RRC SN for SRB2 + 2~~ ~~Current RRC SN for SRB3 + 2~~ ~~Current RRC SN for SRB4 + 2~~
~~Integrity protection algorithm~~	~~UIA1~~
~~CN domain identity~~	~~PS Domain~~

Information Element	**Value/remark**
RRC transaction identifier	X
Integrity check info	
Message authentication code	Calculated result in SS
RRC Message sequence number	Next RRC SN
Security Capability	Same as originally sent by UE (and stored in SS)
Ciphering mode info	
Ciphering mode command	Start/restart
Ciphering algorithm	UEA1
Activation time for DPCH	Not Present
Radio bearer downlink ciphering activation time info	
RB Identity	1
RLC sequence number	Current RLC SN + Y
RB Identity	2
RLC sequence number	Current RLC SN + 4
RB Identity	3
RLC sequence number	Current RLC SN + Y
RB Identity	4
RLC sequence number	Current RLC SN + Y
RB Identity	20
RLC sequence number	Current RLC SN + Y
Integrity protection mode info	
Integrity protection mode command	Modify
Downlink integrity protection activation info	
	Current RRC SN for SRB0 + 2 Current RRC SN for SRB1 + 2 Current RRC SN for SRB2 + 2 Current RRC SN for SRB3 + 2 Current RRC SN for SRB4 + 2
Integrity protection algorithm	UIA1
CN domain identity	PS Domain

Note X = 0 (Step 6), and Y=1 (Step 6),

SECURITY MODE COMPLETE (Step 7)

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	
~~- Message Authentication code~~	~~Checked to see if present~~
~~- RRC Message sequence number~~	~~Checked to see if present~~
~~Uplink integrity protection activation info~~	
~~- RRC message sequence number listRadio~~	~~Check to see if the RRC SN for RB 0 to RB 4 are present~~
~~bearer uplink ciphering activation info~~	
~~- RB Identity other than RB2~~	~~Check to see if the RLC SN for RB1, 3, 4 and 20 are present~~
~~- RB Identity~~	~~2~~
~~- RLC sequence number~~	~~SS records this value. See step 8 in 'expected sequence'~~

Information Element	**Value/remark**
RRC transaction identifier	0
Integrity check info	
- Message Authentication code	Checked to see if present
- RRC Message sequence number	Checked to see if present
Uplink integrity protection activation info	
- RRC message sequence number listRadio	Check to see if the RRC SN for RB 0 to RB 4 are present
bearer uplink ciphering activation info	
- RB Identity other than RB2	Check to see if the RLC SN for RB1, 3, 4 and 20 are present
- RB Identity	2
- RLC sequence number	SS records this value. See step 8 in 'expected sequence'

8.1.7.1b.5 Test requirement

After step 2 the UE shall transmit a SECURITY MODE FAILURE message to report the protocol error detected in the first SECURITY MODE COMMAND message.

After step 4 the UE shall transmit a SECURITY MODE FAILURE message to report on the invalid configuration detected in the second SECURITY MODE COMMAND message.

At step 7 SS checks that the SECURITY MODE COMPLETE message is received ciphered using the old configuration and that the calculated "integrity check info" IE is correct.

After step 7 SS verifies that all uplink signalling messages on RB2 are integrity protected with UIA1 algorithm.

After uplink ciphering activation time has lapsed, SS verifies that the UE CAPABILITY INFORMATION message received is integrity protected with UIA algorithm and ciphered with the new ciphering configuration and algorithm indicated in the SECURITY MODE COMMAND (Step 6) message.

After downlink ciphering activation time has lapsed, SS shall apply ciphering to all downlink messages using the new configuration. At least one more cycle between step 8 and step 10 shall be repeated correctly after activation time on both directions has lapsed and the messages on both direction shall be ciphered and integrity protected.

8.1.7.2 Security mode command in CELL_FACH state

8.1.7.2.1 Definition

8.1.7.2.2 Conformance requirement

1. This procedure is used to trigger the start of ciphering, or to command the restart of ciphering with the new ciphering configuration for the signalling radio bearers and any radio bearers of a particular CN Domain. It is also used to start integrity protection or modify integrity protection configuration for signalling radio bearers.

2. When the UE receives a SECURITY MODE COMMAND message from the UTRAN, which indicates the downlink activation time for each effected SRB and RB, and new ciphering mode configuration, the UE shall apply the old ciphering configuration, for a particular SRB or RB, before the stated downlink activation time. It shall start to decipher using the new ciphering configuration at the downlink activation time.

3. The UE shall transmit SECURITY MODE COMPLETE message using the new integrity protection configuration stated in the received SECURITY MODE COMMAND message. The SECURITY MODE COMPLETE message shall include the ciphering uplink activation time. The UE shall start to apply the new ciphering configuration on the uplink direction, after the uplink activation time has elapsed respectively for each SRB or RB.

Reference

3GPP TS 25.331 clauses 8.1.12, 8.6.3.4, 8.6.3.5.

8.1.7.2.3 Test purpose

To confirm that after the UE receives a SECURITY MODE COMMAND message, it transmits a SECURITY MODE COMPLETE message to the UTRAN using the old ciphering configuration together with the application of the new integrity protection configuration. To confirm that the UE applies the old ciphering configuration in the downlink prior to the activation time; and uses the new ciphering configuration on and after the activation time. To confirm that the UE starts to cipher its uplink transmissions after the uplink activation time stated in SECURITY MODE COMPLETE message is reached. To confirm that the UE sends a SECURITY MODE FAILURE message when the UE receives an invalid SECURITY MODE COMMAND message.

8.1.7.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS initiates an Authentication and Ciphering procedure, which will result in the generation of a new security keyset (CK/IK). The SS transmits a SECURITY MODE COMMAND message which contains an unexpected critical message extension. The UE shall respond by sending SECURITY MODE FAILURE message on the DCCH. Next, SS transmits a valid SECURITY MODE COMMAND message which includes the correct downlink activation times and IE "Integrity check info". The UE shall check the integrity check info. It shall start to configure ciphering in downlink and transmit a SECURITY MODE COMPLETE message, which contains the correct uplink activation times using the new integrity protection configuration. This message shall contain the IE "Integrity check info". SS records the uplink ciphering activation time for RB 2. Next, SS transmits UE CAPABILITY ENQUIRY message repeatedly on the downlink DCCH using RLC-AM mode. The UE shall respond to each downlink message with a UE CAPABILITY INFORMATION message on the uplink DCCH using RLC-AM. SS checks all uplink messages are integrity-protected by UIA1 algorithm, and that the messages contain the correct values for "Integrity check info" IE by sending a UE CAPABILITY INFORMATION CONFIRM. This cycle repeats itself until both the uplink and downlink ciphering activation time for RB 2 have elapsed. After both the uplink and downlink ciphering activation time for RB 2 have passed, the UE shall be able to communicate with the SS using the new ciphering configurations. This can be verified in SS through the reception of a correctly ciphered and integrity-protected UE CAPABILITY INFORMATION message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_FACH state.
1a	←		AUTHENTICATION AND CIPHERING REQUEST	GMM message which will result in the generation of a new security keyset
1b	→		AUTHENTICATION AND CIPHERING RESPONSE	GMM
2	←		SECURITY MODE COMMAND	See specific message content
3	→		SECURITY MODE FAILURE	IE "Failure Cause" shall be set to "Protocol Error" and IE "Protocol Error Information" shall be set to "Message extension not comprehended".
4			Void	
5			Void	
6			Void	
7			Void	
8	←		SECURITY MODE COMMAND	See specific message contents.
9	→		SECURITY MODE COMPLETE	SS verifies that this message is sent using the old ciphering configuration. SS records the uplink ciphering activation time for RB 2.
10	←		UE CAPABILITY ENQUIRY	SS repeats step 10,11 and 12 until its internal uplink and downlink RLC SN have both surpassed the uplink and downlink ciphering activation time specified for RB2. This message is sent on the downlink DCCH using RLC-AM.
11	→		UE CAPABILITY INFORMATION	UE shall send this message on the uplink DCCH using RLC-AM. SS verifies that the last UE CAPABILITY INFORMATION message is both integrity-protected and ciphered correctly.
12	←		UE CAPABILITY INFORMATION CONFIRM	

Specific Message Contents

SECURITY MODE COMMAND (Step 2)

Information Element	Value/remark
~~Integrity check info~~ ~~Message authentication code~~ ~~RRC Message sequence number~~ ~~Critical extensions~~	 ~~Calculated result in SS~~ ~~Next RRC SN~~ ~~'01'H~~

Information Element	Value/remark
Integrity check info Message authentication code RRC Message sequence number Critical extensions	 Calculated result in SS Next RRC SN '01'H

SECURITY MODE COMMAND (Step 8)

See notes below for the value of Y.

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	
Message authentication code	Calculated result in SS
RRC Message sequence number	Next RRC SN
Security Capability	Same as originally sent by UE (and stored in SS)
Ciphering mode info	
Ciphering mode command	Start/restart
Ciphering algorithm	UEA1
Activation time for DPCH	Not Present
Radio bearer downlink ciphering activation time info	
RB Identity	1
RLC sequence number	Current RLC SN + Y
RB Identity	2
RLC sequence number	Current RLC SN + 4
RB Identity	3
RLC sequence number	Current RLC SN + Y
RB Identity	4
RLC sequence number	Current RLC SN + Y
RB Identity	20
RLC sequence number	Current RLC SN + Y
Integrity protection mode info	
Integrity protection mode command	Modify
Downlink integrity protection activation info	Current RRC SN for SRB0 + 2 Current RRC SN for SRB1 + 2 Current RRC SN for SRB2 + 2 Current RRC SN for SRB3 + 2 Current RRC SN for SRB4 + 2
Integrity protection algorithm	UIA1
CN domain identity	PS Domain

Y=1 (Step 8)

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	
Message authentication code	Calculated result in SS
RRC Message sequence number	Next RRC SN
Security Capability	Same as originally sent by UE (and stored in SS)
Ciphering mode info	
Ciphering mode command	Start/restart
Ciphering algorithm	UEA1
Activation time for DPCH	Not Present
Radio bearer downlink ciphering activation time info	
RB Identity	1
RLC sequence number	Current RLC SN + Y
RB Identity	2
RLC sequence number	Current RLC SN + 4
RB Identity	3
RLC sequence number	Current RLC SN + Y
RB Identity	4
RLC sequence number	Current RLC SN + Y
RB Identity	20
RLC sequence number	Current RLC SN + Y
Integrity protection mode info	
Integrity protection mode command	Modify
Downlink integrity protection activation info	
	Current RRC SN for SRB0 + 2
	Current RRC SN for SRB1 + 2
	Current RRC SN for SRB2 + 2
	Current RRC SN for SRB3 + 2
	Current RRC SN for SRB4 + 2
Integrity protection algorithm	UIA1
CN domain identity	PS Domain

Y=1 (Step 8)

SECURITY MODE COMPLETE (Step 9)

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	
~~- Message Authentication code~~	~~Checked to see if present~~
~~- RRC Message sequence number~~	~~Checked to see if present~~
~~Uplink integrity protection activation info~~	
~~- RRC message sequence number list~~	~~Check to see if it the RRC SN for RB 0 to RB 4 are present~~
~~Radio bearer uplink ciphering activation info~~	
~~- RB Identity other than RB2~~	~~Check to see if the RLC SN for RB1, 3 and 4 are present~~
~~- RB Identity~~	~~2~~
~~- RLC sequence number~~	~~SS records this value. See step 10 in 'expected sequence'~~

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	
- Message Authentication code	Checked to see if present
- RRC Message sequence number	Checked to see if present
Uplink integrity protection activation info	
- RRC message sequence number list	Check to see if it the RRC SN for RB 0 to RB 4 are present
Radio bearer uplink ciphering activation info	
- RB Identity other than RB2	Check to see if the RLC SN for RB1, 3 and 4 are present
- RB Identity	2
- RLC sequence number	SS records this value. See step 10 in 'expected sequence'

8.1.7.2.5 Test requirement

After step 2 the UE shall transmit a SECURITY MODE FAILURE message to report the protocol error detected in the first SECURITY MODE COMMAND message.

After step 8 the SS checks that the SECURITY MODE COMPLETE message is received ciphered using the old configuration and that the calculated MAC-I values in "integrity check info" IE is correct.

After step 9 SS verifies that all uplink signalling messages on RB2 are integrity protected with UIA1 algorithm.

After uplink ciphering activation time has lapsed, SS verifies that the UE CAPABILITY INFORMATION message received is integrity protected with UIA algorithm and ciphered with the new ciphering configuration and algorithm indicated in the SECURITY MODE COMMAND (Step 8) message.

After downlink ciphering activation time has lapsed, SS shall apply ciphering to all downlink messages using the new configuration. At least one more cycle between step 10 and step 12 shall be repeated correctly after activation time on both directions has lapsed and the messages on both directions shall be ciphered and integrity protected.

8.1.8 Counter check

8.1.8.1 Counter check in CELL_DCH state

8.1.8.1.1 Definition

8.1.8.1.2 Conformance requirement

When the UE receives a COUNTER CHECK message that includes matched COUNT-C MSB values, the UE shall transmit a COUNTER CHECK RESPONSE message on the uplink DCCH and omitting "RB COUNT-C information" IE in this message.

When the UE receives a COUNTER CHECK message that includes any mismatched COUNT-C MSB values, the UE shall transmit a COUNTER CHECK RESPONSE message on the uplink DCCH and specifies the current COUNT-C information of the RAB(s) with mismatched values.

When the UE receives an invalid COUNTER CHECK message, the UE shall perform procedure specific error handling.

Reference

3GPP TS 25.331 clause 8.1.15.

8.1.8.1.3 Test purpose

To confirm that the UE transmits a COUNTER CHECK RESPONSE message after it receives a COUNTER CHECK message from the SS. To confirm that the UE responds to the reception of an invalid downlink COUNTER CHECK message by transmitting a RRC STATUS message on the uplink DCCH, stating the correct error cause value in message.

8.1.8.1.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH state (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. The SS transmits an invalid COUNTER CHECK message. This message lacks all IEs except IE "Message Type". The UE shall detect a protocol error and send RRC STATUS message to report this event. Next, the SS transmits a COUNTER CHECK message that includes the current COUNT-C MSB information in each radio access bearer. The UE shall react by sending a

COUNTER CHECK RESPONSE message on the uplink DCCH, which does not include "RB COUNT-C information" IE. The SS transmits a COUNTER CHECK message which includes the current COUNT-C MSB information reversed all the bits in each radio bearer. The UE shall send a COUNTER CHECK RESPONSE message on the uplink DCCH, specifying the current COUNT-C information for each radio access bearer established. The SS transmits a COUNTER CHECK message which includes a different radio bearer. The UE shall send a COUNTER CHECK RESPONSE message on the uplink DCCH, specifying the current COUNT-C information for each radio access bearer established.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state after an outgoing call has been established successfully.
2	←		COUNTER CHECK	See specific message contents for this message
3	→		RRC STATUS	UE shall detect a protocol error and then transmit this message.
4	←		COUNTER CHECK	See specific message content.
5	→		COUNTER CHECK RESPONSE	The message shall not include the IE "RB COUNT-C information".
6	←		COUNTER CHECK	See specific message content.
7	→		COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".
8	←		COUNTER CHECK	See specific message content.
9	→		COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".

Specific Message Contents

COUNTER CHECK (Step 2)

Information Element	Value/remark
All IEs	Not Present

RRC STATUS (Step 3)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Protocol Error Information	
~~- Protocol Error Cause~~	~~Checked to see if set to "ASN.1 violation or encoding error"~~
- Protocol Error Cause	Checked to see if set to "ASN.1 violation or encoding error"

COUNTER CHECK (Step 4)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Calculated value~~
~~RB COUNT-C MSB information~~	
~~- RB identity~~	~~20~~
~~- COUNT-C MSB uplink~~	~~Current COUNT-C MSB for RB#20 in uplink~~
~~- COUNT-C MSB downlink~~	~~Current COUNT-C MSB for RB#20 in downlink~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	20
- COUNT-C MSB uplink	Current COUNT-C MSB for RB#20 in uplink
- COUNT-C MSB downlink	Current COUNT-C MSB for RB#20 in downlink

COUNTER CHECK RESPONSE (Step 5)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C information~~	~~Check to if this IE is absent~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	Check to if this IE is absent

COUNTER CHECK (Step 6)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Calculated value~~
~~RB COUNT-C MSB information~~	
~~- RB identity~~	~~Check to see if set to 20~~
~~- COUNT-C MSB uplink~~	~~Toggle all bits of the current COUNT-C MSB in uplink for RB#20~~
~~- COUNT-C MSB downlink~~	~~Toggle all bits of the current COUNT-C MSB in downlink for RB#20~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Check to see if set to 20
- COUNT-C MSB uplink	Toggle all bits of the current COUNT-C MSB in uplink for RB#20
- COUNT-C MSB downlink	Toggle all bits of the current COUNT-C MSB in downlink for RB#20

COUNTER CHECK RESPONSE (Step 7)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C information~~	
~~- RB identity~~	~~Check to see if set to 20~~
~~- COUNT-C uplink~~	~~Check to see if set to Current COUNT-C for RB#20 in uplink~~
~~- COUNT-C downlink~~	~~Check to see if set to COUNT-C for RB#20 in downlink~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink

COUNTER CHECK (Step 8)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Calculated value~~
~~RB COUNT-C MSB information~~	
~~- RB identity~~	~~Check to see if set to 25~~
~~- COUNT-C MSB uplink~~	~~Arbitrary COUNT-C MSB in uplink for RB#25~~
~~- COUNT-C MSB downlink~~	~~Arbitrary COUNT-C MSB in downlink for RB#25~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Check to see if set to 25
- COUNT-C MSB uplink	Arbitrary COUNT-C MSB in uplink for RB#25
- COUNT-C MSB downlink	Arbitrary COUNT-C MSB in downlink for RB#25

COUNTER CHECK RESPONSE (Step 9)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C information~~	
~~- RB identity~~	~~Check to see if set to 20~~
~~- COUNT-C uplink~~	~~Check to see if set to Current COUNT-C for RB#20 in uplink~~
~~- COUNT-C downlink~~	~~Check to see if set to COUNT-C for RB#20 in downlink~~
~~- RB identity~~	~~Check to see if set to 25~~
~~- COUNT-C uplink~~	~~Check to see if COUNT-C MSB is set to COUNT-C MSB in uplink for RB#25 in step 8 and LSB is fill with '0'~~
~~- COUNT-C downlink~~	~~Check to see if COUNT-C MSB is set to COUNT-C MSB in downlink for RB#25 in step 8 and LSB is fill with '0'~~

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink
- RB identity	Check to see if set to 25
- COUNT-C uplink	Check to see if COUNT-C MSB is set to COUNT-C MSB in uplink for RB#25 in step 8 and LSB is fill with '0'
- COUNT-C downlink	Check to see if COUNT-C MSB is set to COUNT-C MSB in downlink for RB#25 in step 8 and LSB is fill with '0'

8.1.8.1.5 Test requirement

After step 2, the UE shall transmit a RRC STATUS message on the uplink DCCH. The protocol error cause shall be set to "ASN.1 violation or encoding error".

After step 4 the UE shall transmit a COUNTER CHECK RESPONSE message which does not includes the IE "RB COUNT-C information" to indicates that a matched comparison result is obtained.

After step 6, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE "RB COUNT-C information" to report that a mismatch in COUNT-C value is detected in RB#20.

After step 8, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE "RB COUNT-C information" to report that RB#25 is not found in variable ESTABLISHED_RABS and RB#20 is not found in IE "RB COUNT-C MSB information".

8.1.8.2 Counter check in CELL_FACH state

8.1.8.2.1 Definition

8.1.8.2.2 Conformance requirement

When the UE receives a COUNTER CHECK message that includes matched COUNT-C MSB values, the UE shall transmit a COUNTER CHECK RESPONSE message on the uplink DCCH and omitting "RB COUNT-C information" IE in this message.

When the UE receives a COUNTER CHECK message that includes any mismatched COUNT-C MSB values, the UE shall transmit a COUNTER CHECK RESPONSE message on the uplink DCCH and specifies the current COUNT-C information of the RAB(s) with mismatched values.

When the UE receives an invalid COUNTER CHECK message, the UE shall perform procedure specific error handling.

Reference

3GPP TS 25.331 clause 8.1.15.

8.1.8.2.3 Test purpose

To confirm that the UE transmits a COUNTER CHECK RESPONSE message after it receives a COUNTER CHECK message from the SS. To confirm that the UE responds to the reception of an invalid downlink COUNTER CHECK message by transmitting a RRC STATUS message on the uplink DCCH, stating the correct error cause value in message.

8.1.8.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CELL_FACH state (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to the CELL_FACH state after a successful outgoing call attempt. The SS transmits an invalid COUNTER CHECK message. This message lacks all IEs. The UE shall detect a protocol error and send RRC STATUS message to report this event. Next, the SS transmits a COUNTER CHECK message that includes the current COUNT-C MSB information in each radio access bearer. The UE shall react by sending a COUNTER CHECK RESPONSE message on the uplink DCCH, which does not include "RB COUNT-C information" IE. The SS transmits a COUNTER CHECK message, which includes the current COUNT-C MSB information for each radio bearer but with all the bits reversed. The UE shall send a COUNTER CHECK RESPONSE message on the uplink DCCH, specifying the current COUNT-C information for each radio access bearer established. The SS transmits a COUNTER CHECK message which includes a different radio bearer. The UE shall send a COUNTER CHECK RESPONSE message on the uplink DCCH, specifying the current COUNT-C information for each radio access bearer established.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state after an outgoing call has been established successfully.
2	←		COUNTER CHECK	See specific message contents for this message
3	→		RRC STATUS	UE shall detect a protocol error and then transmit this message.
4	←		COUNTER CHECK	See specific message content.
5	→		COUNTER CHECK RESPONSE	The message shall not include the IE "RB COUNT-C information".
6	←		COUNTER CHECK	See specific message content.
7	→		COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".
8	←		COUNTER CHECK	See specific message content.
9	→		COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".

Specific Message Contents

COUNTER CHECK (Step 2)

Information Element	Value/remark
All IEs	Not Present

RRC STATUS (Step 3)

Information Element	Value/remark
Message Type	
~~Protocol Error Information~~	
~~- Protocol Error Cause~~	~~Checked to see if set to "ASN.1 violation or encoding"~~
Protocol Error Information	
- Protocol Error Cause	Checked to see if set to "ASN.1 violation or encoding"

COUNTER CHECK (Step 4)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Calculated value~~
~~RB COUNT-C MSB information~~	
~~- RB identity~~	~~20~~
~~- COUNT-C MSB uplink~~	~~Current COUNT-C MSB for RB#20 in uplink~~
~~- COUNT-C MSB downlink~~	~~Current COUNT-C MSB for RB#20 in downlink~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	20
- COUNT-C MSB uplink	Current COUNT-C MSB for RB#20 in uplink
- COUNT-C MSB downlink	Current COUNT-C MSB for RB#20 in downlink

COUNTER CHECK RESPONSE (Step 5)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C information~~	~~Check to if this IE is absent~~

Information Element	**Value/remark**
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	Check to if this IE is absent

COUNTER CHECK (Step 6)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Calculated value~~
~~RB COUNT-C MSB information~~	
~~- RB identity~~	~~20~~
~~- COUNT-C MSB uplink~~	~~Toggle all bits of the current COUNT-C MSB in uplink for RB#20~~
~~- COUNT-C MSB downlink~~	~~Toggle all bits of the current COUNT-C MSB in downlink for RB#20~~

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	20
- COUNT-C MSB uplink	Toggle all bits of the current COUNT-C MSB in uplink for RB#20
- COUNT-C MSB downlink	Toggle all bits of the current COUNT-C MSB in downlink for RB#20

COUNTER CHECK RESPONSE (Step 7)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C information~~	
~~- RB identity~~	~~Check to see if set to 20~~
~~- COUNT-C uplink~~	~~Check to see if set to Current COUNT-C for RB#20 in uplink~~
~~- COUNT-C downlink~~	~~Check to see if set to COUNT-C for RB#20 in downlink~~

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink

COUNTER CHECK (Step 8)

~~Information Element~~	~~Value/remark~~
~~Message Type~~	
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Calculated value~~
~~RB COUNT-C MSB information~~	
~~- RB identity~~	~~Check to see if set to 25~~
~~- COUNT-C MSB uplink~~	~~Arbitrary COUNT-C MSB in uplink for RB#25~~
~~- COUNT-C MSB downlink~~	~~Arbitrary COUNT-C MSB in downlink for RB#25~~

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Check to see if set to 25
- COUNT-C MSB uplink	Arbitrary COUNT-C MSB in uplink for RB#25
- COUNT-C MSB downlink	Arbitrary COUNT-C MSB in downlink for RB#25

COUNTER CHECK RESPONSE (Step 9)

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Integrity check info~~	~~Not checked~~
~~RB COUNT-C information~~	
~~- RB identity~~	~~Check to see if set to 20~~
~~- COUNT-C uplink~~	~~Check to see if set to Current COUNT-C for RB#20 in uplink~~
~~- COUNT-C downlink~~	~~Check to see if set to COUNT-C for RB#20 in downlink~~
~~- RB identity~~	~~Check to see if set to 25~~
~~- COUNT-C uplink~~	~~Check to see if COUNT-C MSB is set to COUNT-C MSB in uplink for RB#25 in step 8 and LSB is fill with '0'~~
~~- COUNT-C downlink~~	~~Check to see if COUNT-C MSB is set to COUNT-C MSB in downlink for RB#25 in step 8 and LSB is fill with '0'~~

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink
- RB identity	Check to see if set to 25
- COUNT-C uplink	Check to see if COUNT-C MSB is set to COUNT-C MSB in uplink for RB#25 in step 8 and LSB is fill with '0'
- COUNT-C downlink	Check to see if COUNT-C MSB is set to COUNT-C MSB in downlink for RB#25 in step 8 and LSB is fill with '0'

8.1.8.2.5 Test requirement

After step 2, the UE shall transmit a RRC STATUS message on the uplink DCCH. The protocol error cause shall be set to "ASN.1 violation or encoding error".

After step 4 the UE shall transmit a COUNTER CHECK RESPONSE message which does not includes the IE "RB COUNT-C information" to indicates that a matched comparison result is obtained.

After step 6, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE "RB COUNT-C information" to report that a mismatch in COUNT-C value is detected in RB#20.

After step 8, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE "RB COUNT-C information" to report that RB#25 is not found in variable ESTABLISHED_RABS and RB#20 is not found in IE "RB COUNT-C MSB information".

8.1.9 Signalling Connection Release Indication

8.1.9.1 Definition

8.1.9.2 Conformance requirement

The UE shall initiate the signalling connection release procedure when the higher layer entities in the UE request to release one or more signalling session (one example of such case is location update failure). In this case, the UE shall transmit a SIGNALLING CONNECTION RELEASE INDICATION message, which includes the CN domain identity of the connection flow to be released.

Reference

3GPP TS 25.331 clause 8.1.14.

8.1.9.3 Test purpose

To confirm that the UE transmits a SIGNALLING CONNECTION RELEASE INDICATION message after it fails to receive a response for the LOCATION UPDATING REQUEST message.

8.1.9.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: Switched off (state 1) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is turned on and it shall find a suitable cell to camp on. The UE shall initiate a location updating procedure. The UE shall establish an RRC connection and transmit a LOCATION UPDATING REQUEST message using the INITIAL DIRECT TRANSFER message. The SS does not respond to this message, and the UE shall send a SIGNALLING CONNECTION RELEASE INDICATION message which includes the CN domain identity with the same value as that in the INITIAL DIRECT TRANSFER message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is powered on.
2	→		RRC CONNECTION REQUEST	UE shall initiate the location updating procedure.
3	←		RRC CONNECTION SETUP	
4				The UE configures the layer 2 and layer 1.
5	→		RRC CONNECTION SETUP COMPLETE	
6	→		INITIAL DIRECT TRANSFER	Depending on supported CN domain, includes ATTACH REQUEST message (PS domain) or LOCATION UPDATE REQUEST (CS domain) message is emdedded in INITIAL DIRECT TRANSFER message.
7				The SS does not respond and waits until the timer for location update procedure or attach procedure expires.
8	→		SIGNALLING CONNECTION RELEASE INDICATION	

Specific Message Content

SIGNALLING CONNECTION RELEASE INDICATION (Step 8)

Information Element	Value/remark
CN domain identity	Check to see if this value is the same as in the uplink INITIAL DIRECT TRANSFER message.

8.1.9.5 Test requirement

After step 1 the UE shall initiate the LOCATION UPDATING procedure or ATTACH procedure and establish an RRC connection.

After step 7 the UE shall transmit a SIGNALLING CONNECTION RELEASE INDICATION message which includes the same CN domain identity as that found in the INITIAL DIRECT TRANSFER message.

8.1.10 Broadcast of system information

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

8.1.10.1.1 Definition

8.1.10.1.2 Conformance requirement

1. The RRC layer in the UE shall perform re-assembly of segments. All segments belonging to the same master information block, scheduling block or system information block shall be assembled in ascending order with respect to the segment index. When all segments of the master information block, scheduling block or a system information block have been received, the UE shall perform decoding of the complete master information block, scheduling block or system information block.

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

2. For all system information blocks or scheduling blocks that are supported by the UE referenced in the master information block or the scheduling blocks, the UE shall perform the following actions:

   ……..

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

NOTE: There are options with and without scheduling blocks.

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

   - skip reading this system information block;

   - skip monitoring changes to this system information block.

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

Reference

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

8.1.10.1.4 Test Purpose

1. To verify that dynamic change of System Information is identified, new information read and used.

2. To verify that the UE can use "all" combinations of segmentation, concatenation and scheduling.

3. To verify that the UE can dynamically use different configurations

4. To verify that the UE properly uses combinations of Default and assigned values.

8.1.10.1.5 Method of test

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

One set contains a "minimum" of data and the other a "maximum". The "maximum" set contains all information blocks including one not yet defined in the R99 release. It also includes all 4 segment types and 11 different SYSTEM INFORMATION messages plus a combination of default and non-default values.

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

Initial Condition

System Simulator: 2 cells

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

Test procedure

a) SS broadcasts the "Minimum" system information.

b) RRC Connection establishment according to clause 8.1.2.1.4.

c) Call setup according to clause 10.1.3, procedure 1.

d) Disconnect call according to clause 10.1.2.6.4. UE shall enter Cell_PCH state.

e) SS broadcasts the "Maximum" system information and notifies the UE as described in clause 8.1.1.5.

f) Call Setup according to clause 10.1.3, procedure 1.

Specific message content for "Minimum" configuration

The minimum set has:

- "minimum" number of system information blocks
- no "unknown future" blocks
- no scheduling blocks
- separate FACH and PCH channels
- There is no SIB4. SIB3 data contains Cell 1 data with default values and Cell 2 data with assigned values, so that Cell1 shall be selected.

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

Information Element	Value/remark
- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card.
- MNC digit	Set to the same Mobile Network Codesstored in the test USIM card.
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	10
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	6
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	128
- SIB_POS	26
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB type SIBs only	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	128
- SIB_POS	22
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	58
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 11

Contents of System Information Block type 1 (supported PLMN type is GSM-MAP)

Information Element	Value/remark
- CN common GSM-MAP NAS system information	
- GSM-MAP NAS system information	Contains the PLMN Identity and Location Area Code
- MCC digit	Set to the same Mobile Country Code stored in test USIM card.
- MNC digit	Set to the same Mobile Network Code stored in test USIM card.
- Location area code	0001H
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in idle mode	
-T300	400 milliseconds
-N300	7
-T312	10 seconds
- N312	200
- UE Timers and constants in connected mode	
- T301	2000 milliseconds
- N301	2
- T302	4000 milliseconds
- N302	3
- T304	1000 milliseconds
- N304	3
- T305	60 minutes
- T307	50 seconds
- T308	320 milliseconds
- T309	8 seconds
- T310	320 milliseconds
- N310	5
- T311	500 milliseconds
- T312	5 seconds
- N312	200
- T313	10 seconds
- N313	20
- T314	20 seconds
- T315	30 seconds
- N315	200
- T316	50 seconds
- T317	1800 seconds

Contents of System Information Block type 2

Not included in "Minimum" configuration

Contents of System Information Block type 3 (FDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	1
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell selection_and_reselection_quality_-measure	CPICH Ec/N0
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- Ssearch,RAT	-105 dB
- SHCS,RAT	Not Present
- Slimit,ShearchRAT	Not Present
- Qhyst1s	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCRMAX	Not used
- NCR	Not Present
- TCMAXHyst	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type 4 in connected mode (FDD)

Not included in "Minimum" configuration.

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- SIB6 indicator	TRUE
- PICH Power offset	-5 dB
- CHOICE Mode	FDD
- AICH Power offset	0dB
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	Reference to clause 6.10 Parameter Set
- Preamble scrambling code number	0
- Puncturing Limit	Reference to clause 6.10 Parameter Set
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B

- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#6)
- Available signature End Index	7 (ASC#6)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	Not Present
- FACH/PCH information	
- Transport Channel Identity	12 (for PCH)
- TFS	(PCH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	

- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	13 (for FACH)
- TFS	(FACH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- CTCH indicator	FALSE
- PICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- Number of PI per frame	18
- STTD indicator	FALSE
- CBS DRX Level 1 information	Not Present

Contents of System Information Block type 6 in connected mode (FDD)

Not included in "Minimum" configuration.

Contents of System Information Block type 7 (FDD)

Information Element	Value/remark
CHOICE Mode	FDD
- UL interference	-100dBm
- PRACHs listed in system information block type5	
- Dynamic persistence level	2
- PRACHs listed in system information block type6	
- Dynamic persistence level	2
- Expiration Time Factor	Not Present – use default value of 1

Contents of System Information Block type 8, 9 (only for FDD)

Not included in "Minimum" configuration.

Contents of System Information Block type 10 (only for FDD)

Not included in "Minimum" configuration.

Contents of System Information Block type 11 (FDD)

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 RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	The current value plus 50(When the current cell is cell No.8 then minus 50)
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	0 dB
- Qoffset2s,n	0 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell measurement	
- Intra-frequency cell id	See test content
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	
- Maximum number of reported cells	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present

- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Active set cells and monitored set cells
- Reporting Range	5dB
- Cells forbidden to affect Reporting range	Not Present
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	Not Present
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Contents of System Information Block type 12 in connected mode (FDD)

Not included in "Minimum" configuration.

Contents of System Information Block types 13, 14

Not included in "Minimum" configuration.

Contents of System Information Block type 15

Not included in "Minimum" configuration.

Contents of System Information Block type 16

Not included in "Minimum" configuration.

Contents of System Information Block type 17

Not included in "Minimum" configuration.

Contents of System Information Block type 18

Not included in "Minimum" configuration.

Default settings for cell No.1 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	100

Cell No.2

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.2 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0010B
URA identity	0000 0000 0000 0001B

Default settings for cell No.2 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	150

Cell No.3

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.3 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0011B
URA identity	0000 0000 0000 0010B

Default settings for cell No.3 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	200

Cell No.4

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.4 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0100B
URA identity	0000 0000 0000 0010B

Default settings for cell No.4 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	250

Cell No.5

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.5 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0101B
URA identity	0000 0000 0000 0011B

Default settings for cell No.5 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	300

Cell No.6

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.6 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0110B
URA identity	0000 0000 0000 0011B

Default settings for cell No.6 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	350

Cell No.7

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.7 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0111B
URA identity	0000 0000 0000 0100B

Default settings for cell No.7 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	400

Cell No.8

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.8 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 1000B
URA identity	0000 0000 0000 0100B

Default settings for cell No.8 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	450

The mapping of SIB's on segments and SYSTEM INFORMATION messages shall be inserted here, but is currently FFS.

Specific message content for "Maximum" configuration

The maximum set has:

- "maximum" number of system information blocks
- one "unknown future" blocks
- scheduling blocks
- combined FACH and PCH channels
- SIB 3 is as in "minimum" set, but SIB4 is included with information as follows. Cell 1 has assigned values and Cell 2 default values, so that Cell2 shall be selected.

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

Information Element	Value/remark
- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card.
- MNC digit	Set to the same Mobile Network Codesstored in the test USIM card.
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	
- Cell Value tag	1
- Scheduling	
- SEG_COUNT	2
- SIB_REP	16
- SIB_POS	2
- SIB_POS offset info	
- SIB_OFF	2
- SIB type	Scheduling Block 1
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	10
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	128
- SIB_POS	14
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 2
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	6
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	38
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 4

Contents of Scheduling Block 1 (FDD)

Information Element	Value/remark
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	128
- SIB_POS	26
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB type SIBs only	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	128
- SIB_POS	42
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB type SIBs only	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	128
- SIB_POS	22
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	58
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	106
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 12
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	TBD
- SIB_REP	TBD
- SIB_POS	TBD
- SIB_POS offset info	
- SIB_OFF	TBD
- SIB type SIBs only	System Information Type 15
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	6
- SIB_REP	128
- SIB_POS	74
- SIB_POS offset info	
- SIB_OFF	2

- SIB_OFF	2
- SIB_OFF	8
- SIB_OFF	4
- SIB_OFF	2
- SIB type SIBs only	System Information Type 16

Contents of System Information Block type 1 (supported PLMN type is GSM-MAP)

Information Element	Value/remark
- CN common GSM-MAP NAS system information	
- GSM-MAP NAS system information	Contains the PLMN Identity and Location Area Code
- MCC digit	Set to the same Mobile Country Code stored in test USIM card.
- MNC digit	Set to the same Mobile Network Code stored in test USIM card.
- Location area code	0001H
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in idle mode	
-T300	400 milliseconds
-N300	7
-T312	10 seconds
- N312	200
- UE Timers and constants in connected mode	
- T301	2000 milliseconds
- N301	2
- T302	4000 milliseconds
- N302	3
- T304	1000 milliseconds
- N304	3
- T305	60 minutes
- T307	50 seconds
- T308	320 milliseconds
- T309	8 seconds
- T310	320 milliseconds
- N310	5
- T311	500 milliseconds
- T312	5 seconds
- N312	200
- T313	10 seconds
- N313	20
- T314	20 seconds
- T315	30 seconds
- N315	200
- T316	50 seconds
- T317	1800 seconds

Contents of System Information Block type 2

Information Element	Value/remark
- URA identity list	*Only 1 URA identity broadcasted*
- URA identity	0000 0000 0000 0001B

Contents of System Information Block type 3 (FDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	1
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell selection_and_reselection_quality_-measure	CPICH Ec/N0
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- $S_{search,RAT}$	-105 dB
- $S_{HCS,RAT}$	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Q_{hyst1s}	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR_{MAX}	Not used
- NCR	Not Present
- $TCMAXH_{yst}$	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type 4 in connected mode (FDD)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- Ssearch,RAT	-105 dB
- SHCS,RAT	Not Present
- $S_{limit,SheachRAT}$	Not Present
- $Qhyst1_S$	0 dB
- $Qhyst2_S$	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR_{MAX}	Not used
- NCR	Not Present
- $TCMAXH_{yst}$	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Access Class Barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type 5 (FDD)

Information Element	Value/remark
- SIB6 indicator	TRUE
- PICH Power offset	-5 dB
- CHOICE Mode	FDD
- AICH Power offset	0dB
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	Reference to clause 6.10 Parameter Set
- Preamble scrambling code number	0
- Puncturing Limit	Reference to clause 6.10 Parameter Set
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B

- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#6)
- Available signature End Index	7 (ASC#6)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	Not Present
- FACH/PCH information	
- Transport Channel Identity	12 (for PCH)
- TFS	(PCH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	

- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	13 (for FACH)
- TFS	(FACH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- CTCH indicator	FALSE
- PICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- Number of PI per frame	18
- STTD indicator	FALSE
- CBS DRX Level 1 information	Not Present

Contents of System Information Block type 6 in connected mode (FDD)

Information Element	Value/remark
- PICH power offset	-5 dB
- CHOICE Mode	FDD
- AICH power offset	0 dB
- CSICH Power offset	Not Present
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	Reference to clause 6.10 Parameter Set
- Preamble scrambling code number	0
- Puncturing Limit	Reference to clause 6.10 Parameter Set
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)

- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#6)
- Available signature End Index	7 (ASC#6)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping	Not Present
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	Reference to clause 6.10 Parameter Set
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	Not Present
- FACH/PCH information	
- Transport Channel Identity	12 (for PCH)
- TFS	(PCH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set

- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	13 (for FACH)
- TFS	(FACH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- CTCH indicator	FALSE
- PICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- Number of PI per frame	18
- STTD indicator	FALSE
- CBS DRX Level 1 information	Not Present

Contents of System Information Block type 7 (FDD)

Information Element	Value/remark
CHOICE Mode	FDD
- UL interference	-100dBm
- PRACHs listed in system information block type5	
- Dynamic persistence level	2
- PRACHs listed in system information block type6	
- Dynamic persistence level	2
- Expiration Time Factor	Not Present – use default value of 1

Contents of System Information Block type 8, 9 (only for FDD)

This information is used for static CPCH in the cell, so this is not present.

Contents of System Information Block type 10 (only for FDD)

This information is used for DRAC, so this is not present.

Contents of System Information Block type 11 (FDD)

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 RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	The current value plus 50(When the current cell is cell No.8 then minus 50)
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	0 dB
- Qoffset2s,n	0 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell measurement	
- Intra-frequency cell id	See test content
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	
- Maximum number of reported cells	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present

- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Active set cells and monitored set cells
- Reporting Range	5dB
- Cells forbidden to affect Reporting range	Not Present
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	Not Present
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Contents of System Information Block type 12 in connected mode (FDD)

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	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	The current value plus 50(When the current cell is cell No.8 then minus 50)
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	0 dB
- $Qoffset2_{s,n}$	0 dB
- Maximum allowed UL TX power	33dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell measurement	
- Intra-frequency cell id	See test contact
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
-SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	
- Maximum number of reported cells	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC

- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Active set cells and monitored set cells
- Reporting Range	5dB
- Cells forbidden to affect reporting range	Not Present
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	Not Present
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cell	Report cell Within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Contents of System Information Block type 15

Information Element	Value/remark
- Reference Position	
- Latitude sign	[FFS]
- Degrees Of Latitude	[FFS]
- Degrees Of Longitude	[FFS]
- Altitude Direction	[FFS]
- Altitude	[FFS]
- Uncertainty semi-major	[FFS]
- Uncertainty semi-minor	[FFS]
- Orientation of major axis	[FFS]
- Uncertainty Altitude	[FFS]
- Confidence	[FFS]
- GPS Reference Time	
- GPS Week	[FFS]
- GPS TOW msec	[FFS]

Contents of System Information Block type 16

Information Element	Value/remark
- Re-establishment timer	[FFS]
- Predefined RB configuration	[FFS]
- Predefined TrCh configuration	[FFS]
- Predefined Phy configuration	[FFS]

Contents of System Information Block type 18

Information Element	Value/remark
- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	
- PLMN identity	Set to the same value as indicated in MIB
- PLMNs of inter-frequency cells list	Not present
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

Default settings for cell No.1 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	100

Cell No.2

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.2 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0010B
URA identity	0000 0000 0000 0001B

Default settings for cell No.2 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	150

Cell No.3

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.3 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0011B
URA identity	0000 0000 0000 0010B

Default settings for cell No.3 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	200

Cell No.4

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.4 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0100B
URA identity	0000 0000 0000 0010B

Default settings for cell No.4 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	250

Cell No.5

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.5 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0101B
URA identity	0000 0000 0000 0011B

Default settings for cell No.5 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	300

Cell No.6

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.6 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0110B
URA identity	0000 0000 0000 0011B

Default settings for cell No.6 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	350

Cell No.7

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.7 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 0111B
URA identity	0000 0000 0000 0100B

Default settings for cell No.7 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	400

Cell No.8

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.8 are identical to those of cell No.1 with the following exceptions:

Information Element	Value/remark
Cell identity	0000 0000 0000 0000 0000 0000 1000B
URA identity	0000 0000 0000 0100B

Default settings for cell No.8 (FDD):

Information Element	Value/remark
Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	450

The mapping of system information blocks on segments and SYSTEM INFORMATION messages are FFS.

8.1.10.1.6 Test requirement

After step 3 the UE shall be in Connected state U10 in Cell 1.

After step 6 the UE shall be in Connected state U10 in Cell 2.

8.1.11 Signalling Connection Release (Invalid configuration)

8.1.11.1 Definition

8.1.11.2 Conformance requirement

Upon reception of a SIGNALLING CONNECTION RELEASE message, the UE shall:

1> indicate the release of the signalling connection and pass the value of the IE "CN domain identity" to upper layers;

1> remove the signalling connection with the identity indicated by the IE "CN domain identity" from the variable ESTABLISHED_SIGNALLING_CONNECTIONS;

1> clear the entry for the SIGNALLING CONNECTION RELEASE message in the table "Accepted transactions" in the variable TRANSACTIONS;

1> the procedure ends.

If radio access bearers for the CN domain indicated by the IE "CN domain identity" exist in the variable ESTABLISHED_RABS, the UE shall:

1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;

1> include the IE "Identification of received message"; and

1> set the IE "Received message type" to SIGNALLING CONNECTION RELEASE; and

1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the SIGNALLING CONNECTION RELEASE message in the table "Accepted transactions" in the variable TRANSACTIONS and clear that entry;

1> include the IE "Protocol error information" with contents set to the value "Message not compatible with receiver state";

1> when the RRC STATUS message has been submitted to lower layers for transmission:

2> continue with any ongoing processes and procedures as if the invalid SIGNALLING CONNECTION RELEASE message has not been received.

Reference

3GPP TS 25.331 clause 8.1.13.3 and 8.1.13.5.

8.1.11.3 Test purpose

To confirm that the UE ignores the SIGNALLING CONNECTION RELEASE REQUEST message which request the UE to release signalling connection of domain that contains established radio access bearers.

To confirm that the UE transmit a RRC STATUS message to SS after detecting an invalid configuration in the received message.

8.1.11.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

SS transmit MEASUREMENT CONTROL message to UE. In this message, SS requests UE to perform traffic volume measurement. Key measurement parameters are as follows: measurement quantity = "RLC Buffer Payload", report criteria = "periodic reporting criteria", reporting interval = "6 seconds", reporting amount = 'infinity'. UE shall begin traffic volume measurements, and shall send MEASUREMENT REPORT message after completing first measurement. UE shall send second MEASUREMENT REPORT message 6 seconds after first MEASUREMENT REPORT message. Then SS transmit SIGNALLING CONNECTION RELEASE message to UE. UE shall ignore the message and send a RRC STATUS message to SS. Then the UE shall send MEASUREMENT REPORT message to SS within the next 6 seconds.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	Periodical traffic volume measurement reporting is requested.
2	→		MEASUREMENT REPORT	
3	→		MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 6 seconds.
4	←		SIGNALLING CONNECTION RELEASE	If the initial condition of the UE is state 6-9, set the IE "CN domain identity" to "CS domain". If the initial condition of the UE is state 6-10, set the IE "CN domain identity" to "PS domain".
5	→		RRC STATUS	
6	→		MEASUREMENT REPORT	This message should be sent within 6 seconds after the previous message.

Specific Message Content

MEASUREMENT CONTROL (Step 1)

For MEASUREMENT CONTROL message in step 1, use the message sub-type as found in clause 9 of TS 34.108, with the exception of the following Information Elements:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	Not Present
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	6 Sec
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2, 3 and 6)

Check that the message received is the same as the message sub-type found in clause 9 of TS 34.108, with the following exceptions:

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

SIGNALLING CONNECTION RELEASE (Step 4)

Information Element	Value/Remarks
Message Type	
RRC transaction identifier	0
Integrity check info	The presence of this IE depends on the IXIT statements in TS 34.123-2: If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
CN domain identity	If the initial condition of the UE is state 6-9, set to "CS domain". If the initial condition of the UE is state 6-10, set to "PS domain".

RRC STATUS (Step 5)

Information Element	Value/remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Identification of received message	Not Checked
- Received message type	SIGNALLING CONNECTION RELEASE
- RRC transaction identifier	0
Protocol error information	
- Protocol error cause	Message not compatible with receiver state

8.1.11.5 Test requirement

After step 1 the UE shall transmit MEASUREMENT REPORT message twice at an interval of 6 seconds.

After step 4 the UE shall transmit a RRC STATUS message with protocol error cause set to "Message not compatible with receiver state".

After step 5 the UE shall transmit a MEASUREMENT REPORT within 6 seconds.

8.2 Radio Bearer control procedure

8.2.1 Radio Bearer Establishment

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

8.2.1.1.1 Definition

8.2.1.1.2 Conformance requirement

The UE shall correctly set up a new radio bearer according to a RADIO BEARER SETUP message and responds with a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.1.3 Test purpose

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

8.2.1.1.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state, after the test operator is prompted to make an out-going call. Before step 1, only signalling radio bearers have been established. The SS transmits a RADIO BEARER SETUP message to the UE . This message requests the establishment of radio access bearer. After the UE receives this message, it configures them and establishes a radio access bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2	→		RADIO BEARER SETUP COMPLETE	
3	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type indicated by "Non speech from CELL_DCH to CELL_DCH in CS" or "Speech from CELL_DCH to CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" in [9] TS 34.108 clause 9.

8.2.1.1.5 Test requirement

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

8.2.1.2 Void

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

8.2.1.3.1 Definition

8.2.1.3.2 Conformance requirement

The UE shall keep its current configuration when the UE receives a RADIO BEARER SETUP message which includes unsupported configuration parameters and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.3.3 Test purpose

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

8.2.1.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message in which the frequency cannot be supported by the UE. After the UE receives this message, it transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	Including the unsupported configuration for the UE.
2	→		RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108 with the following exceptions:

RADIO BEARER SETUP (FDD)

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

RADIO BEARER SETUP (TDD)

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

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type Failure cause	Configuration unsupported

8.2.1.3.5 Test requirement

After step 1 the UE transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

8.2.1.4 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.4.1 Definition

8.2.1.4.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to configure the new radio bearer before T312 expires and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.4.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the radio bearer according to the RADIO BEARER RECONFIGURATION message before timer T312 expires.

8.2.1.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message to the UE and SS keep its old dedicated channel configuration. Then after T312 expiry, the UE reverts to the old configuration and transmits a

RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	The SS keeps its old L1 configuration after transmitting this message.
2				The UE does not configure the new radio access bearer and reverts to the old configuration.
3	→		RADIO BEARER SETUP FAILURE	UE shall transmit this message using the old configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech in CS" as found in annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108.

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.1.4.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

8.2.1.5 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and reversion failure)

8.2.1.5.1 Definition

8.2.1.5.2 Conformance requirement

The UE shall perform a cell update procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer establishment procedure. After the UE complete cell update procedure, the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.5.3 Test purpose

To confirm that UE transmits RADIO BEARER SETUP FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer establishment procedure.

8.2.1.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its dedicated physical channel in accordance with the settings in the message and release the old configuration after the RLC acknowledgement. The UE recognizes that it cannot synchronise on the new physical channel and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value of IE "failure cause" to "physical channel failure".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2				The SS does not configure new radio access bearer and shall release the configuration.
3	→		CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
4	←		CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
5				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7	→		RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

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

RADIO BEARER SETUP FAILURE (Step 7)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	"RADIO BEARER SETUP FAILURE"
Failure cause	"physical channel failure"

8.2.1.5.5 Test requirement

After step 2 the UE shall transmit CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

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

After step 6 the UE shall transmit RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

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

8.2.1.6.1 Definition

8.2.1.6.2 Conformance requirement

If the UE receives a RADIO BEARER SETUP message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER SETUP message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC

Reference

3GPP TS 25.331 clause 8.2.1, clause 8.6.3.11.

8.2.1.6.3 Test purpose

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

8.2.1.6.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER SETUP message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER SETUP message, the UE shall keep its current configuration as if it had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER SETUP FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	Including IE "Activation Time"
2	←		RADIO BEARER SETUP	The SS send this message before the expiry of activation time specified in the message of step 1.
3	→		RADIO BEARER SETUP FAILURE	The UE does not change the configuration according to the RADIO BEARER SETUP message.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

For RADIO BEARER RECONFIGURATION message in step 1, use the message sub-type indicated as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the exception of the following Information Elements:

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

RADIO BEARER SETUP (Step 2)

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108 with the following exceptions:

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

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	
Failure case	Incompatible simultaneous reconfiguration

8.2.1.6.5 Test requirement

After step 2 the UE shall keep its configuration as if the UE had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.1.7 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.1.7.1 Definition

8.2.1.7.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid RADIO BEARER SETUP message, which does not includes any IEs except IE "Message Type". Then it transmits a RADIO BEARER SETUP FAILURE message which is set to "protocol error" in IE "failure cause" and is set to "ASN.1 violation or encoding error" in IE "Protocol error cause".

The UE shall keep existing configuration upon reception of a RADIO BEARER SETUP message which includes some IEs set to give an invalid configuration, and then the UE shall transmit a RADIO BEARER SETUP FAILURE message including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.1

8.2.1.7.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER SETUP message which does not include any IEs except IE "Message Type".

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message including some IEs set to give an invalid configuration.

8.2.1.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. The SS transmits an invalid RADIO BEARER SETUP message to the UE which does not includes any IEs except IE "Message Type". The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause", and is set to "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE keeps current configuration after SS transmits a RADIO BEARER SETUP message including some IEs set to give an invalid configuration. Then UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	See specific message content.
2	→		RADIO BEARER SETUP FAILURE	The UE does not change its configuration.
3	←		RADIO BEARER SETUP	This message includes IE set to invalid value.
4	→		RADIO BEARER SETUP FAILURE	The UE does not change its configuration.

Specific Message Contents

RADIO BEARER SETUP (Step 1)

Information Element	Value/remark
All IEs	Not Present

RADIO BEARER SETUP FAILURE (Step 2)

Information Element	Value/remark
Message Type	
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	ASN.1 violation or encoding error
Other information element	Not checked

RADIO BEARER SETUP (Step 3)

The contents of RADIO BEARER SETUP message in this test case is identical as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108 with the following exceptions:

RADIO BEARER SETUP (Step 3) (FDD)

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

RADIO BEARER SETUP (Step 3) (TDD)

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER SETUP FAILURE (Step 5)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type Failure cause	 Invalid configuration

8.2.1.7.5 Test requirement

After step 1 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "protocol error" in IE "failure cause" and set to "ASN.1 violation or enoding error" in IE "Protocol error cause".

After step 3 the UE shall keep its old configuration and transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

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

8.2.1.8.1 Definition

8.2.1.8.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and responds with a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.8.3 Test purpose

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

8.2.1.8.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state, after the test operator is asked to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE. After the UE receives this message, it transits from CELL_DCH to CELL_FACH state. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. Then the UE and the SS enters the communicating state. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	SS requests test operator to make an outgoing packet-switched data call.
2	→		RADIO BEARER SETUP COMPLETE	The UE selects PRACH and S-CCPCH indicated in SIB5 or SIB6 after entering CELL FACH state.
3	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

For RADIO BEARER SETUP message in step 1, use the message sub-type indicated as "Packet to CELL_FACH from CELL_DCH in PS" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

8.2.1.8.5 Test requirement

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

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

8.2.1.9.1 Definition

8.2.1.9.2 Conformance requirement

1. If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

   ……

   - if the contents of the variable C_RNTI is empty:
     - perform a cell update procedure according to clause 8.3.1 using the cause "Cell reselection";

2. If the CELL UPDATE CONFIRM message
   - does not include "RB information elements"; and
   - does not include "Transport channel information elements"; and
   - does not include "Physical channel information elements"; and
   - includes "CN information elements"; or
   - includes the IE "Ciphering mode info"; or

- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI":

the UE shall:

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

3. In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:
   - transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC;

Reference

3GPP TS 25.331 clause 8.2.2.3, 8.3.1, 8.2.2.4.

8.2.1.9.3 Test purpose

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

8.2.1.9.4 Method of test

Initial Condition

System Simulator: 1 cell- Cell 1 is active.

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

Test Procedure

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

Expected sequence

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

Specific Message Contents

RADIO BEARER SETUP (Step 3) (FDD)

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

RADIO BEARER SETUP (Step 3) (TDD)

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

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

CELL UPDATE (Step 4)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

The contents of UTRAN MOBILITY INFORMATION CONFIRM message is identical as "UTRAN MOBILITY INFORMATION CONFIRM message" as found in [9] TS 34.108 clause 9.

RADIO BEARER SETUP COMPLETE (Step 7)

The contents of RADIO BEARER SETUP COMPLETE message is identical as "RADIO BEARER SETUP COMPLETE message" as found in [9] TS 34.108 clause 9.

8.2.1.9.5 Test requirement

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

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

8.2.1.10.1 Definition

8.2.1.10.2 Conformance requirement

The UE shall correctly set up a radio bearer according to a RADIO BEARER SETUP message and responds with a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.10.3 Test purpose

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

8.2.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state, after SS prompts the test operator to initiate a packet-switched data call. The SS transmits a RADIO BEARER SETUP message to the UE . After the UE receives this message, it configures them and establishes the required radio bearers. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2	→		RADIO BEARER SETUP COMPLETE	
3	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9.

8.2.1.10.5 Test requirement

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

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

8.2.1.11.1 Definition

8.2.1.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER SETUP message which includes an unsupported configuration and then transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, which sets value "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.11.3 Test purpose

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

8.2.1.11.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER SETUP message with a stated frequency that cannot be supported by the UE. After the UE receives this message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC setting value "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	This message includes an unsupported configuration for the UE.
2	→		RADIO BEARER SETUP FAILURE	The UE shall transmit this message using RLC-AM mode and do not change the current configuration.

Specific Message Contents

RADIO BEARER SETUP

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

RADIO BEARER SETUP (FDD)

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

RADIO BEARER SETUP (TDD)

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

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type Failure cause	 Configuration unsupported

8.2.1.11.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

8.2.1.12 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and successful reversion to old configuration)

8.2.1.12.1 Definition

8.2.1.12.2 Conformance requirement

The UE shall attempt to revert to the old configuration when the UE fails to configure the new radio bearer before T312 expires and detects the same serving cell only. It shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC containing value "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.12.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message when the UE fails to configure the new radio bearer after it detects physical channel failure, followed by the T312 expiry.

8.2.1.12.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER SETUP message to the UE and keeps its old physical channel configuration. After T312 expiry, the UE shall perform cell reselection procedure and detect the same serving cell only. Then the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The content of the message shall indicate "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	The SS keep its old configuration.
2	→		RADIO BEARER SETUP FAILURE	The UE does not configure a new radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Physical channel failure

8.2.1.12.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

8.2.1.13 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Physical channel Failure and reversion failure)

8.2.1.13.1 Definition

8.2.1.13.2 Conformance requirement

The UE shall perform a cell update procedure when the UE selects another cell after the detection of physical channel failure in the radio bearer establishment procedure. After the UE completes cell update procedure, the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.13.3 Test purpose

To confirm that the UE transmit a RADIO BEARER SETUP FAILURE message after it completes a cell update for the physical channel failure in the radio bearer establishment procedure.

8.2.1.13.4 Method of test

Initial Condition

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

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108 in cell 1.

Test Procedure

Table 8.2.1.13

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

Table 8.2.1.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies reverse of the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its DL dedicated physical channel in accordance with the setting in the message and release its current configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.1.13. The UE recognize that it cannot synchronize with the SS on the new radio bearer. The UE performs cell re-selection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" which is set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2				The SS does not configure the new radio bearer in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.1.13.
3			Void	
4				The UE select the cell 2.
5	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6	←		CELL UPDATE CONFIRM	This message include IE "new U-RNTI" and IE "new C-RNTI".
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM" message as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 5
New U-RNTI	
- SRNC Identity	'0000 0000 0000 0001'
- S-RNTI	Different from previous S-RNTI
New C-RNTI	Different from previous C-RNTI

RADIO BEARER SETUP FAILURE (Step 8)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	"RADIO BEARER RECONFIGURATION FAILURE"
Failure cause	"physical channel failure"

8.2.1.13.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

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

8.2.1.14.1 Definition

8.2.1.14.2 Conformance requirement

If the UE receives a RADIO BEARER SETUP message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER SETUP message, it shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1, clause 8.6.3.11.

8.2.1.14.3 Test purpose

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

8.2.1.14.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER SETUP message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER SETUP message, the UE shall keep its current configuration as if it had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER SETUP FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	Including IE "Activation Time "
2	←		RADIO BEARER SETUP	The SS send this message before the expiry of activation time specified in the message of step 1.
3	→		RADIO BEAER SETUP FAILURE	The UE does not change the configuration because of the RADIO BEARER SETUP message, and transmit this message on its uplink DCCH using the same RLC-AM mode radio bearer before step 1.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

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

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH Info - Scrambling code number	 1

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

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

RADIO BEARER SETUP (for Step 2) (FDD)

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

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

RADIO BEARER SETUP (for Step 2) (TDD)

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

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

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Incompatible simultaneous reconfiguration

8.2.1.14.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall configure the new configuration on the activation time and transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.1.15 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.1.15.1 Definition

8.2.1.15.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid RADIO BEARER SETUP message, which does not includes any IEs except IE "Message Type". It shall transmit a RADIO BEARER SETUP FAILURE message which set value "protocol error" in IE "failure cause" and also value "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep the old configuration upon reception of a RADIO BEARER SETUP message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a RADIO BEARER SETUP FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.15.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER SETUP messagewhich does not include any IEs except IE "Message Type".

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER SETUP message including some IEs set to give an invalid configuration.

8.2.1.15.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits an invalid RADIO BEARER SETUP message to the UE which does not include all IEs except IE "Message Type". The UE keeps the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. This message shall specify "protocol error" in IE "failure cause" and also set the value "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE keeps current configuration after SS transmits RADIO BEARER SETUP message including some IEs set to give an invalid configuration. Then UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	See specific message content.
2	→		RADIO BEARER SETUP FAILURE	The UE does not change the configuration.
3	←		RADIO BEARER SETUP	This message includes IE set to give an invalid conifguration.
4	→		RADIO BEARER SETUP FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER SETUP (Step 1)

Information Element	Value/remark
All IEs	Not Present

RADIO BEARER SETUP FAILURE (Step 2)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

RADIO BEARER SETUP (Step 3)

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

RADIO BEARER SETUP (Step 3) (FDD)

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

RADIO BEARER SETUP (Step 3) (TDD)

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER SETUP FAILURE (Step 4)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.1.15.5 Test requirement

After step 1 the UE shall transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC. The message shall indicate the reason of failure as "protocol error" in IE "failure cause" and set the value "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 3 the UE shall transmit RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value of IE "failure cause" to "invalid configuration".

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

8.2.1.16.1 Definition

8.2.1.16.2 Conformance requirement

The UE shall correctly set up a radio access bearer according to a RADIO BEARER SETUP message and responds with a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.16.3 Test purpose

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

8.2.1.16.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state, after the test operator is being prompted to make an outgoing packet-switched call. The SS transmits a RADIO BEARER SETUP message to the UE. After the UE receives this message, it configures them and establishes a new radio access bearer. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2	→		RADIO BEARER SETUP COMPLETE	The UE select PRACH and S-CCPCH using SIB5 or SIB6.

Specific Message Contents

RADIO BEARER SETUP

For this message, use the message sub-type entitled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A.

8.2.1.16.5 Test requirement

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

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

8.2.1.17.1 Definition

8.2.1.17.2 Conformance requirement

If the UE receives a RADIO BEARER SETUP message before the UE completes the configuration of the radio bearers according to the previous RADIO BEARER SETUP message, the UE shall ignore the new RADIO BEARER SETUP message and configure according to the previous RADIO BEARER SETUP message. Finally, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1, clause 8.6.3.11.

8.2.1.17.3 Test purpose

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

8.2.1.17.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS transmits a RADIO BEARER SETUP message to the UE before the UE completes the configuration of the radio bearer according to the RADIO BEARER SETUP message prior to this new message. The UE ignores the new RADIO BEARER SETUP message and configures according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	The "Secondary scrambling code is set to "1" for FDD mode.
2	←		RADIO BEARER SETUP	SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1. For TDD the IE "Secondary scrambling code" is set to "2" and for TDD mode a different code combination to that used in step 11 is used.
3	→		RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and completes configuration according to the RADIO BEARER SETUP message in step 1.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

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

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

RADIO BEARER SETUP (Step 1) (TDD)

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

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

RADIO BEARER SETUP (Step 2) (FDD)

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

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

RADIO BEARER SETUP (Step 2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.1.17.5 Test requirement

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

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

8.2.1.18.1 Definition

8.2.1.18.2 Conformance requirement

If the UE receives a RADIO BEARER SETUP message before the UE completes the configuration of the radio bearers according to the previous RADIO BEARER SETUP message, the UE shall ignore the new RADIO BEARER SETUP message and configure according to the previous RADIO BEARER SETUP message. Finally, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1, clause 8.6.3.11.

8.2.1.18.3 Test purpose

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

8.2.1.18.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER SETUP message, requesting the UE to setup radio bearers using DPCH physical channels. SS transmits another RADIO BEARER SETUP message before the activation time specified in the first message has lapsed. The UE ignores the new RADIO BEARER SETUP message and configures the radio bearers according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	The "Secondary scrambling code is set to "1" for FDD mode.
2	←		RADIO BEARER SETUP	SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1. For FDD mode the IE "Secondary scrambling code" is set to "2" and for TDD mode a different code combination to that used in step 1 1 is used.
3	→		RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and confirms configuration according to the RADIO BEARER SETUP message in step 1.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

Information element(s) to be changed are listed below:

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

RADIO BEARER SETUP (Step 1) (TDD)

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

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

RADIO BEARER SETUP (for Step 2) (FDD)

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

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

RADIO BEARER SETUP (Step 2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.1.18.5 Test requirement

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

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

8.2.1.19 Radio Bearer Establishment from CELL_DCH to CELL_PCH: Success

8.2.1.19.1 Definition

8.2.1.19.2 Conformance requirement

The UE shall configure radio bearers so as to transit from CELL_DCH state to CELL_PCH state according to the received RADIO BEARER SETUP message and responds with a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.19.3 Test purpose

To conform that the UE transmits a RADIO BEARER SETUP COMPLETE message and enters CELL_PCH state after it received a RADIO BEARER SETUP message for the transition from CELL_DCH to CELL_PCH from SS.

8.2.1.19.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message. The UE transmits RADIO BEARER SETUP COMPLETE message using AM RLC and enters CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2	→		RADIO BEARER SETUP COMPLETE	
3				The UE is in CELL_PCH state.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER SETUP (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

8.2.1.19.5 Test requirement

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

After step 2, the UE shall enter CELL_PCH state.

8.2.1.20 Radio Bearer Establishment from CELL_DCH to URA_PCH: Success

8.2.1.20.1 Definition

8.2.1.20.2 Conformance requirement

The UE shall configure radio bearers so as to transit from CELL_DCH state to URA_PCH state according to the received RADIO BEARER SETUP message and responds with a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.1.

8.2.1.20.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP COMPLETE message and enters URA_PCH state after it received a RADIO BEARER SETUP message for the transition from CELL_DCH to URA_PCH from SS.

8.2.1.20.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC and enters URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2	→		RADIO BEARER SETUP COMPLETE	
3				The UE is in URA_PCH state.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER SETUP (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

8.2.1.20.5 Test requirement

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

After step 2, the UE shall enter URA_PCH state.

8.2.1.21 RRC connection establishment in CELL_DCH on another frequency

8.2.1.21.1 Definition

8.2.1.21.2 Conformance requirement

1. The UE shall, in the transmitted RRC CONNECTION REQUEST message:
   - set the IE "Establishment cause" to the value of the variable ESTABLISHMENT_CAUSE;
   - set the IE "Initial UE identity" to the value of the variable INITIAL_UE_IDENTITY;

- set the IE "Protocol error indicator" to the value of the variable PROTOCOL_ERROR_INDICATOR;
- include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 11.

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

   If the values are identical, the UE shall:

   - perform the physical layer synchronization procedure

Reference

3GPP TS 25.331 clauses 8.3.1.3, 8.3.1.6

8.2.1.21.3 Test Purpose

To confirm that the UE manages to synchronize on another frequency when so required by UTRAN in the RRC CONNECTION SET UP message.

8.2.1.21.4 Method of test

Initial condition

System simulator: 2 cells – Cell 1 on UARFCN 1 and Cell 2 on UARFCN 2.

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

Test procedure

The UE is initially in idle mode and is camping on cell 1. SIB 11 is broadcast in cell 1, and the parameters used are as specified below.

SS prompts the operator to make an outgoing call of a supported traffic class. The UE shall transmit an RRC CONNECTION REQUEST on the CCCH, and SS replies with the RRC CONNECTION SETUP, in which the IEs are set as described below. The UE shall send the RRC CONNECTION SETUP COMPLETE back to SS in cell 2 on the DPCH described in the RRC CONNECTION SET UP messsage received from the SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	By outgoing call operation
2	←		RRC CONNECTION SETUP	
3				The UE configures the layer 2 and layer 1.
4	→		RRC CONNECTION SETUP COMPLETE	This message is sent to on the frequency indicated in the RRC CONNECTION SETUP message

Specific message content

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

System Information Block type 11

~~Information Element~~	~~Value/Remark~~
~~SIB12 indicator~~	~~FALSE~~
~~FACH measurement occasion info~~	~~Not Present~~
~~Measurement control system information~~	
~~- Intra-frequency measurement system information~~	
~~- Intra-frequency measurement identity~~	~~1~~
~~- Intra-frequency cell info list~~	
~~- CHOICE intra-frequency cell removal~~	~~Remove no intra-frequency cells~~
~~- New intra-frequency info list~~	
~~- Intra-frequency cell id~~	~~1~~
~~- 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 1~~
~~- Primary CPICH TX power~~	~~Not Present~~
~~- TX Diversity Indicator~~	~~FALSE~~
~~- Cell selection and Re-selection~~	~~Not present~~
~~- Cell for measurement~~	~~Not present~~
~~- Intra-frequency measurement quantity~~	~~Not present~~
~~- Intra-frequency measurement for RACH reporting~~	
~~- SFN-SFN observed time difference~~	~~No report~~
~~- Reporting quantity~~	~~CPICH Ec/No~~
~~- Maximum number of reported cells on RACH~~	~~Current Cell~~
~~- Reporting information for state CELL_DCH~~	~~Not present~~

Information Element	**Value/remark**
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	
- Intra-frequency cell info list	1
- CHOICE intra-frequency cell removal	
- New intra-frequency info list	Remove no intra-frequency cells
- Intra-frequency cell id	
- Cell info	1
- Cell individual offset	
- Reference time difference to cell	0 dB
- Read SFN Indicator	256 chips
- CHOICE Mode	FALSE
- Primary CPICH Info	FDD
- Primary Scrambling Code	
- Primary CPICH TX power	Set to same code as used for cell 1
- TX Diversity Indicator	Not Present
- Cell selection and Re-selection	FALSE
- Cell for measurement	Not present
- Intra-frequency measurement quantity	Not present
	Not present
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	
- Reporting quantity	
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	CPICH Ec/No

RRC CONNECTION REQUEST (Step 2)

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

Information Element	Value/remark
Measured results on RACH	Check that the Ec/No for the cell 1 is reported.

RRC CONNECTION SETUP (Step 3)

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

~~Information Element~~	~~Value/remark~~
~~Frequency info~~ ~~- UARFCN uplink(Nu)~~ - ~~UARFCN downlink(Nd)~~	 ~~UARFCN uplink of cell 2~~ ~~UARFCN downlink of cell 2~~

Information Element	**Value/remark**
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	 UARFCN uplink of cell 2 UARFCN downlink of cell 2

8.2.1.21.5 Test requirement

In step 4, the UE shall send the RRC CONNECTION SETUP COMPLETE message on the frequency indicated in the RRC CONNECTION SETUP message.

8.2.1.22 Radio Bearer Establishment for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success

8.2.1.22.1 Definition

8.2.1.22.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304.

1> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" :

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.22.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.1.22.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

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

Test Procedure

Table 8.2.1.22

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.1.22 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS configures its downlink transmission power setting according to columns "T0" in table 8.2.1.22. The SS switches its downlink transmission power settings to columns "T1" and transmits MEASUREMENT CONTROL message in order for the UE to know information of cell 6. The SS transmits a RADIO BEARER SETUP message including new frequency information to the UE. After the UE receives this message, it transits from CELL_DCH in cell 1 to CELL_FACH state in cell 6, and transmits CELL UPDATE with IE "Cell update cause" set to "cell reselection". Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.22.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.22.
3	←		MEASUREMENT CONTROL	The SS specifies inter-frequency measurement for cell 6.
4	←		RADIO BEARER SETUP	Including new frequency information.
5	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6	←		CELL UPDATE CONFIRM	Including the IE" New C-RNTI"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		RADIO BEARER SETUP COMPLETE	The UE selects PRACH and S-CCPCH indicated in SIB5 or SIB6 after entering CELL FACH state in cell 6.
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9 , with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	350
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- COICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 s

- Reporting cell status - CHOICH reported cell - Maximum number of reported cells - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency	 Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 -85dbm 0.0

RADIO BEARER SETUP (Step 4)

Use the message sub-type indicated as "Packet to CELL_FACH from CELL_DCH in PS" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	 Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

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

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.1.22.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL_FACH state of cell 6.

8.2.1.23 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.1.23.1 Definition

8.2.1.23.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

1> remove any C-RNTI from MAC;

1> clear the C_RNTI.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.23.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.1.23.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: CS-DCCH_FACH (state 6-6) or PS_DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.1.23

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-55	Off	-55

Table 8.2.1.23 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.23. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including new frequency information to the UE. After the UE receives this message, it configures them and establishes the required radio access bearers and moves into cell 6. Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC. The SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.23.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.23.
3	←		RADIO BEARER SETUP	Including new frequency information.
4	→		RADIO BEARER SETUP COMPLETE	The UE sends this message in cell 6.
5	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 3)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL_DCH from CELL_FACH in PS" or "Non speech from CELL_FACH to CELL_DCH in CS" or "Speech from CELL_FACH to CELL_DCH in CS" in [9] TS 34.108 clause 9 , with the following exception:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	350

8.2.1.23.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL_DCH state of cell 6.

8.2.2 Radio Bearer Reconfiguration

8.2.2.1 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success

8.2.2.1.1 Definition

8.2.2.1.2 Conformance requirement

The UE shall correctly reconfigure a radio bearer and L1 according to the RADIO BEARER RECONFIGURATION message, which specifies a hard handover to another UL scrambling code and responds with a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.1.3 Test purpose

To confirm that the UE reconfigures the radio bearers according to a RADIO BEARER RECONFIGURATION message, which indicates a hard handover to another UL scrambling code.

8.2.2.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which commands a hard handover in the same cell to a new UL scrambling code to be performed. The UE reconfigures the new physical channel and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3	←		RADIO BEARER RECONFIGURATION	UL scrambling code is modified.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Uplink DPCH Info - Scrambling code number Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	 1 Maintain

RADIO BEARER RECONFIGURATION (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
Uplink DPCH timeslots and codes - First timeslot code list Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	 Assigned by SS Maintain

8.2.2.1.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the new DPCH after the specified activation time has expired.

8.2.2.2 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.2.2.1 Definition

8.2.2.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.2.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE, which includes unsupported configuration parameters for the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	Including unsupported configuration by the UE
2	→		RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RECONFIGURATION (TDD)

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

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

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.2.2.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with the value "configuration unsupported" set in IE "failure cause".

8.2.2.3 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.2.3.1 Definition

8.2.2.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel before timer T312 expires. UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, if the UE fails to reconfigure the radio bearer expires according to the RADIO BEARER RECONFIGURATION message before timer T312.

8.2.2.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message including the new radio bearer parameters to the UE but it keeps its current dedicated physical channel configuration. The UE shall revert to the old configuration. Then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2				SS does not reconfigure L1.
3	→		RADIO BEARER RECONFIGURATION FAILURE	The UE shall detect a failure to reconfigure the new radio bearer, and send this message using the old radio bearer configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A.

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.2.3.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC setting value "physical channel failure" in IE "failure cause".

8.2.2.4 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.2.4.1 Definition

8.2.2.4.2 Conformance requirement

The UE shall perform a cell update when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer reconfiguration procedure. After the UE completes cell update procedure, the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set IE "failure cause" to "physical channel failure".

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.4.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message after it completes a cell update procedure when the UE cannot reconfigure the new radio bearer and a subsequent failure to revert to the old configuration.

8.2.2.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE. After the reception of the acknowledgement for the RADIO BEARER RECONFIGURATION message in SS, the SS shall not reconfigure dedicated physical channel in accordance with the settings in the message and release the previous configuration. The UE discovers that it cannot reconfigure the new radio bearer and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

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

Specific Message Contents

RADIO BEARER RECONFIGURATION message (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as as found in Annex A.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 5) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 5) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

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

RADIO BEARER RECONFIGURATION FAILURE (Step 7)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

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

8.2.2.4.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

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

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

8.2.2.5 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.5.1 Definition

8.2.2.5.2 Conformance requirement

If the UE receives a RADIO BEARER RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RECONFIGURATION message, it shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.6.3.11.

8.2.2.5.3 Test purpose

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

8.2.2.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER SETUP message to the UE. The SS transmits a RADIO BEARER RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER SETUP message expires. When the UE receives the RADIO BEARER RECONFIGURATION message, the UE shall keep its current configuration as if it had not received the RADIO BEARER RECONFIGURATION message and shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER SETUP COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER SETUP	
2	←		RADIO BEARER RECONFIGURATION	Sent before the "activation time" in step 1 has elapsed
3	→		RADIO BEARER RECONFIGURATION FAILURE	The UE does not change its configuration according to the RADIO BEARER RECONFIGURATION message in step 2.
4	→		RADIO BEARER SETUP COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

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

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH Info - Scrambling code number	 1

RADIO BEARER SETUP (Step 1) (TDD)

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

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

RADIO BEARER RECONFIGURATION (Step 2)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to those in the default contents of layer 3 messages for RRC tests with the following exceptions as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with following exceptions:

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

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.2.5.5 Test requirement

After step 2, the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

8.2.2.6 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.2.6.1 Definition

8.2.2.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid RADIO BEARER RECONFIGURATION message, which does not includes any IEs except IE "Message Type". The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message which is set to "protocol error" in IE "failure cause" and is set to "ASN.1 violation or encoding error" in IE "Protocol error cause".

The UE shall keep existing configuration upon reception of a RADIO BEARER RECONFIGURATION message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.6.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGRATION FAILURE message on the DCCH using AM RLC, if it receives an invalid RADIO BEARER RECONFIGURATION message which does not include any IEs except IE "Message Type".

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

8.2.2.6.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits an invalid RADIO BEARER RECONFIGURATION message to the UE which does not include any IEs except IE "Message Type". The UE keeps the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "protocol

error" in IE "failure cause" and is set to "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE keeps current configuration after SS transmits a RADIO BEARER RECONFIGURATION message including some IEs set to give an invalid configuration. Then UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	See specific message content.
2	→		RADIO BEARER RECONFIGRATION FAILURE	The UE does not change the configuration.
3	←		RADIO BEARER RECONFIGURATION	This message includes IE set to give an invalid configuration.
4	→		RADIO BEARER RECONFIGRATION FAILURE	The UE does not change the configuration.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

Information Element	Value/remark
All IEs	Not Present

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

RADIO BEARER RECONFIGURATION (Step 3) (FDD)

The contents of RADIO BEARER RECONFIGRATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with following exceptions:

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

RADIO BEARER RECONFIGURATION (Step 3) (TDD)

The contents of RADIO BEARER RECONFIGRATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with following exceptions:

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER RECONFIGURATION FAILURE (Step 5)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.2.6.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGRATION FAILURE message on the DCCH using AM RLC stating the reason "protocol error" in IE "failure cause". The message shall contain the value "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

8.2.2.7 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (Continue and stop)

8.2.2.7.1 Definition

8.2.2.7.2 Conformance requirement

If the IE "RB information to reconfigure" is included, the UE shall apply the following actions on the radio bearer identified with the value of the IE "RB identity". The UE shall:

…

- if the IE "RB stop/continue" is included; and
  - if the "RB identity" has a value greater than 2; and
    - if the value of the IE "RB stop/continue" is "stop":
      - configure the RLC entity for the radio bearer to stop;
      - set the IE "RB started" in the variable ESTABLISHED_RABS to "stopped" for that radio bearer;
    - if the value of the IE "RB stop/continue" is "continue":
      - configure the RLC entity for the radio bearer to continue;
      - set the IE "RB started" in the variable ESTABLISHED_RABS to "started" for that radio bearer;

Reference

3GPP TS 25.331 clause 8.2.2, 8.6.4.5.

8.2.2.7.3 Test purpose

To confirm that the UE reconfigures new radio bearer and stop the transmission and reception of the RLC entity belonging to the RB identity specified in the RADIO BEARER RECONFIGURATION message.

To confirm that the UE reconfigures new radio bearer and restart the transmission and reception of the RLC entity belonging to the RB identity specified in the RADIO BEARER RECONFIGURATION message.

8.2.2.7.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message including IE "RB stop/continue" set to "continue" for radio bearer with RB identity '3'. The UE reconfigures new radio bearer and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC. Then, the SS transmits an IDENTITY REQUEST message using AM RLC, the UE responds a IDENTITY RESPONSE message. The SS transmits a RADIO BEARER RECONFIGURATION message including IE "RB stop/continue" set to "stop" for radio bearer with RB identity "3". The UE reconfigures new radio bearer and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC. Then, the SS transmits a IDENTITY REQUEST message using AM RLC, the UE does not acknowledge this message and also does not respond with a IDENTITY RESPONSE message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	This message include IE "RB stop/continue" set to "continue".
2	→		RADIO BEARER RECONFIGURATION COMPLETE	
3	←		IDENTITY REQUEST	
3a	→		IDENTITY RESPONSE	
4	←		RADIO BEARER RECONFIGURATION	This message include IE "RB stop/continue" set to "stop".
5	→		RADIO BEARER RECONFIGURATION COMPLETE	
6	←		IDENTITY REQUEST	
7	→			The SS shall not receive any data from the UE.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list	
RB information to reconfigure	
-RB identity	3
-RB stop/continue	"continue"

RADIO BEARER RECONFIGURATION (Step 4)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list	
RB information to reconfigure	
-RB identity	3
-RB stop/continue	"stop"

8.2.2.7.5 Test requirement

After step 3 the UE shall respond with a IDENTITY RESPONSE message.

After step 6 the UE shall not respond with a IDENTITY RESPONSE message on the stopped RB.

8.2.2.8 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Success

8.2.2.8.1 Definition

8.2.2.8.2 Conformance requirement

The UE shall correctly reconfigure radio bearers according to a RADIO BEARER RECONFIGURATION message, which invoke a transition from CELL_DCH to CELL_FACH in the same cell and responds with a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.8.3 Test purpose

To confirm that the UE establishes the reconfigured radio bearer(s) using common physical channel, after UE receives a RADIO BEARER RECONFIGURATION message.

8.2.2.8.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message, which invoke a transition from CELL_DCH to CELL_FACH. The UE reconfigures the radio bearers and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION COMPLETE	The UE selects PRACH and S-CCPCH indicated in SIB5 and SIB6 after entering CELL FACH state.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exception:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

8.2.2.8.5 Test requirement

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

8.2.2.9 Radio Bearer Reconfiguration from CELL_DCH to CELL_FACH: Success (Cell re-selection)

8.2.2.9.1 Definition

8.2.2.9.2 Conformance requirement

The UE shall initiate cell update procedure when the UE performs cell reselection during radio bearer reconfiguration procedure. After the UE completes cell update procedure, the UE shall continue to perform a radio bearer reconfiguration procedure and correctly reconfigure the radio bearer.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.9.3 Test purpose

To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message after it completes a cell update procedure.

8.2.2.9.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes IE "Primary CPICH info" and no dedicated physical channel information to transit from CELL_DCH to CELL_FACH. As the UE cannot detect the specified cell, the UE shall initial the cell update procedure. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3	←		RADIO BEARER RECONFIGURATION	Assign a transition from CELL_DCH to CELL_FACH.
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 3) (FDD)

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

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

RADIO BEARER RECONFIGURATION (Step 3) (TDD)

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

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 4

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"Cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.2.9.5 Test requirement

After step 3, the UE shall transmit CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 5, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message and then followed by RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.2.10 Radio Bearer Reconfiguration: from CELL_FACH to CELL_DCH: Success

8.2.2.10.1 Definition

8.2.2.10.2 Conformance requirement

The UE shall correctly reconfigure radio bearers according to a RADIO BEARER RECONFIGURATION message, which invoke a transition from CELL_FACH to CELL_DCH in the same cell and responds with a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.10.3 Test purpose

To confirm that the UE reconfigures the radio bearers according to a RADIO BEARER RECONFIGURATION message.

8.2.2.10.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The UE reconfigures the radio bearers and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	This message includes IE "Uplink DPCH Info"
2				Reconfiguration of radio bearer
3	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

8.2.2.10.5 Test requirement

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

8.2.2.11 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.2.11.1 Definition

8.2.2.11.2 Conformance requirement

The UE shall keep its current configuration when the UE receives a RADIO BEARER RECONFIGURATION message which includes unsupported configuration parameters and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.11.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RECONFIGURATION message includes unsupported configuration parameters.

8.2.2.11.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes unsupported configuration parameters, to the UE. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC and set "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	The message includes an unsupported configuration for the UE
2	→		RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RECONFIGURATION (FDD)

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

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

RADIO BEARER RECONFIGURATION (TDD)

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

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

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.2.11.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC stating "configuration unsupported" in IE "failure cause".

8.2.2.12 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.2.12.1 Definition

8.2.2.12.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel before timer T312 expires and detects the same serving cell only. The UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.12.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new radio bearer before timer T312 expires according to a RADIO BEARER RECONFIGURATION message.

8.2.2.12.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE and keep its current physical channel channel configuration. Therefore, the UE cannot reconfigure the radio bearers and shall attempt cell reselection procedure after T312 expires. Then the UE shall detect the same serving cell only and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION FAILURE	The SS does not reconfigures L1 and the UE fails to reconfigure its radio bearers.

Specific Message Contents

RADIO BEARER RECONFIGURATION

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.2.12.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE "failure cause".

8.2.2.13 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.2.13.1 Definition

8.2.2.13.2 Conformance requirement

The UE shall perform a cell update procedure when the UE selects another cell after the detection of physical channel failure in the radio bearer reconfiguration procedure. After the UE completes cell update procedure, the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.13.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer reconfiguration procedure.

8.2.2.13.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.2.13

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

Table 8.2.2.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE but SS does not reconfigure dedicated physical channel in accordance with the settings in the message. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.13. The UE recognize that it cannot synchronize with the SS on the new radio bearers.The UE performs cell reselection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. UE reply with UTRAN MOBILITY INFORMATION CONFIRM message. The UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the dedicated physical channel in accordance with the RADIO BEARER RECONFIGRATION message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.2.13.
3			Void	
4			Void	
5	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6	←		CELL UPDATE CONFIRM	See message content.
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		RADIO BEARER RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

RADIO BEARER RECONFIGURATION FAILURE (Step 8)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

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

8.2.2.13.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 6, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 7 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.2.14 Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.2.14.1 Definition

8.2.2.14.2 Conformance requirement

If the UE receives a RADIO BEARER RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RECONFIGURATION message, it shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.6.3.11.

8.2.2.14.3 Test purpose

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

8.2.2.14.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER RECONFIGURATION message before the "activation time" indicated in the PHYSICAL CHANNEL RECONFIGURATION message expires. When the UE receives the RADIO BEARER RECONFIGUTARION message, the UE shall keep the configuration as if it had not received the RADIO BEARER RECONFIGURATION message and shall transmit a RADIO RECONFIGURATION SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	
2	←		RADIO BEARER RECONFIGURATION	Sent before the elapse of the "Activation Time" indicated in the previous message.
3	→		RADIO BEARER RECONFIGURATION FAILURE	The UE does not change its configuration according to the RADIO BEARER RECONFIGURATION message.
4	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions.

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH Info	
- Scrambling code number	1

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions.

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

RADIO BEARER RECONFIGURATION (Step 2) (FDD)

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

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

RADIO BEARER RECONFIGURATION (Step 2) (TDD)

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

Information Element	Value/remark
Activation Time Uplink DPCH timeslots and codes - First timeslot code list	 A different code combination to that used in step 1.

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.2.14.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.2.15 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.2.15.1 Definition

8.2.2.15.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid RADIO BEARER RECONFIGURATION message, which does not include any IEs except IE "Message Type". Then it shall transmit a RADIO BEARER RECONFIGURATION FAILURE message setting "protocol error" in IE "failure cause" and also setting "ASN.1 violation error or encoding error" in IE "Protocol error cause". The UE shall keep its current configuration upon reception of a RADIO BEARER RECONFIGURATION message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.15.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER RECONFIGURATION message which does not include any IEs except IE "Message Type".

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

8.2.2.15.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits an invalid RADIO BEARER RECONFIGURATION message to the UE which does not include all IEs except IE "Message Type". The UE shall keep the old configuration and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "protocol error" in IE "failure cause" and also set "ASN.1 violation error or encoding error" in IE "Protocol error cause". The UE keeps current configuration when SS transmits RADIO BEARER RECONFIGURATION message including some IEs set to give an invalid configuration. The UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	See specific message content.
2	→		RADIO BEARER RECONFIGRATION FAILURE	The UE does not change the configuration.
3	←		RADIO BEARER RECONFIGURATION	This message includes IE set to invalid value
4	→		RADIO BEARER RECONFIGRATION FAILURE	The UE does not change the configuration

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

Information Element	Value/remark
All IEs	Not Present

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation error or encoding error

RADIO BEARER RECONFIGURATION (Step 3) (FDD)

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

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

RADIO BEARER RECONFIGURATION (Step 3) (TDD)

The contents of RADIO BEARER RECONFIGRATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with following exceptions:

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER RECONFIGURATION FAILURE (Step 4)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.2.15.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, which includes the cause "protocol error" in IE "failure cause" and "ASN.1 violation error or encoding error" in IE "Protocol error cause".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

8.2.2.16 Void

8.2.2.17 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Success

8.2.2.17.1 Definition

8.2.2.17.2 Conformance requirement

The UE shall correctly reconfigure radio bearers and transit from CELL_FACH in the current cell to CELL_FACH in another cell according to a RADIO BEARER RECONFIGURATION message and responds with a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.17.3 Test purpose

To confirm that the UE establishes radio bearers according to a RADIO BEARER RECONFIGURATION message.

8.2.2.17.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.2.17

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

Table 8.2.2.17 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RECONFIGURATION message, which invoke a transition from CELL_FACH in the current cell to CELL_FACH in cell 2, to the UE. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.17. The UE moves to cell 2 and configures the common physical channel and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.2.17.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

8.2.2.17.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC in cell 2.

8.2.2.18 Radio Bearer Reconfiguration from CELL_FACH to CELL_FACH: Success (Cell re-selection)

8.2.2.18.1 Definition

8.2.2.18.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE performs cell reselection during radio bearer reconfiguration procedure. After the UE completes cell update procedure, the UE shall continue to perform a radio bearer reconfiguration procedure and correctly reconfigure the radio bearer.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.18.3 Test purpose

To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message in cell 2 after it completes a cell update procedure instigated by a RADIO BEARER RECONFIGURATION message.

8.2.2.18.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.2.18

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

Table 8.2.2.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. On transmitting a RADIO BEARER RECONFIGURATION message to the UE, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.18. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. UE transmit a UTRAN MOBILTY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.1.9.
3			Void	
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 Not Present

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 Not present

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.18.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message on the CCCH with IE "cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.2.19 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (Subsequently received)

8.2.2.19.1 Definition

8.2.2.19.2 Conformance requirement

If the UE receives a RADIO BEARER RECONFIGURATION message before the UE configures the radio bearers according to the previous RADIO BEARER RECONFIGURATION message, the UE shall ignore the new RADIO BEARER RECONFIGURATION message and configure according to the previous RADIO BEARER RECONFIGURATION message. Finally, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.6.3.11.

8.2.2.19.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER RECONFIGURATION message before the UE configures the radio bearer according to a previous RADIO BEARER RECONFIGURATION message, it ignores the new RADIO

BEARER RECONFIGURATION message and configures the radio bearer according to the previous RADIO BEARER RECONFIGURATION message received.

8.2.2.19.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the radio bearer according to the RADIO BEARER RECONFIGURATION message prior to this new message. The UE ignores the new RADIO BEARER RECONFIGURATION message and configures according to the former RADIO BEARER RECONFIGURATION message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	For FDD, the IE "Secondary scrambling code" is set to "1". For TDD, the code combination is assigned by SS.
2	←		RADIO BEARER RECONFIGURATION	Sent before the "activation time" in step 1 has elapsed. For FDD, the IE "Secondary scrambling code" is set to "2". For TDD the code combination assigned is different to that assigned in step 1.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	The UE ignores the RADIO BEARER RECONFIGURATION message in step 2 and performs configuration according to the RADIO BEARER RECONFIGURATION message in step 1.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RECONFIGURATION (Step 2) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RECONFIGURATION (Step 2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.2.19.5 Test requirement

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

8.2.2.20 Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.2.20.1 Definition

8.2.2.20.2 Conformance requirement

If the UE receives a RADIO BEARER RECONFIGURATION message before the UE configures the radio bearer according to the previous RADIO BEARER RECONFIGURATION message, the UE shall ignore the new RADIO BEARER RECONFIGURATION message and configure according to the previous RADIO BEARER RECONFIGURATION message. Finally, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.6.3.11.

8.2.2.20.3 Test purpose

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

8.2.2.20.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. SS transmits a RADIO BEARER RECONFIGURATION message to the UE before the UE configures the radio bearer according to the RADIO BEARER RECONFIGURATION message prior to this new message. The UE ignores the new RADIO BEARER RECONFIGURATION message and configures the radio bearers according to the former RADIO BEARER RECONFIGURATION message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	For FDD, the IE "Secondary scrambling code" is set to "1". For TDD, the code combination is assigned by SS.
1a (TDD)			A code combination is assigned for the SS.	
2	←		RADIO BEARER RECONFIGURATION	SS sends this message before the expiry of activation time specified in RADIO BEARER RECONFIGURATION message of step 1. For FDD, the IE "Secondary scrambling code" is set to "2". For TDD, the code combination assigned is different to that assigned in step 1.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	The UE ignores the RADIO BEARER RECONFIGURATION message in step 2 and confirms configuration according to the RADIO BEARER RECONFIGURATION message in step 1.

Specific Message Contents

RADIO BEARER RECONFIGURATION (step 1) (FDD)

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

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

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RECONFIGURATION (Step 2) (FDD)

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

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

RADIO BEARER RECONFIGURATION (Step 2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.2.20.5 Test requirement

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

8.2.2.21 Radio Bearer Reconfiguration from CELL_DCH to CELL_PCH: Success

8.2.2.21.1 Definition

8.2.2.21.2 Conformance requirement

The UE shall configure radio bearers so as to transit from CELL_DCH state to CELL_PCH state according to the received RADIO BEARER RECONFIGURATION message.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.21.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL_PCH state after it receives a RADIO BEARER RECONFIGURATION, which invoke the UE to transit from CELL_DCH to CELL_PCH, from SS.

8.2.2.21.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.2.21.5 Test requirement

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

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE"Cell update cause" set to "paging response".

8.2.2.22 Radio Bearer Reconfiguration from CELL_DCH to URA_PCH: Success

8.2.2.22.1 Definition

8.2.2.22.2 Conformance requirement

The UE shall configure radio bearers so as to transit from CELL_DCH state to URA_PCH state according to received RADIO BEARER RECONFIGURATION message.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE and enters URA_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH, from SS.

8.2.2.22.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters into URA_PCH state. The SS transmits a PAGING TYPE 1 message and the UE shall enters the CELL_FACH state after receiving this message. UE shall transmit a CELL UPDATE message with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	**Value/remark**
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.2.22.5 Test requirement

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

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.2.23 Radio Bearer Reconfiguration from CELL_FACH to CELL_PCH: Success

8.2.2.23.1 Definition

8.2.2.23.2 Conformance requirement

The UE shall configure radio bearers so as to transit from CELL_FACH state to CELL_PCH state according to the received RADIO BEARER RECONFIGURATION message and responds with a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.23.3 Test purpose

To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL_FACH to CELL_PCH.

8.2.2.33.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list	
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Previously assigned SRNC identity
- S-RNTI	Previously assigned S-RNTI

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.2.23.5 Test requirement

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

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.2.24 Radio Bearer Reconfiguration from CELL_FACH to URA_PCH: Success

8.2.2.24.1 Definition

8.2.2.24.2 Conformance requirement

The UE shall configure radio bearers so as to transit from CELL_FACH state to URA_PCH state according to the received RADIO BEARER RECONFIGURATION message and responds with a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.24.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters URA_PCH state after it receives a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL_FACH to URA_PCH.

8.2.2.24.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.2.24.5 Test requirement

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

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.2.25 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_DCH including modification of previously signalled CELL_DCH configuration

8.2.2.25.1 Definition

8.2.2.25.2 Conformance requirement

Upon receiving a RADIO BEARER RECONFIGURATION message including a request to move to CELL_DCH, the UE shall apply a previously signalled configuration for CELL_DCH, modify the parameters for which reconfiguration was requested in the RADIO BEARER RECONFIGURATION message and transmit a RADIO BEARER RECONFIGURATION COMPLETE message.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.2.25.3 Test purpose

To confirm that the UE applies a previously signalled configuration for CELL_DCH and in addition modifies the parameters for which reconfiguration is requested in the RADIO BEARER RECONFIGURATION message that is used to initiate transition from CELL_FACH to CELL_DCH.

8.2.2.25.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

a) The UE is in CELL_FACH state.

b) The SS transmits a RADIO BEARER RECONFIGURATION message including dedicated physical channel information to request the UE to transit from CELL_FACH to CELL_DCH. Upon receiving this message, the UE establishes the radio bearer and transport channel configuration for CELL_DCH included in a previous RADIO BEARER SETUP message and modifies the parameters for which reconfiguration was requested in the RADIO BEARER RECONFIGURATION message.

c) The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	Initiates the transition from CELL_FACH to CELL_DCH
2	→		RADIO BEARER RECONFIGURATION COMPLETE	

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message is identical as "RADIO BEARER RECONFIGURATION message" as found in Annex A with the following exceptions:

Information Element	Value/remark
RB information to reconfigure list	
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	300
- Max_RST	1
- Polling info	
- Timer_poll	100
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	100
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Same as for RB identity 2
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Same as for RB identity 2
- RB mapping info	Not Present
- RB stop/continue	Not Present

RADIO BEARER RECONFIGURATION COMPLETE (Step 2)

The contents of RADIO BEARER RECONFIGURATION COMPLETE message is identical as "RADIO BEARER RECONFIGURATION COMPLETE message" as found in Annex A.

8.2.2.25.5 Test requirement

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

8.2.2.26 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Success (Incompatible Simultaneous Reconfiguration)

8.2.2.26.1 Definition

8.2.2.26.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

…

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

…

If the IE "Ciphering mode info" is present and if the IE "Reconfiguration" in the variable CIPHERING_STATUS is set to TRUE, the UE shall:

1> ignore this second attempt to change the ciphering configuration; and

1> set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to TRUE.

If the IE "Ciphering mode info" is present and if the IE "Reconfiguration" in the variable CIPHERING_STATUS is set to FALSE, the UE shall:

1> set the IE "Reconfiguration" in the variable CIPHERING_STATUS to TRUE;

…

If the variable INCOMPATIBLE_SECURITY_RECONFIGURATION is set to TRUE due to the received reconfiguration message, the UE shall:

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

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

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

2> clear that entry;

2> set the IE "failure cause" to the cause value "incompatible simultaneous reconfiguration".

1> set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to FALSE;

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

The procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2.12a, clause 8.6.3.4.

8.2.2.26.3 Test purpose

1. To confirm that the UE ignores the subsequent security reconfiguration information which is contained in the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE reconfigures according to the SECURITY MODE COMMAND message.
3. To confirm that the UE transmits RADIO BEARER RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC.
4. To confirm that the UE transmits SECURITY MODE COMPLETE message on the uplink DCCH using AM RLC.

8.2.2.26.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a SECURITY MODE COMMAND message. SS then transmits a RADIO BEARER RECONFIGURATION message. The UE ignores the RADIO BEARER RECONFIGURATION message and transmits a RADIO BEARER RECONFIGURATION FAILURE message and configures the radio bearers according to the SECURITY MODE COMMAND message. On completion of ciphering reconfiguration, the UE shall transmit a SECURITY MODE COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		SECURITY MODE COMMAND	This message includes IE "Ciphering mode info".
2	←		RADIO BEARER RECONFIGURATION	SS send this message before the activation time in step 1 expires. This message includes IE "Ciphering mode info".
3	→		RADIO BEARER RECONFIGURATION FAILURE	The UE ignores the ciphering mode information in step 2.
4	→		SECURITY MODE COMPLETE	

Specific Message Contents

SECURITY MODE COMMAND (Step 1)

If the initial state of the UE is state 6-9, use the message sub-type in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Ciphering mode info	
- Ciphering mode command	Start/restart
- Ciphering algorithm	Use one of the supported ciphering algorithms
- Ciphering activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256
- Radio bearer downlink ciphering activation time info	
- Radio bearer activation time	
- RB identity	1
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	2
- RLC sequence number	Current RLC SN+4
- RB identity	3
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	4
- RLC sequence number	Current RLC SN+X (Note 1)

If the initial state of the UE is state 6-10, use the message sub-type in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Ciphering mode info	
- Ciphering mode command	Start/restart
- Ciphering algorithm	Use one of the supported ciphering algorithms
- Ciphering activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256
- Radio bearer downlink ciphering activation time info	
- Radio bearer activation time	
- RB identity	1
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	2
- RLC sequence number	Current RLC SN+4
- RB identity	3
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	4
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	20
- RLC sequence number	Current RLC SN+X (Note 1)

RADIO BEARER RECONFIGURATION (for Step 2)

If the initial state of the UE is state 6-9, use the message sub-type entitled "Speech in CS" or "Non-speech in CS" in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Ciphering mode info	
- Ciphering mode command	Start/restart
- Ciphering algorithm	Use one of the supported ciphering algorithms
- Ciphering activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256
- Radio bearer downlink ciphering activation time info	
- Radio bearer activation time	
- RB identity	1
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	2
- RLC sequence number	Current RLC SN+4
- RB identity	3
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	4
- RLC sequence number	Current RLC SN+X (Note 1)

If the initial state of the UE is state 6-10, use the message sub-type entitled "Packet to CELL_DCH from CELL_DCH in PS" in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Ciphering mode info	
- Ciphering mode command	Start/restart
- Ciphering algorithm	Use one of the supported ciphering algorithms
- Ciphering activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256
- Radio bearer downlink ciphering activation time info	
- Radio bearer activation time	
- RB identity	1
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	2
- RLC sequence number	Current RLC SN+4
- RB identity	3
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	4
- RLC sequence number	Current RLC SN+X (Note 1)
- RB identity	20
- RLC sequence number	Current RLC SN+X (Note 1)

Note 1: X is set to 1.

RADIO BEARER RECONFIGURATION FAILURE (for Step 3) (FDD)

Check that the message received is the same as the message sub-type found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	incompatible simultaneous reconfiguration

8.2.2.26.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC and set the failure cause to "incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a SECURITY MODE COMPLETE message on the DCCH using AM RLC specified in step 1.

8.2.3 Radio Bearer Release

8.2.3.1 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success

8.2.3.1.1 Definition

8.2.3.1.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message and responds with a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.1.3 Test purpose

To confirm that the UE releases the existing radio bearer according to a RADIO BEARER RELEASE message.

8.2.3.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE releases the radio access bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2	→		RADIO BEARER RELEASE COMPLETE	Release the radio bearer.
3	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE

None.

8.2.3.1.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message.

8.2.3.2 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.3.2.1 Definition

8.2.3.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a RADIO BEARER RELEASE message which includes unsupported configuration parameters and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting value "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.2.3 Test purpose

To confirm that the UE keeps its current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, if the received RADIO BEARER RELEASE message indicates an unsupported configuration parameters for the UE.

8.2.3.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELAESE message to the UE specifying a frequency which is not supported by the UE. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC indicating "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	Including unsupported configuration by the UE
2	→		RADIO BEARER RELEASE FAILURE	The UE does not change the radio bearer.

Specific Message Contents

RADIO BEARER RELEASE (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RELEASE (TDD)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" found in Annex A with the following exceptions:

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

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.3.2.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with the IE "failure cause" set to "configuration unsupported".

8.2.3.3 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)

8.2.3.3.1 Definition

8.2.3.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the radio bearers by timer T312 expiry and transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearer according to a RADIO BEARER RELEASE message by timer T312 expiry.

8.2.3.3.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message but it keeps its current dedicated physical channel configuration. This causes the UE to fail to release the radio bearer, and after T312 expires the UE reverts to the old configuration. The UE then transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which specifies "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2				The SS keeps its current dedicated physical channel configuration.
3	→		RADIO BEARER RELEASE FAILURE	After T312 expires, the UE finds that it fails to release a radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in annex A.

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.3.3.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which includes the value "physical channel failure" in IE "failure cause".

8.2.3.4 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion failure)

8.2.3.4.1 Definition

8.2.3.4.2 Conformance requirement

The UE shall perform a cell update procedure when the UE fails to revert to the old configuration after the detection of physical channel failure in the radio bearer release procedure. After the UE completes cell update procedure, the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which set IE "failure cause" to "physical channel failure".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.4.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update procedure when the UE cannot revert to the old configuration after encountering a physical channel failure during the execution of a radio bearer release procedure.

8.2.3.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE but does not configure dedicated physical channel in accordance with the settings in the message and release the previous configuration. As a result, the UE recognizes that it cannot reconfigure the radio bearers and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Expected sequence

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

Specific Message Contents

RADIO BEARER RELEASE

The contents of RADIO BEARER RELEASE message in this test case are identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
UplinkDPCH Info	Same as RADIO BEARER SETUP message used to move to intial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to intial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
UplinkDPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to intial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to intial condition

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

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

8.2.3.4.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

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

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

8.2.3.5 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.5.1 Definition

8.2.3.5.2 Conformance requirement

If the UE receives a RADIO BEARER RELEASE message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RELEASE message, it shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3, clause 8.6.3.11.

8.2.3.5.3 Test purpose

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

8.2.3.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER RELEASE message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER RELEASE message, the UE shall keep the configuration as if it had not received the RADIO BEARER RELEASE message and shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration".When the activation time lapses, the UE reconfigures the new physical channel parameters and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	←		RADIO BEARER RELEASE	Message sent before the "Activation time" indicated in the message of step 1 has elapsed.
3	→		RADIO BEARER RELEASE FAILURE	The UE does not change the configuration due to the reception of RADIO BEARER RELEASE message.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info - Scrambling code number Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	 1 Maintain

RADIO BEARER RECONFIGURATION (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
Uplink DPCH timeslots and codes - First timeslot code list Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	 Assigned by SS Maintain

RADIO BEARER RELEASE (Step 2) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time Info Uplink DPCH Info - Scrambling code number	Current CFN-[current CFN mod 8 + 8] 2

RADIO BEARER RECONFIGURATION (Step 2) (TDD)

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

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

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.3.5.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall trasmit a RADIO BEARER RECONFIGURATION COMPLETE message.

8.2.3.6 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.3.6.1 Definition

8.2.3.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid RADIO BEARER RELEASE message which does not include any IEs except IE "Message Type". It shall transmit a RADIO BEARER RELEASE FAILURE message which includes value "protocol error" in IE "failure cause" and value "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon reception of a RADIO BEARER RELEASE message, which include some IEs set to give an invalid configuration, and then the UE shall transmit a RADIO BEARER RELEASE FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.6.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER RELEASE message, which does not include any IEs except IE "Message Type".

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message including some IEs set to give an invalid configuration.

8.2.3.6.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits an invalid RADIO BEARER RELEASE message to the UE which does not any IEs except IE "Message Type". The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC. This message shall indicate "protocol error" in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause". SS transmits a RADIO BEARER RELEASE message including some IEs set to give an invalid configuration. The UE keeps current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	See specific message content.
2	→		RADIO BEARER RELEASE FAILURE	The UE shall not change the configuration.
3	←		RADIO BEARER RELEASE	This message includes IE set to give an invalid configuration
4				The UE does not change the configuration
5	→		RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "invalid configuration

Specific Message Contents

RADIO BEARER RELEASE (Step1)

Information Element	Value/remark
All IEs	Not Present

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

RADIO BEARER RELEASE (Step 3) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

RADIO BEARER RELEASE (Step 3) (TDD)

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER RELEASE FAILURE (Step 5)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.3.6.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which is set to "protocol error" in IE "failure cause" and is set to "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 4 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

8.2.3.7 Radio Bearer Release for transition from CELL_DCH to CELL_FACH: Success

8.2.3.7.1 Definition

8.2.3.7.2 Conformance requirement

The UE shall correctly release a radio bearer according to a RADIO BEARER RELEASE message and responds with a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.7.3 Test purpose

To confirm that the UE release the existing the radio bearer according to a RADIO BEARER RELEASE message.

8.2.3.7.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DTCH+DCCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE releases the radio access bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	SS releases the radio bearer in the fashion specified in the message and allocate common channel resources to carry the remaining radio bearers.
2				The UE selects PRACH and S-CCPCH indicated in SIB5 and SIB6 after entering CELL FACH state. The UE shall release dedicated channels, and reconfigure the remaining radio bearers using the common channel.
3	→		RADIO BEARER RELEASE COMPLETE	
4	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

8.2.3.7.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message.

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

8.2.3.8.1 Definition

8.2.3.8.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE performs cell reselection during a radio bearer release procedure. After the UE completes cell update procedure, the UE shall continue to perform the radio bearer release procedure and correctly release the radio bearer.

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.8.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE message after the UE completes a cell update procedure.

8.2.3.8.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message to request the UE to transit from CELL_DCH to CELL_FACH. The UE initiates the cell update procedure because the UE cannot detect the specified cell in this message. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

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

Specific Message Contents

RADIO BEARER RELEASE (Step 3) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

RADIO BEARER RELEASE (Step 3) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 4

CELL UPDATE (Step 4)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause [9] TS 34.108 clause 9, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.3.8.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

8.2.3.9 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Success

8.2.3.9.1 Definition

8.2.3.9.2 Conformance requirement

The UE shall correctly release radio bearers according to a RADIO BEARER RELEASE message and responds with a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.9.3 Test purpose

To confirm that an UE, in state CELL_FACH, releases the radio access bearers using common physical channel. After the release, it shall access the affected radio bearers on the DPCH.

8.2.3.9.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE. In this message, SS commands the UE to release radio access bearers on common physical channel. At the same time, SS allocates DPCH to support the affected radio bearers. The UE shall release the indicated radio access bearers and transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2				UE shall release the radio access bearers carried by common physical channel.
3	→		RADIO BEARER RELEASE COMPLETE	
4	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9.

8.2.3.9.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message using the dedicated physical channel allocated.

8.2.3.10 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.3.10.1 Definition

8.2.3.10.2 Conformance requirement

The UE shall keep its old configuration when it receives a RADIO BEARER RELEASE message which specifies unsupported configuration parameters for the UE. Then the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which, setting value "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.10.3 Test purpose

To confirm that the UE keeps its configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the received RADIO BEARER RELEASE message requests for configuration unspported by the UE.

8.2.3.10.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE, referring to a frequency which cannot be supported by the UE. The UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC and set "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	The message contains a configuration not supported by the UE
2	→		RADIO BEARER RELEASE FAILURE	The UE shall not change the radio bearer configuration.

Specific Message Contents

RADIO BEARER RELEASE (FDD)

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

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

RADIO BEARER RELEASE (TDD)

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

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

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.3.10.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, stating the reason "configuration unsupported" in IE "failure cause".

8.2.3.11 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.3.11.1 Definition

8.2.3.11.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the radio bearers before T312 timer expires and detects the same serving cell only. Then it shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE "failure cause" after it reverts to the old configuration.

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.11.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if the UE fails to release the radio bearers in accordance with the specified settings in RADIO BEARER RELEASE message before T312 timer expires.

8.2.3.11.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message and keeps its current physical channel configuration. The UE is expected to encounter a failure while releasing the radio bearer. After T312 timer expires, the UE shall revert to the old radio bearer configuration, so the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2				The SS does not configure the specified L1.
3	→		RADIO BEARER RELEASE FAILURE	After T312 expiry the UE fails to release a radio bearer and reverts to the old configuration.

Specific Message Contents

RADIO BEARER RELEASE

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.3.11.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE "failure cause".

8.2.3.12 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.3.12.1 Definition

8.2.3.12.2 Conformance requirement

The UE shall perform a cell update procedure when the UE selects another cell after the detection of physical channel failure during a radio bearer release procedure. After the UE completes cell update procedure, the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which is set IE "failure cause" to "physical channel failure".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.12.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update procedure following a physical channel failure during the radio bearer release procedure.

8.2.3.12.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.3.12

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

Table 8.2.3.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a RADIO BEARER RELAESE message to the UE, but it does not configure the specified L1 in accordance with the settings in the message. This is expected to cause the UE to experience a failure to release the radio bearer and it subsequently tries to revert to the old configuration. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.3.12. The UE shall find cell 2 and transmits CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2				The SS does not configure the specified L1 in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.3.12.
3	←		Void	
4	→		CELL UPDATE	The UE finds a new cell 2 and enter CELL_FACH state. This message includes the value "cell reselection" set in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Assigned previously in cell 1
- S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

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

8.2.3.12.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

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

8.2.3.13 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.13.1 Definition

8.2.3.13.2 Conformance requirement

If the UE receives a RADIO BEARER RELEASE message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RELEASE message, it shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3, clause 8.6.3.11.

8.2.3.13.3 Test purpose

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

8.2.3.13.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER RELEASE message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER RELEASEmessage, the UE shall keep the configuration as if it had not received the RADIO BEARER RELEASE message and shall

transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER RELEASE FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	The UE receives any message other than RADIO BEARER RELEASE. (e.g. RADIO BEARER SETUP)
2	←		RADIO BEARER RELEASE	Sent before the expiry of IE "Activation Time" stated in message in step 1.
3	→		RADIO BEARER RELEASE FAILURE	The UE does not change the configuration due to the reception of RADIO BEARER RECONFIGURATION message.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH Info - Scrambling code number	 1

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A. Information element(s) to be changed are listed below:

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

RADIO BEARER RELEASE (Step 2) (FDD)

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

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

RADIO BEARER RELEASE (Step 2) (TDD)

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

Information Element	Value/remark
Activation Time Info - Uplink DPCH timeslots and codes - First timeslot code list	Current CFN-[current CFN mod 8 + 8] A different code combination to that used in step 1.

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.3.13.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using the new physical channel parameters reconfigured as a result of the RADIO BEARER RECONFIGURATION message.

8.2.3.14 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.3.14.1 Definition

8.2.3.14.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid RADIO BEARER RELEASE message which does not include any IEs except IE "Message Type". It shall transmit a RADIO BEARER RELEASE FAILURE message which indicate the value "protocol error" in IE "failure cause" and setting "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon reception of a RADIO BEARER RELEASE message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a RADIO BEARER RELEASE FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.14.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER RELEASE message which does not include any IEs except IE "Message Type".

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives a RADIO BEARER RELEASE message including some IEs set to give an invalid configuration.

8.2.3.14.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS_DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits an invalid RADIO BEARER RELEASE message, which does not include any IEs except IE "Message Type", to the UE. The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which shall indicate the value "protocol error" in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause". SS transmits a RADIO BEARER RELEASE message including some IEs set to give an invalid configuration. The UE keeps current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	See specific message content.
2	→		RADIO BEARER RELEASE FAILURE	The UE shall not change its current configuration.
3	←		RADIO BEARER RELEASE	This message includes IE set to give an invalid configuration.
4				The UE does not change its configuration
5	→		RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "invalid configuration

Specific Message Contents

RADIO BEARER RELEASE (Step 1)

Information Element	Value/remark
All IEs	Not Present

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

RADIO BEARER RELEASE (Step 3) (FDD)

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

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

RADIO BEARER RELEASE (Step 3) (TDD)

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

Information Element	Value/remark
-PRACH TFCS	Present

RADIO BEARER RELEASE FAILURE (Step 5)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.3.14.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE "failure cause" and also indicating "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 3 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

8.2.3.15 Radio Bearer Release for transition from CELL_FACH to CELL_FACH: Success

8.2.3.15.1 Definition

8.2.3.15.2 Conformance requirement

The UE shall correctly release a radio bearer according to the RADIO BEARER RELEASE message received and responds with a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3.

8.2.3.15.3 Test purpose

To confirm that the UE releases the existing the radio bearer(s) according to the RADIO BEARER RELEASE message.

8.2.3.15.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RELEASE message to the UE. The UE releases the radio access bearer and transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2			Void	
3	→		RADIO BEARER RELEASE COMPLETE	
4	←		RADIO BEARER RECONFIGURATION	The IE "RAB information to reconfigure" is included with the same RAB identity as was released with the RADIO BEARER RELEASE message.
5	→		RADIO BEARER RECONFIGURATION FAILURE	The UE responds with failure, in case the RB is properly removed
6	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9.

RADIO BEARER RECONFIGURATION (Step 4)

The contents of RADIO BEARER RECONFIGURATION message in this test case is specified below:

Information Element	Condition	Value/remark
Message Type		
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3
Integrity check info		The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE.
- RRC message sequence number		SS provides the value of this IE, from its internal counter.
Integrity protection mode info		Not Present
Ciphering mode info		Not Present
Activation time		Now
New U-RNTI		Not Present
New C-RNTI		Not Present
RRC State indicator		CELL_FACH
UTRAN DRX cycle length coefficient		Not Present
CN information info		Not Present
URA identity		Not Present
RAB information to reconfigure list		
- RAB information to reconfigure		(AM DTCH for PS domain)
- RAB identity		0000 0101B
- CN domain identity		PS domain
- NAS Synchronization Indicator		Not Present
RB information to reconfigure list		TS25.331 specifies that "Although this IE is not always required, need is MP to align with ASN.1".
- RB information to reconfigure		(Dummy)
- RB identity		1
- PDCP info		Not Present
- PDCP SN info		Not Present
- RLC info		Not Present
- RB mapping info		Not Present
- RB stop/continue		Not Present
RB information to be affected list		Not Present
UL Transport channel information for all transport channels		Not Present
Deleted TrCH information list		Not Present
Added or Reconfigured TrCH information list		Not Present
CHOICE mode		Not Present
Deleted DL TrCH information list		Not Present
Added or Reconfigured DL TrCH information list		Not Present
Frequency info		Not Present
Maximum allowed UL TX power		Not Present
CHOICE channel requirement		Not Present
CHOICE Mode		FDD
- Downlink PDSCH information		Not Present
Downlink information common for all radio links		Not Present
Downlink information per radio link list		Not Present

RADIO BEARER RECONFIGURATION FAILURE (step 5)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.3.15.5 Test requirement

After step 1 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC on the common physical channel.

After step 4, UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message to verify that the RAB is properly removed.

8.2.3.16 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (Subsequently received)

8.2.3.16.1 Definition

8.2.3.16.2 Conformance requirement

If the UE receives a RADIO BEARER RELEASE message before the UE releases the radio bearer according to the previous RADIO BEARER RELEASE message, the UE shall ignore the new RADIO BEARER RELEASE message and releases according to the previous RADIO BEARER RELEASE message. Finally, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3, clause 8.6.3.11.

8.2.3.16.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER RELEASE message before the UE releases the radio bearer according to a previous RADIO BEARER RELEASE message it ignore the new RADIO BEARER RELEASE message and configures according to the previous RADIO BEARER RELEASE message received.

8.2.3.16.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE releases the radio access bearer, the UE ignores the second RADIO BEARER RELEASE message and releases the radio bearer according to the previous RADIO BEARER RELEASE message received. Finally, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	For FDD, the SS sets its UL scrambling code to "1".
2	←		RADIO BEARER RELEASE	Message sent before the expiry of "activation time" specified in message in step 1. For FDD, the IE "Secondary scrambling code" is set to "2". For TDD the code combination assigned is different ftrom that assigned in stage 1.
3	→		RADIO BEARER RELEASE COMPLETE	The UE ignores the RADIO BEARER RELEASE message in step 2 and release radio bearer according to the RADIO BEARER RELEASE message in step 1.

Specific Message Contents

RADIO BEARER RELEASE (Step 1) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

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

RADIO BEARER RELEASE (Step 1) (TDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

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

RADIO BEARER RELEASE (Step 2) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

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

RADIO BEARER RELEASE (Step 2) (TDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.3.16.5 Test requirement

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

8.2.3.17 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.3.17.1 Definition

8.2.3.17.2 Conformance requirement

If the UE receives a RADIO BEARER RELEASE message before the UE releases the radio bearer according to the previous RADIO BEARER RELEASE message, the UE shall ignore the new RADIO BEARER RELEASE message and releases the radio bearers according to the previous RADIO BEARER RELEASE message. Finally, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.3, clause 8.6.3.11.

8.2.3.17.3 Test purpose

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

8.2.3.17.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE releases the radio access bearer, the UE ignores the second RADIO BEARER RELEASE message and releases the radio bearers according to the previous RADIO BEARER RELEASE message received. Finally, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	For FDD, the SS sets its UL scrambling code to "1".
2	←		RADIO BEARER RELEASE	Sent before the expiry stated in IE "Activation Time" of RADIO BEARER RELEASE message in step 1. For TDD the IE "Secondary scrambling code" is set to "2". For TDD, the code combination assigned is different from that assigned in stage 1.
3	→		RADIO BEARER RELEASE COMPLETE	The UE ignores the RADIO BEARER RELEASE message in step 2 and release radio bearers according to the RADIO BEARER RELEASE message in step 1.

Specific Message Contents

RADIO BEARER RELEASE (Step 1) (FDD)

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

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

RADIO BEARER RELEASE (Step 1) (TDD)

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

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

RADIO BEARER RELEASE (Step 2) (FDD)

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

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

RADIO BEARER RELEASE (Step 2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.3.17.5 Test requirement

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

8.2.3.18 Radio Bearer Release from CELL_DCH to CELL_PCH: Success

8.2.3.18.1 Definition

8.2.3.18.2 Conformance requirement

The UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC before it transits from CELL_DCH to CELL_PCH when UE receives a RADIO BEARER RELEASE message. And then, the UE shall release radio access bearers according to the RADIO BEARER RELEASE message.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.3.18.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE before entering CELL_PCH state after it received a RADIO BEARER RELEASE message and released its radio access bearers.

8.2.3.18.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message. The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC and enters into CELL_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2	→		RADIO BEARER RELEASE COMPLETE	The UE sends this message before it completes state transition.
2a			Void	SS waits 5 seconds to allow the UE to read system information before the next step.
3	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

RADIO BEARER RELEASE (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

8.2.3.18.5 Test requirement

After step 1 the UE transmits a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC.

8.2.3.19 Radio Bearer Release from CELL_DCH to URA_PCH: Success

8.2.3.19.1 Definition

8.2.3.19.2 Conformance requirement

The UE shall transmit a RADIO BEARER RELEASE COMPLETE message before it transits from CELL_DCH to URA_PCH when UE receives a RADIO BEARER RELEASE message. And then, the UE shall release radio access bearers according to the RADIO BEARER RELEASE message.

Reference

3GPP TS 25.331 clause 8.2.2.

8.2.3.19.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE before entering URA_PCH state after it received a RADIO BEARER RELEASE message and released its radio bearers.

8.2.3.19.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RELEASE message. The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC and enters into URA_PCH state. SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RELEASE	
2	→		RADIO BEARER RELEASE COMPLETE	The UE sends this message before it completes state transition.
2a			Void	SS waits 5 seconds to allow the UE to read system information before the next step.
3	←→		CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	100

RADIO BEARER RELEASE (Step 1) (TDD)

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links	
- Primary CCPCH info	
-Cell parameters ID	4

8.2.3.19.5 Test requirement

After step 1 the UE transmits a RADIO BEARER RELEASE COMPLETE message to the UE on uplink DCCH using AM RLC.

8.2.3.20 Radio Bearer Release for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success

8.2.3.20.1 Definition

8.2.3.20.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304.

1> if the received reconfiguration message included the IE "Primary CPICH info"), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" :

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.20.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the RADIO BEARER RELEASE message.
2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.3.20.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

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

Test Procedure

Table 8.2.3.20

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.3.20 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.20. The SS switches its downlink transmission power settings to columns "T1" and then transmits MEASUREMENT CONTROL message in order for the UE to know information of cell 6. The SS transmits a RADIO BEARER RELEASE message including new frequency information to the UE. The UE releases the radio access bearer and moves into cell 6. The UE transmits CELL UPDATE message with IE "Cell update cause" set to "cell reselection". SS then transmit CELL UDPATE CONFIRM with IE "New C_RNTI". The UE shall respond with an UTRAN MOBILITY INFORMATION CONFIRM message, and then transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. The SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.20.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.20.
3	←		MEASUREMENT CONTROL	The SS specifies inter-frequency measurement for cell 6.
4	←		RADIO BEARER RELEASE	Including new frequency information.
5	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6	←		CELL UPDATE CONFIRM	Including the IE" New C-RNTI"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		RADIO BEARER RELEASE COMPLETE	
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	350
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- COICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 s

- Reporting cell status - CHOICH reported cell - Maximum number of reported cells - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency	 Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 -85dbm 0.0

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" or "Non speech to CELL_FACH from CELL_DCH in CS" or "Speech to CELL_FACH from CELL_DCH in CS" in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	 Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

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

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.3.20.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL_FACH state of cell 6.

8.2.3.21 Radio Bearer Release from CELL_DCH to CELL_PCH (Frequency band modification): Success

8.2.3.21.1 Definition

8.2.3.21.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info, and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info:

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

2> when the cell update procedure completed successfully:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.21.3 Test purpose

1. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

2. To confirm that the UE transits from CELL_DCH to CELL_PCH according to the RADIO BEARER RELEASE message.

3. To confirm that the UE releases the radio access bearer and selects a common physical channel in a different frequency indicated by SS.

8.2.3.21.4 Method of test

Initial Condition

System Simulator: 2 cells–Cells 1 is active and cell 6 is inactive.

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

Test Procedure

Table 8.2.3.21

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.3.21 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.21. The SS switches its downlink transmission power settings to columns "T1" transmits MEASUREMENT CONTROL message in order for the UE to know information of cell 6. The SS then transmits a RADIO BEARER RELEASE message including new frequency information. The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC and enters CELL_PCH state of cell 6, then the UE shall transmit CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection", to complete the procedure. The SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.21.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.21.
3	←		MEASUREMENT CONTROL	The SS specifies inter-frequency measurement for cell 6.
4	←		RADIO BEARER RELEASE	Including new frequency information.
5	→		RADIO BEARER RELEASE COMPLETE	The UE sends this message before it completes state transition. UE sends this message in cell 1.
6	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	350
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- COICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 s

- Reporting cell status - CHOICH reported cell - Maximum number of reported cells - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency	 Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 -85dbm 0.0

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" or "Non speech to CELL_FACH from CELL_DCH in CS" or "Speech to CELL_FACH from CELL_DCH in CS" in [9] TS 34.108 clause 9, with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 6)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

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

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

8.2.3.21.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL_PCH state in cell 6.

8.2.4 Transport channel reconfiguration

8.2.4.1 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Success with no transport channel type switching

8.2.4.1.1 Definition

8.2.4.1.2 Conformance requirement

The UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC after it correctly reconfigures the radio bearers according to the TRANSPORT CHANNEL RECONFIGURATION message, which specifies a hard handover by changing the scrambling code for the DPCH.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.1.3 Test purpose

To confirm that the UE reconfigures the channel configuration according to a TRANSPORT CHANNEL RECONFIGURATION message, which also specifies a hard handover by changing the scrambling code for the DPCH.

8.2.4.1.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new configuration parameters. The UE shall reconfigure the new configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3	←		TRANSPORT CHANNEL RECONFIGURATION	UL scrambling code is modified.
4			Void	
5	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Uplink DPCH info - Scrambling code number Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	 Different value from previous value Maintain

TRANSPORT CHANNEL RECONFIGURATION (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in Annex A, with the following exceptions:

Information Element	Value/remark
- Uplink DPCH timeslots and codes - First timeslot code list Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing Indicator	 A different code combination to that used previously. Maintain

8.2.4.1.5 Test requirement

After step 3 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.1a Transport channel reconfiguration (Transmission Rate Modification with Timing Maintained) from CELL_DCH to CELL_DCH of the same cell: Success

8.2.4.1a.1 Definition

8.2.4.1a.2 Conformance requirement

The UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC after it correctly reconfigures the radio bearers according to the TRANSPORT CHANNEL RECONFIGURATION message, which specifies a hard handover to modify the transmission rate by (1) changing physical channel information and (2) changing either TFCS and TFS or TFCS only.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.1a.3 Test purpose

To confirm that the UE reconfigures the physical channel and transport channel configuration according to a TRANSPORT CHANNEL RECONFIGURATION message, which specifies a hard handover by changing physical channel information and either TFCS and TFS or TFCS only.

8.2.4.1a.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Note : Transmission rate shall be set to the maximum rate for the UE during the radio bearer establishment procedure.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE to modify the transmission rate which includes a new physical channel information and the TFCS is reconfigured to restrict the use of TFCI. The UE shall reconfigure the new configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. Next the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE to modify the transmission rate which includes new physical channel information and new TFCS and TFS. The UE shall reconfigure the new configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	
2	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3	←		TRANSPORT CHANNEL RECONFIGURATION	
4	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

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

Information Element	Value/remark
UL Transport channel information for all transport channels	Not Present
Added or Reconfigured UL TrCH information	Not Present
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	Normal
- TFCI Field 1 Information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.10 Parameter Set which is used in RADIO BEARER SETUP message in initial procedure.
- CTFC information	
- CTFC	This CTFC value is set as defined value to be restricted from the TFCS defined in RADIO BEARER SETUP message and repeated for TFC numbers.
- Power offset information	Not Present
Added or Reconfigured DL TrCH information	Not Present

8.2.4.1a.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

After step 3 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.2 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)

8.2.4.2.1 Definition

8.2.4.2.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.2.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the received TRANSPORT CHANNEL RECONFIGURATION message specifies unsupported configuration parameters.

8.2.4.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes configuration parameters unsupported by the UE. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the event "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONGURATION	Including configuration unsupported by the UE
2	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the settings used by the transport channels.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.4.2.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "configuration unsupported" in IE "failure cause".

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

8.2.4.3.1 Definition

8.2.4.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel according to the received TRANSPORT CHANNEL RECONFIGURATION message and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.3.3 Test purpose

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

8.2.4.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE, which includes new configuration parameters but the SS does not configure the new physical channel specified in this message and keep its old configuration. Therefore, the UE cannot synchronise with the SS on the new physical channel and shall revert to the old configuration after T312 expires. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	Specifies a change in the TFS of the dedicated transport channel used.
2				The SS does not reconfigure the new configuration.
3	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE reverts to the old configuration and transmits this message.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

Use the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A.

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.4.3.5 Test requirement

After step 2 the UE shall revert to the old configuration and transmit a TRANPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, and it shall set the value "physical channel failure" in IE "failure cause".

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

8.2.4.4.1 Definition

8.2.4.4.2 Conformance requirement

The UE shall perform a cell update when physical channel failure and reversion failure occur. After the UE completes cell update procedure, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which set IE "failure cause" to "physical channel failure".

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.4.3 Test purpose

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

8.2.4.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state.The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE. The message specifies a new configuration but the SS does not reconfigure the new channel specified in this message and release the old configuration. The UE cannot synchronise with SS before T312 expires and shall attempt to revert to the old configuration. The UE cannot revert to the old configuration and then transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Expected sequence

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

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

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

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONGURATION FAILURE (Step 7)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

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

8.2.4.4.5 Test requirement

After step 2 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

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

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

8.2.4.5 Transport Channel Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.5.1 Definition

8.2.4.5.2 Conformance requirement

If the UE receives a TRANSPORT CHANNEL RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than TRANSPORT CHANNEL RECONFIGURATION message, it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.4, clause 8.6.3.11.

8.2.4.5.3 Test purpose

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

8.2.4.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the TRANSPORT CHANNEL RECONFIGURATION message, the UE shall keep the configuration as if it had not received the TRANSPORT CHANNEL RECONFIGURATION message and shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the TRANSPORT CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical configuration parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	Including IE "Uplink DPCH info" for FDD mode
2	←		TRANSPORT CHANNEL RECONFIGURATION	Sent before the time specified in IE "Activation Time Info" of message in step 1 has elapsed.
3	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration due to the reception of TRANSPORT CHANNEL RECONFIGURATION message.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type indicated as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	2

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type indicated as as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH timeslots and codes	
- First timeslot code list	A different code combination that used previously.

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.4.5.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the new coniguration specified in step 1.

8.2.4.6 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.4.6.1 Definition

8.2.4.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid TRANSPORT CHANNEL RECONFIGURATION message which does not include any IEs except IE "Message Type". Then it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message with the value "protocol error" set in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon reception of a TRANSPORT CHANNEL RECONFIGURATION message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.6.3 Test purpose

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

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

8.2.4.6.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits an invalid TRANSPORT CHANNEL RECONFIGURATION message to the UE, which does not include any IEs except IE "Message Type". The UE shall keep the old configuration and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying "protocol error" in IE "failure cause" and also indicating "ASN.1 violation or encoding error" in IE "Protocol error cause". SS transmits a TRANSPORT CHANNEL RECONFIGURATION message including some IEs set to give an invalid configuration. The UE keeps current configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	See specific message content.
2	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change its configuration.
3	←		TRANSPORT CHANNEL RECONFIGURATION	This message includes IE set to give an invalid configuration
4				The UE does not change its configuration
5	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "invalid configuration

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
All IEs	Not Present

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (FDD)

Use the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS"as found in Annex A with the following exceptions.

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

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (TDD)

Use the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS"as found in Annex A with the following exceptions:

Information Element	Value/remark
-PRACH TFCS	Present

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 5)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.4.6.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The message shall specify "protocol error" in IE "failure cause" and set value "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

8.2.4.7 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success

8.2.4.7.1 Definition

8.2.4.7.2 Conformance requirement

The UE shall correctly reconfigure the channels according to TRANSPORT CHANNEL RECONFIGURATION message and transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.7.3 Test purpose

To confirm that the UE reconfigures the channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.7.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE and the UE performs a state transition from CELL_DCH to CELL_FACH in the same cell. The UE then reconfigures the new channels according to this message and system information messages. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exception:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

8.2.4.7.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the common physical channel.

8.2.4.8 Void

8.2.4.9 Transport channel reconfiguration from CELL_DCH to CELL_FACH: Success (Cell re-selection)

8.2.4.9.1 Definition

8.2.4.9.2 Conformance requirement

The UE shall initiate a cell update procedure when the UE performs cell reselection during a transport channel reconfiguration procedure. After the UE completes a cell update procedure, the UE shall continue to perform the transport channel reconfiguration procedure and correctly reconfigure the channel.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.9.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after it completes a cell update procedure.

8.2.4.9.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes IE "Primary CPICH info" and no dedicated physical channel information to transit from CELL_DCH to CELL_FACH, to the UE. As the UE cannot detect the specified cell, the UE shall initiate a cell re-selection procedure and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3	←		TRANSPORT CHANNEL RECONGURATION	This message include IE "Primary CPICH info".
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 4

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.4.9.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.10 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Success

8.2.4.10.1 Definition

8.2.4.10.2 Conformance requirement

The UE shall correctly reconfigure the channels according to a TRANSPORT CHANNEL RECONFIGURATION message, which trigger a state transition from CELL_FACH to CELL_DCH in the same cell.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.10.3 Test purpose

To confirm that the UE reconfigures a new channel using dedicated physical channel according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.10.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes IE "Uplink DPCH info" and IE "Downlink DPCH info" leading to a state transition from CELL_FACH to CELL_DCH in the same cell, to the UE. The UE shall reconfigure the new channel according to this message. Finally, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	Includes both IE "Uplink DPCH Info" and IE "Downlink DPCH Info" in the message.
2				Reconfiguration of transport channel
3	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

8.2.4.10.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT RECONFIGURATION COMPLETE message on the newly configured DPCH.

8.2.4.11 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.4.11.1 Definition

8.2.4.11.2 Conformance requirement

The UE shall keep its old configuration when the UE receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters and transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.11.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC when it receives a TRANSPORT CHANNEL RECONFIGURATION message which includes unsupported configuration parameters.

8.2.4.11.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes configuration parameters unsupported by the UE, to the UE. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONGURATION	The message includes configuration unsupported by the UE
2	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change its configuration.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (FDD)

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

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

TRANSPORT CHANNEL RECONFIGURATION (TDD)

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

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

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.4.11.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The UE shall set "configuration unsupported" in IE "failure cause" of the message.

8.2.4.12 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old channel)

8.2.4.12.1 Definition

8.2.4.12.2 Conformance requirement

The UE shall revert to the old configuration when the UE has failed to reconfigure the new transport channel requested and detects the same serving cell only. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message to UTRAN.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.12.3 Test purpose

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

8.2.4.12.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes the new transport channel parameters, to the UE. However, SS keeps its current physical channel configuration.. Hence, the UE shall experience a failure in the reconfiguration process. After T312 expires, the UE shall

revert to the old channel configuration. Then the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, stating the reason "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONGURATION	Message includes IE "Downlink DPCH Info" and IE "Uplink DPCH Info"
2				SS does not reconfigure the channel causing the UE to detect a physical channel failure.
3	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expires the UE shall revert to the old configuration and transmit this message.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.4.12.5 Test requirement

After step 2 the UE shall transmit a TRANPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE "failure cause".

8.2.4.13 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.4.13.1 Definition

8.2.4.13.2 Conformance requirement

The UE shall initiate a cell update procedure when it selects another cell, following a physical channel failure in the transport channel reconfiguration procedure. After the UE completes the cell update procedure, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.13.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message after it completes a cell update procedure, when the UE cannot reconfigure the new channel before timer T312 expires.

8.2.4.13.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.4.13

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

Table 8.2.4.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE in cell 1. The message includes a new configurationparameters. However, the SS does not reconfigure the specified configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.13. As a result, the UE cannot synchronise with the SS on the new DPCH before T312 expires. The UE initiates the cell re-selection procedure transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	
2				The SS does not reconfigure L1 and transport channel in accordance with the settings in the message, and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.13.
3			Void	
4				The UE shall find cell 2, camp onto it,
5	→		CELL UPDATE	This message include the value "cell reselection" set in IE "Cell update cause".
6	←		CELL UPDATE CONFIRM	See message content.
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Assigned previously in cell 1
- S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

TRANSPORT CHANNELRECONGURATION FAILURE (Step 8)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

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

8.2.4.13.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 6 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 7 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.4.14 Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.4.14.1 Definition

8.2.4.14.2 Conformance requirement

If the UE receives a TRANSPORT CHANNEL RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than TRANSPORT CHANNEL RECONFIGURATION message, it shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.4, clause 8.6.3.11.

8.2.4.14.3 Test purpose

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

8.2.4.14.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the TRANSPORT CHANNEL RECONFIGURATION message, the UE shall keep its current configuration as if it had not received the TRANSPORT CHANNEL RECONFIGURATION message and shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the TRANSPORT CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	←		TRANSPORT CHANNEL RECONFIGURATION	Sent before the elapse of the Activation time specified in step 1.
3	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not reconfigure according to the TRANSPORT CHANNEL RECONFIGURATION message.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (FDD)

For TRANSPORT CHANNEL RECONFIGURATION in step 2, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

For TRANSPORT CHANNEL RECONFIGURATION in step 2, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.4.14.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message.

8.2.4.15 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.4.15.1 Definition

8.2.4.15.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid TRANSPORT CHANNEL RECONFIGURATION message which does not includes any IEs except IE "Message Type". The UE shall then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message, specifying "protocol error" in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon the reception of a TRANSPORT CHANNEL RECONFIGURATION message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.15.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGRATION FAILURE message on the DCCH using AM RLC, if it receives an invalid TRANSPORT CHANNEL RECONFIGURATION message which does not include any IEs except IE "Message Type".

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

8.2.4.15.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits an invalid TRANSPORT CHANNEL RECONFIGURATION message, which does not include any IEs except IE "Message Type", to the UE. The UE shall keep the old configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. This message shall contain the value "protocol error" in IE "failure cause" and also "ASN.1 violation or

encoding error" in IE "Protocol error cause". SS transmits TRANSPORT CHANNEL RECONFIGURATION message including some IEs set to give an invalid configuration. The UE keeps its current configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	See specific message content.
2	→		TRANSPORT CHANNEL RECONFIGRATION FAILURE	The UE does not change its configuration.
3	←		TRANSPORT CHANNEL RECONFIGURATION	This message includes IEs which is set to give an invalid configuration
4				The UE does not change its configuration.
5	→		TRANSPORT CHANNEL RECONFIGRATION FAILURE	The IE "failure cause" shall be set to "invalid configuration

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
All IEs	Not Present

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (FDD)

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

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

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (TDD)

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

Information Element	Value/remark
-PRACH TFCS	Present

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 5)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.4.15.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The content of the message shall specify "protocol error" in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

8.2.4.16 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success with no transport channel type switching

8.2.4.16.1 Definition

8.2.4.16.2 Conformance requirement

The UE shall remain in CELL_FACH state in another cell and transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC after transition from CELL_FACH in the current cell to CELL_FACH in another cell as requested in the received TRANSPORT CHANNEL RECONFIGURATION message.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.16.3 Test purpose

To confirm that the UE transits from CELL_FACH in the current cell to CELL_FACH in another cell according to a TRANSPORT CHANNEL RECONFIGURATION message received from the SS.

8.2.4.16.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.4.16

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

Table 8.2.4.16 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes the parameters that invoke the UE to transit from CELL_FACH in the current cell to CELL_FACH in cell 2, to the UE. Then the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.16. The UE moves to cell 2 and configures the new transport channels and the common physical channel according to the system information messages and transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.16.
3	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

TRANSPORT CHANNEL RECONFIGURATION (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 4

8.2.4.16.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on DCCH using AM RLC in cell 2.

8.2.4.17 Transport channel reconfiguration from CELL_FACH to CELL_FACH: Success (Cell re-selection)

8.2.4.17.1 Definition

8.2.4.17.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE performs cell reselection during a transport channel reconfiguration procedure. After the UE complete cell update procedure, the UE shall continue to perform the transport channel reconfiguration procedure and correctly reconfigure the channel.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.17.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after UE completes a cell update procedure indicated by a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.17.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.4.17

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

Table 8.2.4.17 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. On transmitting a TRANSPORT CHANNEL RECONFIGURATION message, which does not include the IE "Primary CPICH info", the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.17. The UE shall initiate the cell reselection procedure. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	This message does not include IE "Primary CPICH info"
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.17.
3			Void	
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		TRANSPORT CHANNELRECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 Not Present

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 Not present

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD.

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.4.17.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.18 Transport Channel Reconfiguration from CELL_DCH to CELL_DCH: Success (Subsequently received)

8.2.4.18.1 Definition

8.2.4.18.2 Conformance requirement

If the UE receives a TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the radio bearer according to the previous TRANSPORT CHANNEL RECONFIGURATION message, the UE shall ignore the new TRANSPORT CHANNEL RECONFIGURATION message and configure according to the first TRANSPORT CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.4, clause 8.6.3.11.

8.2.4.18.3 Test purpose

To confirm that if the UE receives a TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the radio bearer according to the previous TRANSPORT CHANNEL RECONFIGURATION message it ignores the second TRANSPORT CHANNEL RECONFIGURATION message and configures according to the previous TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.18.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in CELL_DCH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous TRANSPORT CHANNEL RECONFIGURATION message elapses, the UE ignores the new TRANSPORT CHANNEL RECONFIGURATION message and configures according to the previous TRANSPORT CHANNEL RECONFIGURATION message. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	For FDD, the "Secondary scrambling code is set to "1" and for TDD , the code combination is assigned by SS.
2	←		TRANSPORT CHANNEL RECONFIGURATION	SS send this message before the expiry of "activation time" specified in TRANSPORT CHANNEL SETUP message of step 1. For FDD the IE "Secondary scrambling code" is set to "2". For TDD the code combination assigned is different from that assigned in stage 1.
3	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE ignores the TRANSPORT CHANNEL RECONFIGURATION message in step 2 and configures according to the TRANSPORT CHANNEL RECONFIGURATION message in step 1.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.4.18.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.19 Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.4.19.1 Definition

8.2.4.19.2 Conformance requirement

If the UE receives a TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the radio bearer according to the previous TRANSPORT CHANNEL RECONFIGURATION message, the UE shall ignore the new TRANSPORT CHANNEL RECONFIGURATION message and configure according to the first TRANSPORT CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.4, clause 8.6.3.11.

8.2.4.19.3 Test purpose

To confirm that if the UE receives a TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the radio bearer according to the previous TRANSPORT CHANNEL RECONFIGURATION message it ignores the second TRANSPORT CHANNEL RECONFIGURATION message and configures according to the previous TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.19.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous TRANSPORT CHANNEL RECONFIGURATION message elapses, the UE ignores the new TRANSPORT CHANNEL RECONFIGURATION message and configures according to the previous TRANSPORT CHANNEL RECONFIGURATION message. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	For FDD, the "Secondary scrambling code is set to "1" and for TDD, the code combination is assigned by SS.
2	←		TRANSPORT CHANNEL RECONFIGURATION	Sent before the elapse of the activation time specified in step 1. For FDD the IE "Secondary scrambling code" is set to "2". For TDD the code combination assigned is different that assigned in stage 1.
3	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE ignores the TRANSPORT CHANNEL RECONFIGURATION message in step 2 and configures according to the TRANSPORT CHANNEL RECONFIGURATION message in step 1.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

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

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

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

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

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (FDD)

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

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

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.4.19.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.20 Transport Channel Reconfiguration from CELL_DCH to CELL_PCH: Success

8.2.4.20.1 Definition

8.2.4.20.2 Conformance requirement

The UE shall transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invoke the UE to transits from CELL_DCH to CELL_PCH. And then, the UE shall enter CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.20.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters CELL_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to CELL_PCH.

8.2.4.20.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to CELL_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	
2	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient Downlink information for each radio link - Primary CPICH info - Primary scrambling code	3 100

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient - Primary CCPCH info - Cell parameters ID	3 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

Information Element	Value/remark
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.4.20.5 Test requirement

After step 1 the UE shall transmit TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE"Cell update cause" set to "paging response".

8.2.4.21 Transport Channel Reconfiguration from CELL_DCH to URA_PCH: Success

8.2.4.21.1 Definition

8.2.4.21.2 Conformance requirement

The UE shall transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invoke the UE to transits from CELL_DCH to URA_PCH. And then, the UE shall enter URA_PCH state.

Reference

3GPP TS 25.331 clause 8.2.4.

8.2.4.21.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters URA_PCH stateafter it received a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH.

8.2.4.21.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	
2	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		Cell UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient Downlink information for each radio link - Primary CPICH info - Primary scrambling code	3 100

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex with following exceptions:

Information Element	Value/remark
RRC State Indicator UTRAN DRX cycle length coefficient - Primary CCPCH info - Cell parameters ID	URA_PCH 3 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	**Value/remark**
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.4.21.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.4.22 Transport Channel Reconfiguration from CELL_FACH to CELL_PCH: Success

8.2.4.22.1 Definition

8.2.4.22.2 Conformance requirement

The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL_FACH to CELL_PCH. And then, the UE shall enter CELL_PCH state

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.22.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters CELL_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_FACH to CELL_PCH state.

8.2.4.22.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_FACH to CELL_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell Update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		←	PAGING TYPE 1	The SS transmits this message included a matched identity.
5		→	CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message contents of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~	
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Previously assigned SRNC identity~~
~~- S-RNTI~~	~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list	
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Previously assigned SRNC identity
- S-RNTI	Previously assigned S-RNTI

CELL UPDATE (step 5)

The contents of CELL UPDATE is identical to "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.4.22.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall transmit CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

8.2.4.23 Transport Channel Reconfiguration from CELL_FACH to URA_PCH: Success

8.2.4.23.1 Definition

8.2.4.23.2 Conformance requirement

The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to and transits from CELL_FACH to URA_PCH. And then, the UE shall enter URA_PCH state.

Reference

3GPP TS 25.331 clause 8.2.4

8.2.4.23.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters URA_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL_FACH to CELL_PCH.

8.2.4.23.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL_FACH to CELL_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		TRANSPORT CHANNEL RECONFIGURATION	
2	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message contents of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	**Value/remark**
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

CELL UPDATE (step 5)

The contents of CELL UPDATE is identical to "Contents of CELL UPDATE message" as found in Annex A with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"paging response"

8.2.4.23.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.4.24 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Success with uplink transmission rate modification

8.2.4.24.1 Definition

8.2.4.24.2 Conformance requirement

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message:

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.4.24.3 Test purpose

To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after reconfigure its available uplink TFC according to a TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.24.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state of cell 1. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE to modify the transmission rate. This message includes a new uplink transport channel information in order to restricts available uplink TFC within assigned uplink TFCS. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after reconfiguring its transport channel parameters. Next the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE which includes a new uplink transport channel information in order to reconfigure uplink TFCS. The UE transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after reconfiguring its transport channel parameters according to the TRANSPORT CHANNEL RECONFIGURATION message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state of cell 1.
2	←		TRANSPORT CHANNEL RECONFIGURATION	This message includes the IE"TFC subset" and don't include UL/DL physical channel information.
3	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
4	←		TRANSPORT CHANNEL RECONFIGURATION	
5	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
UL Transport channel information for all transport channels	
- CHOICE mode	FDD
- TFC subset	
- CHOICE Subset representation	Allowed transport format combination list
- Allowed transport format combination	Indicate TFCs which are a part of the TFCS defined in this message to restrict uplink allowed TFC subset.
- UL DCH TFCS	Same contents as a RADIO BEARER SETUP message used in initial procedure.
CHOICE channel requirement	Not present
Downlink information per radio link list	Not present

TRANSPORT CHANNEL RECONFIGURATION (Step 4)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
UL Transport channel information for all transport channels	
- CHOICE mode	FDD
- TFC subset	
- UL DCH TFCS	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	Same contents as a RADIO BEARER SETUP message used in initial procedure
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
- Number of FBI bit	Not Present
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
Downlink information per radio link list	Not present

8.2.4.24.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.4.25 Transport channel reconfiguration from CELL_FACH to CELL_DCH (Frequency band modification): Success

8.2.4.25.1 Definition

8.2.4.25.2 Conformance requirement

If the UE receives:

-a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

1> remove any C-RNTI from MAC;

1> clear the C_RNTI.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.4.25.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_DCH according to TRANSPORT CHANNEL RECONFIGURATION message.

2. To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION message on the uplink DCCH using AM RLC on dedicated physical channel in a different frequency.

8.2.4.25.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

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

Test Procedure

Table 8.2.4.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-55	Off	-55

Table 8.2.4.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of ce11 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.25. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes new frequency information leading to a state transition from CELL_FACH to CELL_DCH in cell 6. The UE shall reconfigure transport channel parameter and frequency band according to this message. Finally, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.25.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.25.
3	←		TRANSPORT CHANNEL RECONFIGURATION	
4				Reconfiguration of transport channel.
5	→		TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message in cell 6.
6	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	350

8.2.4.25.5 Test requirement

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL_DCH state of cell 6.

8.2.5 Transport format combination control

8.2.5.1 Transport format combination control in CELL_DCH: restriction

8.2.5.1.1 Definition

8.2.5.1.2 Conformance requirement

The UE shall change the subset of the allowed uplink transport format combination when the UE receives TRANSPORT FORMAT COMBINATION CONTROL message.

Reference

3GPP TS 25.331 clause 8.2.5.

8.2.5.1.3 Test purpose

To confirm that the UE does not transmit any data on the DCH for the user data radio bearer on the uplink, following the reception of TRANSPORT FORMAT COMBINATION CONTROL message sent from the SS, which is set to the value in IE "Restricted TrCH information".

8.2.5.1.4 Method of test

Initial Condition

System Simulator: 1 cell

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

PS case:
For the PS case the reference radio bearer configuration specified in TS 34.108, clause 6.10.3.4.1.26 (Interactive or background / UL:64 DL:64 kbps / PS RAB) is used.

RLC is configured for no discard.

CS case:

For the CS case the reference radio bearer configuration specified in TS 34.108, clause 6.10.2.4.1.13 (UL:64/DL:64 kbps CS RAB, 20 ms TTI) is used.

RLC is configured for no segmentation and 'Timer based discard without explicit signalling' with Timer_discard value set to 100ms.

Test Procedure

a. The UE is in CELL_DCH state.

b. The SS close the UE test loop.

c. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message using AM_RLC on the DCCH, which indicates that only TF0 is allowed on the uplink for DCH transport channel on the DTCH.

d. The SS transmits data to the UE.

e. The SS waits to check that no data is returned in uplink.

f. The SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message using AM_RLC on the DCCH, which enables all transport formats on the uplink for DCH transport channel on the DTCH.

g. For the CS case the SS send data (the previous data should have been discarded by the TM RLC entity)

h. The SS checks that the sent data is returned from the UE.

Expected sequence

CS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
2	<--		PAGING TYPE 1 (PCCH)	Paging (CS domain, TMSI)
3	-->		RRC CONNECTION REQUEST (CCCH)	RRC
4	<--		RRC CONNECTION SETUP (CCCH)	RRC
5	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6	-->		PAGING RESPONSE (DCCH)	RR

PS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
2	<--		PAGING TYPE 1 (PCCH)	Paging (PS domain, P-TMSI)
3	-->		RRC CONNECTION REQUEST (CCCH)	RRC
4	<--		RRC CONNECTION SETUP (CCCH)	RRC
5	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6a	-->		SERVICE REQUEST (DCCH)	GMM
6b	<--		SECURITY MODE COMMAND	RRC see note 1
6c	-->		SECURITY MODE COMPLETE	RRC see note 1
NOTE	Step 6b and Step 6c are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.			

Step	Direction		Message	Comments
	UE	SS		
1			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.
2	<--		ACTIVATE RB TEST MODE (DCCH)	TC
3	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
4	<--		RADIO BEARER SETUP (DCCH)	RRC
5	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
6	<--		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test.
7	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
8	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to TF0 (no data)
9	<--		PS case: 1 RLC SDU CS case: 2xRLC SDU	For the PS case one RLC SDU of size 312 bits is sent (payload size minus size of 7 bit length indicator and expansion bit). For the CS case two RLC SDUs of size 640 bits are sent.
10				SS waits 5 seconds to secure that no data is returned by the UE
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC All transport format combinations are enabled
12			CS case: 2xRLC SDU	For the CS case two RLC SDUs of size 640 bits are sent.
13	-->		PS case: 1 RLC SDU CS case: 2xRLC SDU	UE returns data
14	<--		OPEN UE TEST LOOP (DCCH)	TC
15	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
16			RB RELEASE (DCCH)	RRC Optional step
17	<--		DEACTIVATE RB TEST MODE (DCCH)	TC Optional step
18	-->		DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step

Specific Message Contents

TRANSPORT FORMAT COMBINATION CONTROL (step 8)

Use the same message sub-type titled "TRANSPORT FORMAT COMBINATION CONTROL" in Annex A with following exceptions:

Information Element	Value/remark
TrCH information elements -DPCH/PUSCH TFCS uplink in uplink - Restricted TrCH information - Uplink transport channel type - Restricted UL TrCH identity - Allowed TFI	 DCH 1 0

TRANSPORT FORMAT COMBINATION CONTROL (step 11)

Use the same message sub-type titled "TRANSPORT FORMAT COMBINATION CONTROL" in Annex A with following exceptions:

Information Element	Value/remark
TrCH information elements -DPCH/PUSCH TFCS uplink in uplink - Restricted TrCH information - Uplink transport channel type - Restricted UL TrCH identity - Full transport format combination set	 DCH 1 Null

8.2.5.1.5 Test requirement

1. At step 10 no data shall be sent by the UE.
2. At step 13:
   - For PS case: SS shall receive one RLC SDU from the UE
   - For CS case: SS shall receive two RLC SDUs from the UE

8.2.5.2 Transport format combination control in CELL_DCH: release a restriction

Implicitely tested in test case 8.2.5.1.

8.2.5.3 Void

8.2.5.4 Transport format combination control in CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.5.4.1 Definition

8.2.5.4.2 Conformance requirement

The UE shall keep its current configuration when it receives an invalid TRANSPORT FORMAT COMBINATION CONTROL message. It shall then transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message, indicating "protocol error" in IE "failure cause" and "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon the reception of a TRANSPORT FORMAT COMBINATION CONTROL message, which includes some IEs set to give an invalid configuration, and then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.5.

8.2.5.4.3 Test purpose

To confirm after the UE receives an invalid TRANSPORT FORMAT COMBINATION CONTROL message, it transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and keeps the TFC subset as if no TRANSPORT FORMAT COMBINATION CONTROL message has been received.

To confirm that the UE transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC if it receives a TRANSPORT FORMAT COMBINATION CONTROL message including some IEs set to give an invalid configuration.

8.2.5.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits an invalid TRANSPORT FORMAT COMBINATION CONTROL message which does not include any IEs except IE "Message Type". The UE shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message which is set to "ASN.1 violation or encoding error" in IE "Protocol error cause". SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message including some IEs set to get an invalid configuration. The UE keeps its current configuration and transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in CELL_DCH state with a DCH for a signalling radio bearer and a DCH for a radio access bearer.
2	←		TRANSPORT FORMAT COMBINATION CONTROL	See specific message content.
3	→		TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall not change its configuration
4	←		TRANSPORT FORMAT COMBINATION CONTROL	This message includes IEs set to give an invalid configuration.
5	→		TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall not change its configuration

Specific Message Contents

TRANSPORT FORMAT COMBINATION CONTROL (Step 2)

Information Element	Value/remark
All IEs	Not Present

TRANSPORT FORMAT COMBINATION CONTROL FAILURE (Step 3)

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CONTROL FAILURE"
RRC transaction identitifer	Checked to see if it is set to identical value of the same IE in the downlink TRANSPORT FORMAT COMBINATION CONTROL message.
Integrity check info	The presence if this IE is dependent on IXIT statements in TS 34.123-2. if integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Failure cause	"protocol error"
Protocol error information	
-Protocol error cause	ASN.1 violation or encoding error

TRANSPORT FORMAT COMBINATION CONTROL (Step 5)

Use the same message sub-type titled "TRANSPORT FORMAT COMBINATION CONTROL" in Annex A with following exceptions:

Information Element	Value/remark
TrCH information elements	
-DPCH/PUSCH TFCS uplink in uplink	
- Restricted TrCH information	
- Uplink transport channel type	DCH
- Restricted UL TrCH identity	15 (for RACH transport channel identity)
- Allowed TFI	0

TRANSPORT FORMAT COMBINATION CONTROL FAILURE (Step 6)

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CONTROL FAILURE"
RRC transaction identitifer	Checked to see if it is set to identical value of the same IE in the downlink TRANSPORT FORMAT COMBINATION CONTROL message.
Integrity check info	The presence if this IE is dependent on IXIT statements in TS 34.123-2. if integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Failure cause	Invalid configuration

8.2.5.4.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC. The UE shall set the value "protocol error" in IE "Failure cause" and the value "ASN.1 violation or encoding error" in IE "protocol error information".

After step 4 the UE shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

8.2.6 Physical channel reconfiguration

8.2.6.1 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Success

8.2.6.1.1 Definition

8.2.6.1.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message, which indicates a hard handover procedure and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.1.3 Test purpose

To confirm that the UE reconfigures the physical channel parameters according to a PHYSICAL CHANNEL RECONFIGURATION message received from the SS. After the reconfiguration, the UE shall be able to communicate with the SS on the new physical channel.

8.2.6.1.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes a new UL scrambling code. The UE shall reconfigure the physical channel at the activation time specified in this message and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH AM RLC after its transition.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	Including new UL scrambling code .
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

8.2.6.1.5 Test requirement

After step 1 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

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

8.2.6.2.1 Definition

8.2.6.2.2 Conformance requirement

The UE shall keep its configuration when the UE receives a PHYSICAL CHANNEL RECONFIGURATION message which includes an unsupported configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the reason "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.2.3 Test purpose

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

8.2.6.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes configuration parameters unsupported by the UE. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	Includes configuration unsupported by the UE
2	→		PHYISICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not reconfigure and continue to communicate using the old configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (TDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION FAILURE

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.6.2.5 Test requirement

After step 1 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC and set "configuration unsupported" in IE "failure cause".

8.2.6.3 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and reversion to old channel)

8.2.6.3.1 Definition

8.2.6.3.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel before the expiry of timer T312, and then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC indicating "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.3.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message before timer T312 expiry.

8.2.6.3.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes new UL scrambling code . However, the SS keeps its current dedicated physical channel configuration. The UE fails to synchronise with the SS on the new physical channel and after T312 timer expires the UE shall revert to the old configuration. Finally, the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC specifies "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	Including a new UL scrambling code for FDD and First timeslot code list for TDD.
2				The SS does not reconfigure the physical channel so that the UE fails to synchronise on the new physical channel.
3	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expires, the UE shall revert to the old configuration and transmits this message.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION FAILURE

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.6.3.5 Test requirement

After step 2 the UE shall revert to the old configuration and transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value "physical channel failure" in IE "failure cause".

8.2.6.4 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and reversion failure)

8.2.6.4.1 Definition

8.2.6.4.2 Conformance requirement

The UE shall perform a cell update procedure when the UE fails to revert to the old configuration, after the detection of physical channel failure during the course of executing a physical channel reconfiguration procedure. After the UE completes the cell update procedure, the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set IE "failure cause" to "physical channel failure".

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.4.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message after UE completes a cell update procedure when the UE fails synchronise on the old physical channel after the UE cannot synchronise on the new physical channel according to the received PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new UL scrambling code, but the SS does not configure the new physical channel and release the old configuration. The UE fails to synchronise on the new dedicated physical channel and tries to revert to the old configuration. But the SS already deleted the old physical channel configuration and the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3	←		PHYSICAL CHANNEL RECONFIGURATION	The message includes new UL scrambling code for FDD and First timeslot code list for TDD .
4				SS does not configure any dedicated physical channel and at the same time, it deletes the old configuration so the UE cannot reconfigure the new physical channel and cannot revert to the old configuration.
5	→		CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
6	←		CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
7				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
9	→		PHYSICAL CHANNELRECONGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

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

CELL UPDATE CONFIRM (Step 6) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI RRC State indicator UplinkDPCH Info Downlink information for each radio links	Same as CELL UPDATE message in step 4 CELL_DCH Same as RADIO BEARER SETUP message used to move to intial condition Same as RADIO BEARER SETUP message used to move to intial condition

CELL UPDATE CONFIRM (Step 6) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex Awith the following exceptions:

Information Element	Value/remark
U-RNTI RRC State Indicator Uplink DPCH timeslots and codes Downlink information for each radio links	Same as CELL UPDATE message in step 4 CELL_DCH Same as RADIO BEARER SETUP message used to move to initial condition Same as RADIO BEARER SETUP message used to move to initial condition

PHYSICAL CHANNEL RECONGURATION FAILURE (Step 9)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

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

8.2.6.4.5 Test requirement

After step 4 the UE shall transmits a CELL UPDATE message using RLC-TM mode on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

After step 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.6.5 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Incompatible simultaneous reconfiguration)

8.2.6.5.1 Definition

8.2.6.5.2 Conformance requirement

If the UE receives a PHYSICAL CHANNEL RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than PHYSICAL CHANNEL RECONFIGURATION message, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6, clause 8.6.3.11.

8.2.6.5.3 Test purpose

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

8.2.6.5.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the PHYSICAL CHANNEL RECONFIGURATION message, the UE shall keep the configuration as if it had not received the PHYSICAL CHANNEL RECONFIGURATION message and shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the PHYSICAL CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	←		PHYSICAL CHANNEL RECONFIGURATION	Sent before the "activation time" specified in the message in step 1 has elapsed.
3	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration due to the reception of a PHYSICAL CHANNEL RECONFIGURATION message.
4	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned by SS
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Not Present
Uplink DPCH info	
- Scrambling code number	2
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (TDD)

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
- Uplink DPCH timeslots and codes	
- First timeslot code list	Different as assigned in Step 1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION FAILURE (step 3)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.6.5.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC on the DCCH.

8.2.6.6 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Invalid message reception and Invalid configuration)

8.2.6.6.1 Definition

8.2.6.6.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid PHYSICAL CHANNEL RECONFIGURATION message, which does not include any IEs except IE "Message Type". It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message which contains the value "protocol error" in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon reception of a PHYSICAL CHANNEL RECONFIGURATION message when the PHYSICAL CHANNEL RECONFIGURATION message that includes some IEs set to give an invalid configuration, and then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE including IE "failure cause" set to "invalid configuration".

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.6.3 Test purpose

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

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

8.2.6.6.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in CELL_DCH state. The SS transmits an invalid PHYSICAL CHANNEL RECONFIGURATION message to the UE, which does not include any IEs except IE "Message Type". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, with a value "protocol error" in IE "failure cause" and also a value "ASN.1 violation or encoding error" in IE "Protocol error cause". SS transmits a PHYSICAL CHANNEL RECONFIGURATION message including some IEs which are set to give an invalid configuration. The UE keeps its initial configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	See specific message content.
2	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change its configuration.
3	←		PHYSICAL CHANNEL RECONFIGURATION	This message includes IEs which is set to give an invalid configuration
4				The UE does not change its configuration
5	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "invalid configuration

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Information Element	Value/remark
All Es	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (TDD)

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

Information Element	Value/remark
-PRACH TFCS	Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.6.6.5 Test requirement

After step 1 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting value "protocol error" in IE "failure cause" and also setting value "ASN.1 violation or encoding error" in IE "Protocol error cause".

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

8.2.6.7 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Success

8.2.6.7.1 Definition

8.2.6.7.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to CELL_FACH and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.7.3 Test purpose

To confirm that the UE reconfigures a common physical channel according to the PHYSICAL CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to CELL_FACH.

8.2.6.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The UE shall then reconfigure the specified common physical channel according to this message and the system information messages. Following this, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exception:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

8.2.6.7.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE messageon the common physical channel.

8.2.6.8 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH: Success (Cell re-selection)

8.2.6.8.1 Definition

8.2.6.8.2 Conformance requirement

The UE shall initiate the cell update procedure when the UE performs cell reselection during a physical channel reconfiguration procedure. After the UE completes cell update procedure, the UE shall continue to perform the physical channel reconfiguration procedure and correctly reconfigure the physical channel.

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.8.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message after the UE completes a cell update procedure.

8.2.6.8.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "Primary CPICH info" and no dedicated physical channel information to invoke the UE to transit from CELL_DCH to CELL_FACH. As the UE cannot detect the specified cell, the UE shall initiate the cell update procedure. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE then transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2	←		PHYSICAL CHANNEL RECONFIGURATION	This message include IE "Primary CPICH info" for FDD and Primary CCPCH info for TDD.
3			Void	
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 4

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 5)

Use the same message type found in clause Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type is checked.

8.2.6.8.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

After step 6 UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.6.9 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Success

8.2.6.9.1 Definition

8.2.6.9.2 Conformance requirement

The UE shall correctly reconfigure a physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, which invoke UE to transit from CELL_FACH to CELL_DCH and shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.9.3 Test purpose

To confirm that the UE reconfigures a new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message, which invoke UE to transit from CELL_FACH to CELL_DCH.

8.2.6.9.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_FACH to CELL_DCH. The UE

shall reconfigure the new dedicated physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		PHYSICAL CHANNEL RECONFIGURATION	
5				The UE shall configure the allocated dedicated physical channels.
6	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A for FDD and Annex A for TDD.

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A.

8.2.6.9.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION message on the new dedicated physical channel.

8.2.6.10 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.6.10.1 Definition

8.2.6.10.2 Conformance requirement

The UE shall keep its old configuration when it receives a PHYSICAL CHANNEL RECONFIGURATION message, which specifies configuration parameters unsupported by the UE. It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, reporting the cause "configuration unsupported" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.10.3 Test purpose

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

8.2.6.10.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes unsupported frequency for the UE. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "configuration unsupported" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		PHYSICAL CHANNEL RECONFIGURATION	Includes unsupported frequencies for the UE
5	→		PHYISICAL CHANNEL RECONFIGURATION FAILURE	The UE shall not change the physical channel configuration, this message shall be sent using the old configuration.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 3) (TDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION FAILURE

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.6.10.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, the IE "failure cause" shall be set to "configuration unsupported".

8.2.6.11 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.6.11.1 Definition

8.2.6.11.2 Conformance requirement

The UE shall revert to the old configuration when the UE fails to reconfigure the new physical channel before timer T312 expires and detects the same serving cell only. It shall report the failure by transmitting a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.11.3 Test purpose

To confirm that the UE reverts to the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC if the UE fails to reconfigure the new physical channel according to a PHYSICAL CHANNEL RECONFIGURATION message before the T312 expiry.

8.2.6.11.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_FACH to CELL_DCH. However, the SS keeps its current physical channel configuration and then the UE cannot synchronise with the SS. After T312 expires, the UE attempt to revert to the old configuration. Then the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set "physical channel failure" in IE "failure cause".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		PHYSICAL CHANNEL RECONFIGURATION	
5				The SS does not reconfigure the physical channel, hence the UE shall detect a failure to reconfigure to the new physical channel.
6	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expires the UE reverts to the old configuration and transmits this message.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A for FDD and Annex A for TDD.

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A for FDD and Annex A for TDD..

PHYSICAL CHANNEL RECONFIGURATION FAILURE

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.6.11.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, specifying "physical channel failure" in IE "failure cause".

8.2.6.12 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.6.12.1 Definition

8.2.6.12.2 Conformance requirement

The UE shall perform a cell update procedure when the UE selects another cell after the detection of physical channel failure in the physical channel reconfiguration procedure. After the UE completes cell update procedure, the UE transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.12.3 Test purpose

To confirm that the UE initiates a cell update procedure after it fails to reconfigure the new physical channel and selects another cell.

To confirm that UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message after UE completes cell update procedure.

8.2.6.12.4 Method of test

Initial Condition

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

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108 in cell 1

Test Procedure

Table 8.2.6.12

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

Table 8.2.6.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_DCH state in cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, but the SS does not reconfigure L1 accordingly. The SS

configures its downlink transmission power settings according to columns "T1"in table 8.2.6.12. As a result, the UE fails to synchronise on the new physical channel before timer T312 expires and reselect cell 2 and then the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "Cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		PHYSICAL CHANNEL RECONFIGURATION	
5				The SS does not configure the new dedicated physical channel in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.6.12.
6			Void	
7	→		CELL UPDATE	This message includes the value "cell reselection" set in IE "Cell update cause".
8	←		CELL UPDATE CONFIRM	
9			Void	
10	→		PHYSICAL CHANNEL RECONGURATION FAILURE	UE shall transmit this message in the cell 2.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A for FDD and Annex A for TDD.

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Annex A for FDD and Annex A for TDD.

CELL UPDATE (Step 7)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Assigned previously in cell 1
- S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A.

PHYSICAL CHANNEL RECONGURATION FAILURE (Step 10)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

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

8.2.6.12.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 6 the UE shall transmit a CELL UPDATE message using RLC-TM mode on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 9 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.6.13 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.13.1 Definition

8.2.6.13.2 Conformance requirement

If the UE receives a PHYSICAL CHANNEL RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than a PHYSICAL CHANNEL RECONFIGURATION message, it shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6, clause 8.6.3.11.

8.2.6.13.3 Test purpose

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

8.2.6.13.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel

correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the PHYSICAL CHANNEL RECONFIGURATION message, the UE shall keep its configuration as if it had not received the PHYSICAL CHANNEL RECONFIGURATION message and shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the UE transmits the PHYSICAL CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters CELL_FACH state.
4	←		RADIO BEARER RECONFIGURATION	
5	←		PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the frame number specified in IE "Activation time" of the message dispatched in step 4.
6	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration due to the reception of PHYSICAL CHANNEL RECONFIGURATION message.
7	→		RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

RADIO BEARER RECONFIGURATION (Step 4) (FDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time Info	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1

RADIO BEARER RECONFIGURATION (Step 4) (TDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions

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

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (FDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 5, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

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

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (TDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 5, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Not present
- Uplink DPCH timeslots and codes	
- First timeslot code list	Different as assigned previously

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 6)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.6.13.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

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

8.2.6.14.1 Definition

8.2.6.14.2 Conformance requirement

The UE shall keep its old configuration when the UE receives an invalid PHYSICAL CHANNEL RECONFIGURATION message which does not includes any IEs except IE "Message Type". It shall then transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message, set "protocol error" in IE "failure cause" and also set "ASN.1 violation or encoding error" in IE "Protocol error cause". The UE shall keep existing configuration upon reception of a PHYSICAL CHANNEL RECONFIGURATION message, which includes some IEs which are set to give an invalid configuration, and then the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE including IE "failure cause" set to "invalid configuration"

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.14.3 Test purpose

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

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

8.2.6.14.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits an invalid PHYSICAL CHANNEL RECONFIGURATION message to the UE which does not include any IEs except IE "Message Type". The UE keeps the old configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE "failure cause" and also setting "ASN.1 violation or encoding error" in IE "Protocol error cause". SS transmits PHYSICAL CHANNEL RECONFIGURATION message including some IEs which are set to give an invalid configuration. The UE keeps current configuration and transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters CELL_FACH state.
4	←		PHYSICAL CHANNEL RECONFIGURATION	See specific message content.
5	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration.
6	←		PHYSICAL CHANNEL RECONFIGURATION	This message includes IEs which are set to give an invalid configuration.
7				The UE does not change the configuration
8	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "invalid configuration

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A for FDD and Annex A for TDD.

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Information Element	Value/remark
All IEs	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause - Failure cause - Protocol error information - Protocol error cause	 Protocol error ASN.1 violation or encoding error

PHYSICAL CHANNEL RECONFIGURATION (Step 6) (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 6) (TDD)

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

Information Element	Value/remark
-PRACH TFCS	Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 7)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.6.14.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 4 the UE shall keep its old configuration, transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with "protocol error" in IE "failure cause" and also "ASN.1 violation or encoding error" in IE "Protocol error cause".

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

8.2.6.15 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: Success

8.2.6.15.1 Definition

8.2.6.15.2 Conformance requirement

The UE shall correctly reconfigure a common physical channel in another cell according to a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_FACH in a current cell to CELL_FACH in the specified another cell.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.15.3 Test purpose

To confirm that the UE reconfigures a new common physical channel in another cell according to the PHYSICAL CHANNEL RECONFIGURATION message received from the SS.

8.2.6.15.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.6.15

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

Table 8.2.6.15 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 2.

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_FACH in the current cell to CELL_FACH in cell 2, to the UE. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.6.15. The UE shall move to cell 2 and configure the common physical channel and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	
2				The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.6.15.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions.

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 150

PHYSICAL CHANNEL RECONFIGURATION (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

8.2.6.15.5 Test requirement

After step 2 the UE shall tranmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message in cell 2.

8.2.6.16 Physical channel reconfiguration for transition from CELL_FACH to CELL_FACH: (Cell re-selection)

8.2.6.16.1 Definition

8.2.6.16.2 Conformance requirement

The UE shall initiate the cell reselection procedure when the UE performs cell reselection during a physical channel reconfiguration procedure. After the UE completes cell update procedure, the UE shall continue to perform the physical channel reconfiguration procedure and correctly reconfigure the physical channel.

Reference

3GPP TS 25.331 clause 8.2.6

8.2.6.16.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after the UE completes a cell update procedure indicated by a PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.16.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.6.16

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

Table 8.2.6.16 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. On transmitting a PHYSICAL CHANNEL RECONFIGURATION message, which does not include the IE "Primary CPICH info", the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.6.16. The UE shall initiate the cell update procedure and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC and transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	This message does not include IE "Primary CPICH info" (FDD).
2				The UE shall detect a failure to transmission power settings, according to the values in columns "T1" of table 8.2.6.16.
3			Void	
4	→		CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CPICH info - Primary scrambling code	 Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with the following exceptions:

Information Element	Value/remark
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	 Not Present

CELL UPDATE (Step 4)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Assigned previously in cell 1 Assigned previously in cell 1 "cell reselection"

CELL UPDATE CONFIRM (Step 5)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A for FDD and Annex A for TDD. with the following exceptions:

Information Element	Value/remark
U-RNTI New U-RNTI - SRNC Identity - S-RNTI New C-RNTI	Same as CELL UPDATE message in step 4 '0000 0000 0000 0001' Different from previous S-RNTI Different from previous C-RNTI

8.2.6.16.5 Test requirement

After step 3 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.

After step 5 the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.6.17 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Success (Subsequently received)

8.2.6.17.1 Definition

8.2.6.17.2 Conformance requirement

If the UE receives a PHYSICAL CHANNEL RECONFIGURATION message before the UE reconfigures the radio bearer according to the previous PHYSICAL CHANNEL RECONFIGURATION message, the UE shall ignore the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigure according to the previous PHYSICAL CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6, clause 8.6.3.11.

8.2.6.17.3 Test purpose

To confirm that if the UE receives a PHYSICAL CHANNEL RECONFIGURATION message before the UE reconfigures the radio bearer according to the previous PHYSICAL CHANNEL RECONFIGURATION message it ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.17.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous PHYSICAL CHANNEL RECONFIGURATION message elapses, the UE ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	For FDD mode the "Secondary scrambling code is set to "1". For TDD mode a code combination is assigned by SS.
2	←		PHYSICAL CHANNEL RECONFIGURATION	SS send this message before the expiry of "activation time" specified in PHYSICAL CHANNEL RECONFIGURATION message of step 1. For FDD, the IE "Secondary scrambling code" is set to "2". For TDD, the code combination assigned is different to that assigned in stage 1.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE ignores the PHYSICAL CHANNEL RECONFIGURATION message in step 2 and confirms configuration according to the PHYSICAL CHANNEL RECONFIGURATION message in step 1.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A for FDD and Annex A for TDD with the following exceptions:

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

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step2) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.6.17.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.6.18 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.6.18.1 Definition

8.2.6.18.2 Conformance requirement

If the UE receives a PHYSICAL CHANNEL RECONFIGURATION message before the UE reconfigures the radio bearer according to the previous PHYSICAL CHANNEL RECONFIGURATION message, the UE shall ignore the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigure according to the previous PHYSICAL CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.6, clause 8.6.3.11.

8.2.6.18.3 Test purpose

To confirm that if the UE receives a PHYSICAL CHANNEL RECONFIGURATION message before the UE reconfigures the radio bearer according to the previous PHYSICAL CHANNEL RECONFIGURATION message it ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.18.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous PHYSICAL CHANNEL RECONFIGURATION message, the UE ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters CELL_FACH state.
4	←		PHYSICAL CHANNEL RECONFIGURATION	The "Secondary scrambling code is set to "1" for FDD mode and A code combination is assigned by SS for TDD
5	←		PHYSICAL CHANNEL RECONFIGURATION	SS send this message before the expiry of "activation time" specified in PHYSICAL CHANNEL RECONFIGURATION message of step 4. For FDD the IE "Secondary scrambling code" is set to "2". For TDD, the code combination assigned is different from that assigned in stage 4.
6	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE ignores the PHYSICAL CHANNEL RECONFIGURATION message in step 5 and confirms configuration according to the PHYSICAL CHANNEL RECONFIGURATION message in step 4.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

PHYSICAL CHANNEL RECONFIGURATION (Step 4) (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 4) (TDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (FDD)

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

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

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (TDD)

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

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.6.18.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

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

8.2.6.19 Physical Channel Reconfiguration from CELL_DCH to CELL_PCH: Success

8.2.6.19.1 Definition

8.2.6.19.2 Conformance requirement

The UE shall transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after it receives a PHYSICAL CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL_DCH to CELL_PCH. And then, the UE shall enter CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.19.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and enter CELL_PCH state after it received a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH.

8.2.6.19.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message with a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

Information Element	Value/remark
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

8.2.6.19.5 Test requirement

After step 1 the UE shall transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.6.20 Physical Channel Reconfiguration from CELL_DCH to URA_PCH: Success

8.2.6.20.1 Definition

8.2.6.20.2 Conformance requirement

The UE shall transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message after it receives a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to URA_PCH. And then, the UE shall reconfigure radio bearers according to the PHYSICAL CHANNEL RECONFIGURATION message and enter URA_PCH state.

Reference

3GPP TS 25.331 clause 8.2.6.

8.2.6.20.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and enter URA_PCH state after it received a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to URA_PCH.

8.2.6.20.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in the CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL_DCH to URA_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA_PCH state. The SS transmits a PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4	←		PAGING TYPE 1	The SS transmits this message with a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	 100

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	 4

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (SMS in PS)" in Annex A for FDD and Annex A for TDD with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~Previously assigned SRNC identity~~ ~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity Previously assigned SRNC identity Previously assigned S-RNTI

8.2.6.20.5 Test requirement

After step 1 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

8.2.6.21 Physical Channel Reconfiguration from CELL_FACH to URA_PCH: Success

8.2.6.21.1 Definition

8.2.6.21.2 Conformance requirement

1. In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

   - transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC;

2. If the new state is CELL_PCH or URA_PCH, the response message shall be transmitted using the old configuration before the state transition, but the new C-RNTI shall be used if the IE "New C-RNTI" was included in the received reconfiguration message, and the UE shall:

   - when RLC has confirmed the successful transmission of the response message:

     - for each radio bearer in the variable PDCP_SN_INFO:

       - if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":

         - configure the RLC entity for that radio bearer to "continue";

     - enter the new state (CELL_PCH or URA_PCH, respectively);

Reference

3GPP TS 25.331 clause 8.2.2.4

8.2.6.21.3 Test purpose

1. To verify that the UE, when receiving a PHYSICAL CHANNEL RECONFIGURATION message, responds by transmitting a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

2. To verify that the response message is transmitted using the old configuration before the state transition, and that the UE enters the URA_PCH state.

8.2.6.21.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using AM RLC and enters into URA_PCH state. The SS transmits a PAGING TYPE 1 message and the UE accepts it and enters the CELL_FACH state again.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE sends this message before start state transition.
3				Reconfiguration of Physical Channel after state transition.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

~~Information Element~~	~~Value/remark~~
~~RRC State Indicator~~	~~URA_PCH~~
~~UTRAN DRX cycle length coefficient~~	~~3~~
~~Downlink information for each radio links~~	
~~- Choice mode~~	
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~100~~

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links	
- Choice mode	
- Primary CPICH info	
- Primary scrambling code	100

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (SMS in PS)" in Annex A with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~	
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Previously assigned SRNC identity~~
~~- S-RNTI~~	~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list	
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Previously assigned SRNC identity
- S-RNTI	Previously assigned S-RNTI

8.2.6.21.5 Test requirement

1. After step 1 the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the UE on uplink DCCH using AM RLC.

2. In step 5 the UE shall transmit a CELL UPDATE message.

8.2.6.22 Physical Channel Reconfiguration from CELL_FACH to CELL_PCH: Success

8.2.6.22.1 Definition

8.2.6.22.2 Conformance requirement

1. In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

   - transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC;

2. If the new state is CELL_PCH or URA_PCH, the response message shall be transmitted using the old configuration before the state transition, but the new C-RNTI shall be used if the IE "New C-RNTI" was included in the received reconfiguration message, and the UE shall:

   - when RLC has confirmed the successful transmission of the response message:

     - for each radio bearer in the variable PDCP_SN_INFO:

       - if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":

         - configure the RLC entity for that radio bearer to "continue";

     - enter the new state (CELL_PCH or URA_PCH, respectively);

Reference

3GPP TS 25.331 clause 8.2.2.4

8.2.6.22.3 Test purpose

1. To verify that the UE, when receiving a PHYSICAL CHANNEL RECONFIGURATION message, responds by transmitting a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

2. To verify that the response message is transmitted using the old configuration before the state transition, and that the UE enters the CELL_PCH state.

8.2.6.22.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is in the CELL_FACH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using AM RLC and enters into CELL_PCH state. The SS transmits a PAGING TYPE 1 message and the UE accepts it and enters the CELL_FACH state again.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE sends this message before start state transition.
3				Reconfiguration of Physical Channel after state transition.
4	←		PAGING TYPE 1	The SS transmits this message included a matched identity.
5	→		CELL UPDATE	The UE is in CELL_FACH state.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in Annex A with following exceptions:

~~Information Element~~	~~Value/remark~~
~~RRC State Indicator~~	~~CELL_PCH~~
~~UTRAN DRX cycle length coefficient~~	~~3~~
~~Downlink information for each radio links~~	
~~- Choice mode~~	
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~100~~

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links	
- Choice mode	
- Primary CPICH info	
- Primary scrambling code	100

PAGING TYPE 1 (Step 4)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~	
~~Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~Previously assigned SRNC identity~~
~~- S-RNTI~~	~~Previously assigned S-RNTI~~

Information Element	Value/remark
Paging record list	
Paging record	
- CHOICE Used paging identity	UTRAN identity
- U-RNTI	
- SRNC Identity	Previously assigned SRNC identity
- S-RNTI	Previously assigned S-RNTI

8.2.6.22.5 Test requirement

1. After step 1 the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the UE on uplink DCCH using AM RLC.

2. In step 5 the UE shall transmit a CELL UPDATE message.

8.2.6.23 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing maintain): Success

8.2.6.23.1 Definition

8.2.6.23.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.23.3 Test purpose

To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, on a dedicated physical channel in a different frequency band.

8.2.6.23.4 Method of test

Initial Condition

System Simulator: 2 cells–Cells 1 is active and cell 6 is inactive.

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

Test Procedure

Table 8.2.6.23

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-55	Off	-55

Table 8.2.6.23 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.23. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new frequency information and IE "Timing indicator" set to maintain. The UE shall reconfigure the physical channel parameters according to PHYSICAL CHANNEL RECONFIGURATION message and establish a radio link with the SS using a dedicated physical channel in cell 6. The UE then transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message in cell 6 on the uplink DCCH AM RLC after its transition.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.23.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.23.
3	←		PHYSICAL CHANNEL RECONFIGURATION	Including new frequency information. IE "Timing indicator" is set to maintain.
4				The UE remains in CELL_DCH state after connecting to the SS on a dedicated physical channel in cell 6.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message in cell 6.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 3)

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

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink DPCH info	
- Scrambling code number	1
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	350

8.2.6.23.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 6.

8.2.6.24 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (modify uplink physical channel rate): Success

8.2.6.24.1 Definition

8.2.6.24.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2 and 8.5 and 8.6

8.2.6.24.3 Test purpose

To confirm that the UE modifies uplink physical channel rate according to a PHYSICAL CHANNEL RECONFIGURATION message and transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

8.2.6.24.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state of cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which assign a new UL puncture limit and minimum spreading factor to the UE to modify uplink physical channel rate. The UE shall reconfigure the physical channel according to this message and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state of cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	This message is including new IE "Uplink DPCH info" and don't include IE "Downlink information for each radio link".
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	Same contents as a RADIO BEARER SETUP message used in initial procedure
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
- Number of FBI bit	Not Present
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set Set different parameter which is included in a RADIO BEARER SETUP message used in initial procedure.
Downlink information per radio link list	Not present

8.2.6.24.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

8.2.6.25 Physical channel reconfiguration for transition from CELL_DCH to CELL_FACH (Frequency band modification): Success

8.2.6.25.1 Definition

8.2.6.25.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> if the received reconfiguration message included the IE "Primary CPICH info" (, and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL_PCH or URA_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.25.3 Test purpose

1. To confirm that the UE transits from CELL_DCH to CELL_FACH according to the PHYSICAL CHANNEL RECONFIGURATION message.

2. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency..

8.2.6.25.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Table 8.2.6.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.6.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.25. The SS switches its downlink transmission power settings to columns "T1" and transmits MEASUREMENT CONTROL message in order for the UE to know information of cell 6. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message including new physical channel information. The UE shall then reconfigure the specified common physical channel according to this message and the system information in cell 6. Following this, it shall transmit CELL UPDATE message with IE "Cell update cause" set to "cell reselection". Upon completion of the cell update procedure, UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the DCCH in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.25.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.25.
3	←		MEASUREMENT CONTROL	The SS specifies inter-frequency measurement for cell 6.
4	←		PHYSICAL CHANNEL RECONFIGURATION	Including new frequency information
5	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6	←		CELL UPDATE CONFIRM	Including the IE" New C-RNTI"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE selects PRACH and S-CCPCH indicated in SIB5 or SIB6 after entering CELL FACH state.
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	350
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- COICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 s

- Reporting cell status - CHOICH reported cell - Maximum number of reported cells - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency	 Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 -85dbm 0.0

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	 Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.6.25.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL_FACH state of cell 6.

8.2.6.26 Physical Channel Reconfiguration from CELL_DCH to CELL_PCH (Frequency band modification): Success

8.2.6.26.1 Definition

8.2.6.26.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

2> when the cell update procedure completed successfully:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.26.3 Test purpose

1. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

2. To confirm that the UE transits from CELL_DCH to CELL_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.

3. To confirm that the UE releases a dedicated physical channel and selects a common physical channel in a different frequency.

8.2.6.26.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Table 8.2.6.26

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.6.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26. The SS switches its downlink transmission power settings to columns "T1" and transmits MEASUREMENT CONTROL message in order for the UE to know information of cell 6. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL_DCH to CELL_PCH and includes new frequency information. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state of cell 6. Then, UE shall transmit CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.26.
3	←		MEASUREMENT CONTROL	The SS specifies inter-frequency measurement for cell 6.
4	←		PHYSICAL CHANNELRECONFIGURATION	Including new frequency information.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmit this message in cell 1.
6	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

MEASUREMENT CONTROL (Step 3)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	350
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- COICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 s
- Reporting cell status	

- CHOICH reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85dbm
- W non-used frequency	0.0

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 6)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

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

8.2.6.26.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL_PCH state in cell 6.

8.2.6.27 Physical channel reconfiguration from CELL_FACH to CELL_PCH: Success

8.2.6.27.1 Definition

8.2.6.27.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS5.331 subclause 8.6.3.2.

1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE:

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

2> when the cell update procedure is successfully completed:

3> the procedure ends.

3GPP TS 25.331 clause 8.2.2,8.3, 8.5 and 8.6.

8.2.6.27.3 Test purpose

1. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.

3. To confirm that the UE replies with CELL UPDATE message in cell 6 when the SS transmits PAGING TYPE 1 message to the UE.

8.2.6.27.4 Method of test

Initial Condition

System Simulator: 1 cell– Cell 1 is active.

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

Test Procedure

The UE is in CELL_FACH state of cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL_PCH state. The SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4				The SS waits for 5 s.
5	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

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

8.2.6.27.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall be in CELL_PCH state in cell 6.

8.2.7 Physical Shared Channel Allocation [TDD only]

[Editor's note: This message is not included in Release99 so this is FFS.]

8.2.8 PUSCH capacity request [TDD only]

[Editor's note: This message is not included in Release99 so this is FFS.]

8.2.9 Void

8.3 RRC connection mobility procedure

8.3.1 Cell Update

8.3.1.1 Cell Update: cell reselection in CELL_FACH

8.3.1.1.1 Definition

8.3.1.1.2 Conformance requirement

This procedure is used to update UTRAN with the current cell of the UE after it has performed a cell reselection in CELL_FACH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.1.3 Test purpose

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

8.3.1.1.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.1.1

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

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

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

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2			Void	SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.1. The UE shall find that the cell 2 is better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
3	→		CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". SS set k=0.
4a	→		CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause"
4b	←		CELL UPDATE CONFIRM	See message content. SS set k=0.
5	→		UTRAN MOBILITY INFORMATION CONFIRM	
6				SS reverses the transmission power level of cell 1 and cell 2.
7	→		CELL UPDATE	

8	←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH". If k ≥ 0, new C-RNTI and U-RNTI identities are assigned to the UE. If k>0, IE "Physical channel information elements" is included in this message. If k>1, IE "Transport channel information elements" is included in this message. If k>2, IE "RB information to be affected list" is included in this message. If k>3, IE "RB information to release list" is included in this message. Increment k by 1.
9	→	UTRAN MOBILITY INFORMATION CONFIRM	If k=1 when SS received this message, go to step 6. Else test fails. If this message is not received, proceed to next step.
10	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	If k=2 when SS received this message, go to step 6. Else test fails. If this message is not received, proceed to next step.
11	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	If k=3 when SS received this message, go to step 6. Else test fails. If this message is not received, proceed to next step.
12	→	RADIO BEARER RECONFIGURATION COMPLETE	If k=4 when SS received this message, go to step 6. Else test fails. If this message is not received, proceed to next step.
13	→	RADIO BEARER RELEASE COMPLETE	If k=5 when SS received this message, proceed to next step. Else test fails. If this message is not received, test fails.
14			SS reverses the transmission power level of cell 1 and cell 2.
15	→	CELL UPDATE	
16			SS reverses the transmission power level of cell 1 and cell 2.
17	→	CELL UPDATE	
18	←	CELL UPDATE CONFIRM	
19	→	UTRAN MOBILITY INFORMATION CONFIRM	
20	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 3, 7, 15 and 17)

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

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

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

CELL UPDATE CONFIRM (Step 4)

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

CELL UPDATE CONFIRM (Step 4b and 18)

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

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

CELL UPDATE CONFIRM (Step 8 and k = 0)

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

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

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

CELL UPDATE CONFIRM (Step 8 and k=1)

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

Information Element	Value/remark
Maximum allowed uplink TX power	3 dB below the follow value: Minimum of {33 dBm for FDD and 30 dBm for TDD, maximum uplink power allowed under the UE power class}

CELL UPDATE CONFIRM (Step 8 and k=2)

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

Information Element	Value/remark
Added or Reconfigured uplink TrCH information ~~Added or Reconfigured downlink TrCH information~~	Same as the system information block type 5 ~~Same as the system information block type 5~~
Added or Reconfigured downlink TrCH information	Same as the system information block type 5

CELL UPDATE CONFIRM (Step 8 and k=3)

Use the same message sub-type found in step 8 and k=2, with the following exceptions:

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

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

CELL UPDATE CONFIRM (Step 8 and k=4)

Use the same message sub-type found in step 8 and k=3, with the following exceptions:

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

8.3.1.1.5 Test requirement

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

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

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

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

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

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

If k=3, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to acknowledge that it has reconfigured the transport channels.

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

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

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

After step 16 the UE shall transmit a CELL UPDATE message to the cell with stronger transmitting power, in order to indicate that a cell reselection has taken place.

After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message to acknowledge that it has started to use the new RNTI identities allocated.

8.3.1.2 Cell Update: cell reselection in CELL_PCH

8.3.1.2.1 Definition

8.3.1.2.2 Conformance requirement

This procedure is to update UTRAN with information of the current cell, after a cell reselection has occurred in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1.

8.3.1.2.3 Test purpose

To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the successful reselection of another UTRA cell.

8.3.1.2.4 Method of test

Initial Condition

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

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state and is camped onto cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.1. When the UE detects the presence of cell 2, it moves to CELL_FACH state and transmits a CELL UPDATE message on the uplink CCCH. The value "cell reselection" shall be set in IE "Cell update cause" in CELL UPDATE message. Upon reception of CELL_UPDATE message, SS replies with a CELL UPDATE CONFIRM message with the IE "RRC State Indicator" set to "CELL_PCH". After receiving this message, the UE returns to CELL_PCH state without transmitting any uplink message. The SS transmits a

PAGING TYPE 1 message, causing the UE to enter CELL_FACH state and the UE shall transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "paging response". SS shall respond with a CELL UPDATE CONFIRM message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_PCH state in cell 1
2				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.1. The UE shall find that the cell 2 is better and attempt to perform a cell reselection.
3	→		CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection"
4	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
5				The UE is in CELL_PCH state.
6	←		PAGING TYPE 1	The SS transmits this message with a matched identity.
7	→		CELL UPDATE	The UE is in CELL_FACH state
8	←		CELL UPDATE CONFIRM	
9	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

CELL UPDATE (Steps 3 and 7)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'Cell Re-selection' when in step 3. Check to see if set to "paging response" when in step 7.

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Annex A, with the following exceptions:

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

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in Annex A, with the following exceptions:

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

8.3.1.2.5 Test requirement

After step 2 the UE shall reselect to cell 2 and transmit a CELL UPDATE message, containing the IE "Cell update cause" set to "cell reselection".

After step 6 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "paging response".

After step 8, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.

8.3.1.3 Cell Update: periodical cell update in CELL_FACH

8.3.1.3.1 Definition

8.3.1.3.2 Conformance requirement

This procedure is to update UTRAN with the current cell information, after the UE has remained in the service area in the CELL_FACH state for a period exceeding the timer value T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.3.3 Test purpose

To confirm that the UE executes a periodical cell update procedure following the expiry of timer T305.

8.3.1.3.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.1.3

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

Table 8.3.1.3 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE is in CELL_FACH state. When the UE detects the expiry of timer T305 according to the settings in system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH with a cause indicating periodical cell updating. SS replies with a CELL UPDATE CONFIRM message, and IE "RRC State Indicator" is set to "CELL_FACH". SS verifies that the UE does not transmit any uplink message. SS then waits for T305 to expire again. The UE shall send another CELL UPDATE message to report periodic cell updating. After the SS receives this message, it transmits a CELL UPDATE CONFIRM message which includes the IEs "new C-RNTI", "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.3, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS then monitors the uplink CCCH for a period up to the maximum possible value for timer T305 (720 minutes) and verifies that no CELL_UPDATE message is received. After this, the SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to '5', to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.3, causing the UE to enter CELL_FACH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall resume periodic cell updating procedure and transmit CELL_UPDATE message after T305 (5 minutes) expires.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS waits until T305 has expired.
2	→		CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell updating"
3	←		CELL UPDATE CONFIRM	No RNTI identities are given. No information on PRACH and S-CCPCH are provided.
4				SS verifies that no uplink message is received from UE. SS waits for another period to allow T305 to expire.
5	→		CELL UPDATE	Set to "periodical cell update" in IE "Cell update cause" upon the expiry of timer T305.
6	←		CELL UPDATE CONFIRM	Including IEs "new C-RNTI", "new U-RNTI" and IE "RRC State Indicator" is set to "CELL_FACH"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	

8	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to 'infintiy'.
9	→	UTRAN MOBILITY INFORMATION CONFIRM	
10			SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.3
11	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".
12	←	CELL UPDATE CONFIRM	
12a	→	UTRAN MOBILITY INFORMATION CONFIRM	
13			SS waits for 720 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.
14	←	UTRAN MOBILITY INFORMATION	IE "T305" is set to '5.
15	→	UTRAN MOBILITY INFORMATION CONFIRM	
16			SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.3
17	→	CELL UPDATE	IE "Cell update cause" shall be set to "cell reselection".
18	←	CELL UPDATE CONFIRM	
18a	→	UTRAN MOBILITY INFORMATION CONFIRM	
19	→	CELL UPDATE	UE shall transmit this message with "cell update cause" set to "periodical cell updating" after T305 expires.
20	←	CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2 and 5)

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

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~Cell Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to 'periodical cell updating'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'periodical cell updating'

CELL UPDATE (Step 11 and 17)

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

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6.~~
~~Cell Update Cause~~	~~Check to see if set to "cell reselection"~~

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 same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6.
Cell Update Cause	Check to see if set to "cell reselection"

CELL UPDATE CONFIRM (Step 3, 12, 18 and 20)

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

CELL UPDATE CONFIRM (Step 6, 12 and 18)

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

~~Information Element~~	~~Value/remark~~
~~New U-RNTI~~	
~~- SRNC Identity~~	~~Set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Set to an arbitrary string different from '0000 0000 0000 0000 0001'~~
~~New C-RNTI~~	~~'1010 1010 1010 1010'~~

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	Set to '0000 0000 0001'
- S-RNTI	Set to an arbitrary string different from '0000 0000 0000 0000 0001'
New C-RNTI	'1010 1010 1010 1010'

CELL UPDATE (Step 19)

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

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6.~~
~~Cell Update Cause~~	~~Check to see if set to 'periodical cell updating'~~

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 same bit string as in IE "S-RNTI" in IE "U-RNTI" of the CELL UPDATE CONFIRM message sent in step 6.
Cell Update Cause	Check to see if set to 'periodical cell updating'

UTRAN MOBILITY INFORMATION (Step 8)

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

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T305	infinity

UTRAN MOBILITY INFORMATION (Step 14)

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

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T305	5

8.3.1.3.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 and then transmits a CELL UPDATE message setting value "periodical cell update" into IE "Cell update cause".

After step 3 the UE shall not send any uplink message as a response to CELL UPDATE CONFIRM message sent in step 3.

After step 4 the UE shall send a CELL UPDATE message, specifying the cell updating cause to be "periodical cell update".

After step 6 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

After step 8, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

Between step 12a and 14, the UE shall not transmit any CELL UPDATE message.

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

After step 16, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 18a, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "periodical cell update" on the uplink CCCH.

8.3.1.4 Cell Update: periodical cell update in CELL_PCH

8.3.1.4.1 Definition

8.3.1.4.2 Conformance requirement

This procedure is to update UTRAN with the information of the current cell when the UE detects that it is still in the service area, while residing in the CELL_PCH state, after the expiry of timer T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.4.3 Test purpose

To confirm that the UE, in CELL_PCH state, executes a cell update procedure after the expiry of timer T305.

8.3.1.4.4 Method of test

Initial Condition

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

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.1.4

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

Table 8.3.1.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE starts from CELL_PCH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE moves to CELL_FACH state. It shall transmit a CELL UPDATE message on the uplink CCCH and set the value "periodical cell update" into IE "Cell update cause". SS answers with a CELL UPDATE CONFIRM message. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "infinity", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.4, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM with IE "RRC state indicator" set to "CELL_PCH". Then UE shall enter CELL_PCH state. SS then monitors the uplink CCCH for a period up to the maximum possible value for timer T305 (720 minutes) and verifies that no CELL_UPDATE message is received. SS then configures its downlink transmission power settings according to columns "T0" in table 8.3.1.4, causing the UE to enter CELL_FACH state in cell 1 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Next, SS transmits UTRAN MOBILITY INFORMATION message, which includes IE "T305" set to "5", to UE. UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.4, causing the UE to enter CELL_FACH state in cell 2 and transmit a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". Then SS shall transmit CELL UPDATE CONFIRM with IE "RRC state indicator" set to "CELL_PCH". Then UE shall enter CELL_PCH state. After T305 expires, UE shall transmit CELL UPDATE message with IE "cell update cause" set to "periodical cell update". SS shall transmit CELL UPDATE CONFIRM message to end the procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state. SS waits until T305 has expired. Wait for CELL UPDATE message and then verify that the time of arrival of this message is in the range of T305 value +/- 10 % after it entered CELL_PCH state
2	→		CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "periodical cell update".
3	←		CELL UPDATE CONFIRM	
3a	→		UTRAN MOBILITY INFORMATION CONFIRM	
4	←		UTRAN MOBILITY INFORMATION	IE "T305" is set to 'infintiy'.
5	→		UTRAN MOBILITY INFORMATION CONFIRM	
6				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.4.
7	→		CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
8	←		CELL UPDATE CONFIRM	UE enters CELL_PCH state after transmitting this message.
9				SS waits for 720 minutes and checks that no CELL UPDATE message is transmitted on uplink PRACH channel.

Step	Direction		Message	Comment
	UE	SS		
10				SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.4.
11	→		CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
12	←		CELL UPDATE CONFIRM	
12a	→		UTRAN MOBILITY INFORMATION CONFIRM	
13	←		UTRAN MOBILITY INFORMATION	IE "T305" is set to '5'.
14	→		UTRAN MOBILITY INFORMATION CONFIRM	
15				SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.1.4.
16	→		CELL UPDATE	The UE shall move to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection".
17	←		CELL UPDATE CONFIRM	UE enters CELL_PCH state after transmitting this message.
18				SS wait for T305 timer to expire
19	→		CELL UPDATE	IE "Cell update cause" shall be set to "periodical cell update".
20	←		CELL UPDATE CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2 and 19)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0000 0000 0000 0000 0001'~~
~~Cell Update Cause~~	~~Check to see if set to 'periodical cell updating'~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'periodical cell updating'

CELL UPDATE (Step 7, 11 and 16)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~Cell Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to "cell reselection"~~

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

CELL UPDATE CONFIRM (Step 20)

Use the same message sub-type found in Annex A.

CELL UPDATE CONFIRM (Step 3 and 12)

Use the same message sub-type found in Annex A, with the following exceptions:

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

CELL UPDATE CONFIRM (Step 8 and 17)

Use the same message sub-type found in Annex A, with the following exceptions:

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

UTRAN MOBILITY INFORMATION (Step 4 and 13)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T305	Set to 'infinity' in step 4 and '5' in step 13

8.3.1.4.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, it shall then move to CELL_FACH state and transmits a CELL UPDATE message with the IE "Cell update cause" set to "periodical cell update".

After step 3, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 4, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 6, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 8 and before step 10, the UE shall not transmit any CELL UPDATE messages.

After step 10, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 13, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 15, the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "cell reselection" on the uplink CCCH.

After step 18 the UE shall transmit a CELL UPDATE message stating the cell update cause to be periodic updating.

8.3.1.5 Cell Update: UL data transmission in URA_PCH

8.3.1.5.1 Definition

8.3.1.5.2 Conformance requirement

This procedure is to update UTRAN with the current cell information if the UE wants to transmit uplink data while in URA_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.5.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in URA_PCH state.

8.3.1.5.4 Method of test

Initial Condition

System Simulator: 1cell

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

Test Procedure

SS sends a MEASUREMENT CONTROL message to trigger UE to measure the traffic volume on RACHorCPCH in a traffic volume measurement with measurement validity set to "all-states" and to report periodically by the MEASUREMENT REPORT message using UM RLC. UE shall send MEASUREMENT REPORT message to SS using UM RLC on DCCH. SS then transmit a RADIO BEARER RELEASE message with IE "RRC State Indicator" is set to "URA_PCH". The UE shall reply with RADIO BEARER RELEASE COMPLETE message and move to URA_PCH state. UE shall detect that the periodical timer for measurement reporting has elapsed and attempt to transmit a MEASUREMENT REPORT message. The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "uplink data transmission". After receiving such a message, SS transmits CELL UPDATE CONFIRM message. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. The UE shall stay in CELL_FACH state and transmit MEASUREMENT REPORT message using UM RLC on DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state.
2	←		MEASUREMENT CONTROL	
3	→		MEASUREMENT REPORT	
4	←		RADIO BEARER RELEASE	IE "RRC State Indicator" set to "URA_PCH"
5	→		RADIO BEARER RELEASE COMPLETE	UE moves to URA_PCH state.
6	→		CELL UPDATE	The UE shall move to CELL FACH state with the message set to "uplink data transmission" in IE "Cell update cause".
7	←		CELL UPDATE CONFIRM	See message content.
7a	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in Annex A with the following exceptions:

Information Element	Value/remark
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Unacknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Periodical
CHOICE Measurement Type	Traffic volume measurement
- Traffic volume measurement objects	1
- Uplink transport channel type	RACHorCPCH
- Traffic volume measurement quantity	
- Measurement quality	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- Measurement validity	All states
- CHOICE reporting criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	64000

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
RB information to release list	
- RB identity	20 or 21 (for radio access bearer)
RB information to be affected list	Not Present
UL Transport channel information common for all transport channel	Not Present
Deleted TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	Not Present
DL Transport channel information common for all transport channel	Not Present
Deleted TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	Not Present
CHOICE channel requirement	Not Present
Downlink information per radio link list	Not Present

CELL UPDATE (Step 6)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'uplink data transmission'~~

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 'uplink data transmission'

CELL UPDATE CONFIRM (Step 7)

Use the same message sub-type found in Annex A, with the following exceptions:

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

MEASUREMENT REPORT (Step 3 and 8)

Only the message type IE in this message will be checked.

RADIO BEARER RELEASE COMPLETE (Step 5)

Only the message type IE in this message will be checked.

8.3.1.5.5 Test requirement

After step 2, UE shall transmit a MEASUREMENT REPORT message to SS using UM RLC on DCCH when 64 seconds has elapsed since the acknowledgement of MEASUREMENT CONTROL message.

After step 4, UE shall transmit a RADIO BEARER RELEASE COMPLETE message and move to URA_PCH state.

After step 5, the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "uplink data transmission" in IE "Cell update cause".

After step 7, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7a, UE shall transmit MEASUREMENT REPORT message to SS using AM RLC on DCCH.

8.3.1.6 Cell Update: UL data transmission in CELL_PCH

8.3.1.6.1 Definition

8.3.1.6.2 Conformance requirement

This procedure is to update UTRAN with the current cell of the UE if the UE wants to transmit uplink data when the UE is in CELL_PCH state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.6.3 Test purpose

To confirm that the UE executes a cell update procedure when the UE transmits uplink data if the UE is in CELL_PCH state.

8.3.1.6.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in the CELL_FACH state. SS sends a MEASUREMENT CONTROL message to trigger UE to measure the traffic volume on RACHorCPCH in a traffic volume measurement with measurement validity set to "all-states" and to report periodically by the MEASUREMENT REPORT message using UM RLC. UE shall send a MEASUREMENT REPORT message to SS using UM RLC on DCCH. SS then transmits a RADIO BEARER RELEASE message with IE "RRC State Indicator" is set to "CELL_PCH". The UE shall reply with RADIO BEARER RELEASE COMPLETE message and move to CELL_PCH state. UE shall detect that the periodical timer for measurement reporting has elapsed and attempt to transmit a MEASUREMENT REPORT message. The UE then moves to CELL_FACH state and transmits a CELL UPDATE message to the SS on the uplink CCCH, with the IE "Cell update cause" set to value "uplink data transmission". After receiving such a message, SS transmits a CELL UPDATE CONFIRM message. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. The UE shall stay in CELL_FACH state and transmit a MEASUREMENT REPORT message using UM RLC on DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state.
2	←		MEASUREMENT CONTROL	
3	→		MEASUREMENT REPORT	
4	←		RADIO BEARER RELEASE	IE "RRC State Indicator" set to "CELL_PCH"
5	→		RADIO BEARER RELEASE COMPLETE	UE moves to CELL_PCH state.
6	→		CELL UPDATE	The UE moves to CELL FACH state and transmit this message which is set to "uplink data transmission" in IE "Cell update cause".
7	←		CELL UPDATE CONFIRM	See message content .
7a	→		UTRAN MOBILITY INFORMATION CONFIRM	
8	→		MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in Annex A with the following exceptions:

Information Element	Value/remark
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Unacknowledged mode RLC
- Measurement Reporting/Event Trigger Reporting Mode	Periodical
CHOICE Measurement Type	Traffic volume measurement
- Traffic volume measurement objects	1
- Uplink transport channel type	RACHorCPCH
- Traffic volume measurement quantity	
- Measurement quality	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- Measurement validity	All states
- CHOICE reporting criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	64000

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
RB information to release list	
- RB identity	20 or 21 (for radio access bearer)
RB information to be affected list	Not Present
UL Transport channel information common for all transport channel	Not Present
Deleted TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	Not Present
DL Transport channel information common for all transport channel	Not Present
Deleted TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	Not Present
CHOICE channel requirement	Not Present
Downlink information per radio link list	Not Present

CELL UPDATE (Step 6)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'uplink data transmission'~~

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 'uplink data transmission'

CELL UPDATE CONFIRM (Step 7)

Use the same message sub-type found in Annex A, with the following exceptions:

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

MEASUREMENT REPORT (Step 3 and 8)

Only the message type IE in this message will be checked.

RADIO BEARER RELEASE COMPLETE (Step 5)

Only the message type IE in this message will be checked.

8.3.1.6.5 Test requirement

After step 2, UE shall transmit a MEASUREMENT REPORT message to SS using UM RLC on DCCH when 64 seconds has elapsed since the acknowledgement of MEASUREMENT CONTROL message.

After step 4, UE shall transmit a RADIO BEARER RELEASE COMPLETE message and move to CELL_PCH state.

After step 5, the UE shall move to CELL_FACH state to initiate a cell update procedure and transmits a CELL UPDATE message which is set to "uplink data transmission" in IE "Cell update cause".

After step 7, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7a, UE shall transmit a MEASUREMENT REPORT message to SS using UM RLC on DCCH.

8.3.1.7 Void

8.3.1.8 Void

8.3.1.9 Cell Update: re-entering of service area after T305 expiry and being out of service area

8.3.1.9.1 Definition

8.3.1.9.2 Conformance requirement

When a UE detects that it's out of service area after experiencing a T305 timer expiry, it shall try to search for a suitable cell to camp on. At the same time, it shall start timer T307. If the UE subsequently re-enters the service area of a cell before T307 expires, it shall perform a cell update procedure.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.9.3 Test purpose

To confirm that the UE performs a cell search after experiencing an "out of service area" condition following the expiry of timer T305. To confirm that the UE initiates cell updating procedure if it manages to re-enter the service area.

8.3.1.9.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

Table 8.3.1.9

Parameter	Unit	Cell 1	
		T0	T1
UTRA RF Channel Number		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.1.9 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in the CELL_FACH state. The content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.9 so that S<0. Following the expiry of periodic cell updating timer T305 according to the system information, the UE shall detect that it is out of service area. Within the time interval equivalent to T307 timer value, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.9 so that S>0. The UE shall find that it is back in service area, and transmit a CELL UPDATE message to the SS on the uplink CCCH. In this message, the IE "Cell update cause" shall be set to "re-entered service area". After the SS receives this message, it transmits a CELL

UPDATE CONFIRM message with the IE "RRC State Indicator" set "CELL_PCH" on the downlink DCCH. The UE shall enter CELL_PCH state. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.9 so that S<0. Following the expiry of periodic cell updating timer T305 according to the system information, the UE shall detect that it is out of service area. Within the time interval equivalent to T307 timer value, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.9 so that S>0. The UE shall find that it is back in service area, move to CELL_FACH and transmits a CELL UPDATE message to the SS on the uplink CCCH. In this message, the IE "Cell update cause" shall be set to "re-entered service area". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message on the downlink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state of cell 1.
1a	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents).
1b	←		SYSTEM INFORMATION CHANGE INDICATION	
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.9 so that its S value falls below 0.
3				The UE shall detect a "out of service" condition upon expiry of timer T305 and it shall search for other cells to camp on. (T307 timer starts)
4				SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.9.
5	→		CELL UPDATE	The value "re-entered service area" shall be found in IE "Cell update cause" in this message
6	←		CELL UPDATE CONFIRM	"RRC State Indicator" is set to "CELL_PCH"
7				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.9 so that its S value falls below 0 and waits until T305 has expired.
8				SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.9.
9	→		CELL UPDATE	UE shall move to CELL_FACH. It shall transmit this message with cell update cause set to "re-entered service area"
10	←		CELL UPDATE CONFIRM	

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

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

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

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

Information Element	Value/remark
Qrxlevmin	-70

SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

~~Information Element~~	~~Value/remark~~
~~Message Type~~ ~~BCCH modification info~~ ~~MIB Value tag~~	 ~~2~~

Information Element	Value/remark
Message Type BCCH modification info MIB Value tag	 2

CELL UPDATE (Step 5 and 9)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~Cell Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to 're-entered service area'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 're-entered service area'

CELL UPDATE CONFIRM (Step 6 and 10)

Use the same message sub-type found in Annex A, with the following exception.

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

8.3.1.9.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message in which the IE "Cell update cause" is set to the value "re-entered service area".

After step 8 the UE shall move to CELL_FACH and then transmit a CELL UPDATE message, with the IE "Cell Update Cause" set to "re-entered service area".

8.3.1.10 Cell Update: expiry of T307 after T305 expiry and being out of service area

8.3.1.10.1 Definition

8.3.1.10.2 Conformance requirement

This procedure is required to cater for the case of a failure to update UTRAN with the current cell, after the expiry of T307. In this case, the UE shall return to idle mode and perform cell reselection if possible.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.10.3 Test purpose

To confirm that the UE moves to idle mode after the expiry of T307, indicating that it is out of service area when attempting to perform a periodic cell updating procedure.

8.3.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

Table 8.3.1.10

Parameter	Unit	Cell 1	
		T0	T1
UTRA RF Channel Number		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.1.10 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in CELL_FACH state at the start of the test. Before the expiry of periodic cell updating timer T305, the content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.10 so that S<0 and this results in a "out of service area" condition. The SS continues to listen to the uplink channel to detect possible attempts to perform a cell updating procedure. The UE shall not send any CELL UPDATE message on the uplink CCCH, instead it triggers timer T307 and T305. After the expiry of timer T307 and SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.10 so that S>0, the UE shall enter idle state. This is confirmed by the SS when it sends a PAGING TYPE 1 message to the UE using UE identity, and the UE shall respond to the message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state.
1a	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents).
1b	←		SYSTEM INFORMATION CHANGE INDICATION	
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.10 so that the cell is no longer suitable for camping. The UE shall detect that it is out of service area and refrains from transmitting CELL UPDATE message due to periodic cell updating.
3				The UE detects the expiry of timer T305 and it searches for other cells to camp on. After the expiry of timer T307, the UE shall enter idle mode. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.10 so that the cell is suitable for camping.
4	←		PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated UE identity.
5	→		RRC CONNECTION REQUEST	The UE shall respond to this page as it has already entered the idle mode.

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

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

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

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

Information Element	Value/remark
Qrxlevmin	-70

SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

~~Information Element~~	~~Value/remark~~
~~Message Type~~ ~~BCCH modification info~~ ~~MIB Value tag~~	 ~~2~~

Information Element	Value/remark
Message Type BCCH modification info MIB Value tag	 2

PAGING TYPE 1 (Step 4)

Use the same message type found in Annex A, with the following exception.

~~Information Element~~	~~Value/remark~~
~~Paging record list~~ ~~Paging record~~ ~~CHOICE Used paging identity~~ ~~- Paging cause~~ ~~- CN domain identity~~ ~~- CHOICE UE Identity~~ ~~- IMSI~~	~~Only 1 entry~~ ~~CN identity~~ ~~Terminating Call with one of the supported services~~ ~~Supported Domain (PS Domain or CS Domain)~~ ~~IMSI~~ ~~Set to the same IMSI value stored in the TEST USIM card.~~

Information Element	Value/remark
Paging record list Paging record CHOICE Used paging identity - Paging cause - CN domain identity - CHOICE UE Identity - IMSI	Only 1 entry CN identity Terminating Call with one of the supported services Supported Domain (PS Domain or CS Domain) IMSI Set to the same IMSI value stored in the TEST USIM card.

8.3.1.10.5 Test requirement

After step 4 the UE shall transmit a RRC CONNECTION REQUEST message to respond to a PAGING TYPE 1 message.

8.3.1.11 Cell Update: Success after T302 time-out

8.3.1.11.1 Definition

8.3.1.11.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update the UTRAN with the current cell of the UE. When the UE does not receive a CELL UPDATE CONFIRM message upon expiry of timer T302, the UE transmits a CELL UPDATE message repeatedly until its internal counter V302 counter is greater than N302.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.11.3 Test purpose

To confirm that the UE repeats the transmission of CELL UPDATE message after failing to receive any response from the SS before T302 timer expires.

8.3.1.11.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

At the start of the test, the UE is brought to CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305 according to the system information, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH. The IE "Cell update cause" in this message shall be set to "periodical cell update". SS ignores this message, and the UE shall then re-transmit a CELL UPDATE message after the expiry of timer T302. When the SS has received (N302+1) such messages, it transmits a CELL UPDATE CONFIRM message with new values for "C-RNTI" to the UE. Finally, the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts from CELL_FACH state. SS initializes its internal counter K to 0 and waits until the expiry of T305 timer.
2	→		CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause".
3				If K is equal to N302 then proceeds to step 5.
4				SS increments counter K, transmits no response to the UE and waits for an additional period equal to the value of timer T302. The next step is step 2.
5	←		CELL UPDATE CONFIRM	The message includes IEs "new C-RNTI". The IE "RRC State Indicator" is set to "CELL_FACH".
6	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

CELL UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Periodic cell updating'~~

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 'Periodic cell updating'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Annex A, with the following exception:

Information Element	Value/remark
New C-RNTI	Set to an arbitrary string different from '0000 0000 0000 0001'

8.3.1.11.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305 then transmit a CELL UPDATE message on the uplink CCCH, setting "periodical cell update" into IE "Cell update cause".

After step 2 the UE shall re-transmits a CELL UPDATE message after the expiry of timer T302. A total of (N302+1) transmissions of CELL UPDATE message shall be detected in SS.

After step 5 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH and stay at CELL_FACH state.

8.3.1.12 Cell Update: Failure (After Maximum Re-transmissions)

8.3.1.12.1 Definition

8.3.1.12.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update UTRAN with information on the current cell of the UE. If the UE fails to receive a CELL UPDATE CONFIRM message, it re-transmits a CELL UPDATE message repeatedly upon the expiry of timer T302 until the value of V302 counter is greater than N302. If V302 is greater than N302, the UE stop the re-transmission and enters idle state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.12.3 Test purpose

To confirm that the UE repeats the cell update procedure upon the expiry of timer T302 and moves to idle state when its internal counter V302 is greater than N302.

8.3.1.12.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodic cell updating procedure. The SS ignores this message, and the UE shall attempt to re-transmit a CELL UPDATE message up to a maximum of

(N302) times after the expiry of timer T302. After (N302) attempts of retransmission, the UE shall return to idle state. SS transmits a PAGING TYPE 1 message with UE's identity. UE shall respond with a RRC CONNECTION REQUEST message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state. SS sets its internal counter K=0 and waits for a period equals to timer value T305.
2	→		CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause".
3				SS transmits no response to the UE and increments counter K.
4				SS waits for an additional period equal to T302 timer and if K is not greater than N302, then next step is step 2. Else the next step is step 5.
5				The UE shall enter idle mode state.
6	←		PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated UE identity.
7	→		RRC CONNECTION REQUEST	The UE shall respond to this page as it has already entered the idle mode.

Specific Message Contents

CELL UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Periodic cell updating'~~

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 'Periodic cell updating'

8.3.1.12.5 Test requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodical cell update" into IE "Cell update cause".

After step 3 and if K is not greater than N302, the UE shall retry to transmit a CELL UPDATE message.

After step 3 and if K is greater than N302, the UE shall stop transmitting CELL UPDATE message and then enters idle state.

After step 6 the UE shall transmit a RRC CONNECTION REQUEST message to respond to the PAGING TYPE 1 message.

8.3.1.13 Cell Update: Reception of Invalid CELL UPDATE CONFIRM Message

8.3.1.13.1 Definition

8.3.1.13.2 Conformance Requirement

If the UE encounters an invalid CELL UPDATE CONFIRM message while executing a cell update procedure, it shall check the current value of its internal counter V302. If V302 is not greater than N302, the UE shall set contexts pertaining to protocol error, re-transmits a CELL UPDATE message on uplink CCCH, restart T302 timer and increments V302. It shall use the same "Cell Update Cause" as before receiving the invalid downlink message.

8.3.1.13.3 Test Purpose

To confirm that the UE retransmits a CELL UPDATE message when it receives an invalid CELL UPDATE CONFIRM message, before the number of retransmissions has reached the maximum allowed value.

8.3.1.13.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending a PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall transmit a CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with an invalid CELL UPDATE CONFIRM messageon downlink DCCH using UM RLC. The UE shall detect the protocol error and re-transmit a CELL UPDATE message up to a maximum of N302 times. SS then transmit a valid CELL UPDATE CONFIRM message. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PAGING TYPE 1	The UE is in the CELL_PCH state. SS pages for the UE using the allocated connected mode identity (U-RNTI).
2	→		CELL UPDATE	Check that the value "paging response" is set in IE "Cell update cause".
3	←		CELL UPDATE CONFIRM	See specific message content.
4	→		CELL UPDATE	Check that the value "paging response" is set in IE "Cell update cause", the value "protocol error" is set in IE "failure cause" and the value "ASN.1 violation and encoding error" is set in IE "Protocol error information".
5	←		CELL UPDATE CONFIRM	See message content.
6	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

CELL UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Paging Response'~~

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 'Paging Response'

CELL UPDATE CONFIRM (Step 3)

Information Element	Value/remark
All IEs	Not Present

CELL UPDATE (Step 4)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Paging Response'~~
~~Failure cause~~	~~Check to see if it is set to 'protocol error'~~
~~-Protocol error information~~	~~Check to see if it is set to "ASN.1 violation and encoding error"~~

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 'Paging Response'
Failure cause	Check to see if it is set to 'protocol error'
-Protocol error information	Check to see if it is set to "ASN.1 violation and encoding error"

PAGING TYPE 1 (Step 1)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Page record list~~	
~~- Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- SRNC Identity~~	~~'0000 0000 0001'~~
~~- S-RNTI~~	~~'0000 0000 0000 0000 0001'~~

Information Element	Value/remark
Page record list - Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Annex A, with the following exceptions:

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

8.3.1.13.5 Test Requirement

After step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH, setting "paging response" into IE "Cell update cause".

After step 3 the UE shall transmit a CELL UPDATE message on the uplink CCCH, setting "paging response" into IE "Cell update cause", "protocol error" into IE "failure cause" and "ASN.1 violation or encoding error" into IE "Protocol error information".

After step 5, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.14 Cell Update: Incompatible simultaneous reconfiguration

8.3.1.14.1 Definition

8.3.1.14.2 Conformance Requirement

If the UE encounters a CELL UPDATE CONFIRM message that includes "Physical channel information elements" and UE's variable ORDERED_RECONFIGURATION is set to TRUE because of an ongoing Reconfiguration procedure, it shall check the current value of its internal counter V302. If V302 is not greater than N302, the UE shall set IE "failure cause" to "Incompatible simultaneous reconfiguration", re-transmits a CELL UPDATE message on uplink CCCH, restart T302 timer and increments V302. It shall use the same "Cell Update Cause" as before receiving the downlink message.

8.3.1.14.3 Test Purpose

To confirm that the UE retransmits a CELL UPDATE message when it receives a CELL UPDATE CONFIRM message that includes "Physical channel information elements" and UE's variable ORDERED_RECONFIGURATION is set to TRUE because of an ongoing Reconfiguration procedure, before the number of retransmissions has reached the maximum allowed value.

8.3.1.14.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending a PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall transmit a

CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with a CELL UPDATE CONFIRM message contains IE "Physical channel information elements". Following that, SS immediately transmits another CELL UPDATE CONFIRM message contains IE "Physical channel information elements" before the "activation time" indicated in the previous CELL UPDATE CONFIRM message expires. The UE shall re-transmit a CELL UPDATE message with the same cause as the previous CELL UPDATE message and failure cause as "Incompatible simultaneous reconfiguration". SS then transmits a CELL UPDATE CONFIRM message to end the procedure.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PAGING TYPE 1	
2	→		CELL UPDATE	
3	←		CELL UPDATE CONFIRM	SS transmits this message including IE "Physical channel information elements".
4	←		CELL UPDATE CONFIRM	Sent before the activation time specified in the message in step 3 has elapsed.
5	→		CELL UPDATE	
6	←		CELL UPDATE CONFIRM	

Specific Message Content

CELL UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Paging Response'~~

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 'Paging Response'

CELL UPDATE (Step 5)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Paging Response'~~
~~Failure cause~~	~~Check to see if set to 'Incompatible simultaneous reconfiguration'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause Failure cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'Paging Response' Check to see if set to 'Incompatible simultaneous reconfiguration'

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Annex A, with the following exception:

Information Element	Value/remark
Activation Time Info Maximum allowed UL TX power	Current CFN-[current CFN mod 8 + 8] 30dBm

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in Annex A, with the following exception:

Information Element	Value/remark
Activation Time Info Maximum allowed UL TX power	Current CFN-[current CFN mod 8 + 8] 25dBm

PAGING TYPE 1 (Step 1)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Page record list~~ ~~- Paging record~~ ~~- CHOICE Used paging identity~~ ~~- U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~	 ~~UTRAN identity~~ ~~'0000 0000 0001'~~ ~~'0000 0000 0000 0000 0001'~~

Information Element	Value/remark
Page record list - Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity '0000 0000 0001' '0000 0000 0000 0000 0001'

8.3.1.14.5 Test Requirement

After step 1, UE shall transmit a CELL UPDATE message.

After step 4 the UE shall re-transmit a CELL UPDATE message with failure cause set to "Incompatible simultaneous reconfiguration".

8.3.1.15 Cell Update: Unrecoverable error in Acknowledged Mode RLC SRB

8.3.1.15.1 Definition

8.3.1.15.2 Conformance Requirement

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

…

1> RLC unrecoverable error:

…

2> if the UE detects RLC unrecoverable error in an AM RLC entity:

3> perform cell update using the cause "RLC unrecoverable error".

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

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

…

1> if an unrecoverable error in any of the AM RLC entities for the signalling radio bearers RB2, RB3 or RB4 is detected:

2> set the IE "AM_RLC error indication (RB2, RB3 or RB4)" to TRUE.

1> otherwise:

2> set the IE "AM_RLC error indication (RB2, RB3 or RB4)" to FALSE.

…

When the UTRAN receives a CELL UPDATE/URA UPDATE message, the UTRAN should:

…

1> initiate an RRC connection release procedure by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH. In particular UTRAN should:

2> if the CELL UPDATE message was sent because of an unrecoverable error in RB2, RB3 or RB4:

3> initiate an RRC connection release procedure by transmitting an RRC CONNECTION RELEASE message on the downlink CCCH.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.15.3 Test Purpose

- To confirm that the UE reports the occurrence of an unrecoverable error in a C-plane AM RLC entity by initiating cell update procedure.
- To confirm that UE enters idle mode state after receiving RRC CONNECTION RELEASE message on the downlink CCCH.

8.3.1.15.4 Method of Test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is initially in CELL_DCH state. SS sends a UE CAPABILITY ENQUIRY message on the DCCH using AM mode. The UE shall reply with a UE CAPABILITY INFORMATION message, sent using AM RLC on the DCCH. SS does not acknowledge the AM PDUs carrying this message. The UE shall continue to re-transmit the AM PDU carrying UE CAPABILITY INFORMATION message until the maximum re-transmission count is reached. Thereafter, the UE shall start sending RESET PDUs to request that the AM RLC entity for RRC signalling be re-initialized. SS ignores the requests and wait for a duration equivalent to (MAX_RST-1) times expiry of Timer_RST. At this point, the UE shall initiate a cell update procedure by transmitting a CELL UPDATE message on the uplink CCCH. The CELL UPDATE message shall specify the value "TRUE" in IE "AM_RLC error indicator (RB2, RB3 or RB4)" and "RLC unrecoverable error" as the cell update cause. SS sends RRC CONNECTION RELEASE message on the downlink CCCH to UE. SS waits for [TBD] s and then calls for generic procedure C.1 to check that UE is in idle mode state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is initially in CELL_DCH state.
2	←		UE CAPABILITY ENQUIRY	
3	→		UE CAPABILITY INFORMATION	SS does not acknowledge this AM PDU. The UE shall re-transmit this AM PDU until the maximum number has been reached.
4				UE shall start to transmit a RESET PDU. SS does not respond to any RESET PDU frames originated from the UE, and it waits for a period equivalent to (MAX_RST+1) times expiry of Timer_RST.
5	→		CELL UPDATE	UE shall send this message on CCCH. IE "AM_RLC Error Indication (RB2, RB3 or RB4)" shall be set to 'TRUE'
6	←		RRC CONNECTION RELEASE	Sends this message on the downlink CCCH and includes UE's UTRAN identity
7	←→		CALL C.1	If the test result of C.1 indicates that UE is in idle mode state, the test passes, otherwise it fails.

Specific Message Contents

UE CAPABILITY ENQUIRY (Step 2)

Use the same message found in Annex A.

UE CAPABILITY INFORMATION (Step 3)

Only the message type IE is checked for this message.

CELL UPDATE (Step 5)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~AM_RLC error indicator (RB2, RB3 or RB4)~~ ~~Cell update cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to 'TRUE'~~ ~~RLC unrecoverable error~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI AM_RLC error indicator (RB2, RB3 or RB4) Cell update cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'TRUE' RLC unrecoverable error

RRC CONNECTION RELEASE (Step 6)

Use the same message found in Annex A.

8.3.1.15.5 Test Requirement

After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH to report the occurrence of an unrecoverable error in AM RLC entity for RB2, RB3 or RB4 data as well as cell update cause set to "RLC unrecoverable error".

8.3.1.16 Void

8.3.1.17 Cell Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)

8.3.1.17.1 Definition

8.3.1.17.2 Conformance requirement

The UE transmits a CELL UPDATE message to the UTRAN when it needs to update UTRAN with information on the current cell of the UE. If the UE receives a RRC CONNECTION RELEASE message on CCCH, it shall release all its radio resources and enter idle mode.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.17.3 Test purpose

To confirm that the UE moves to idle state upon the reception of RRC CONNECTION RELEASE message on CCCH.

8.3.1.17.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11)

Test Procedure

The UE is initially in CELL_FACH state. When the UE detects the expiry of periodic cell updating timer T305, the UE transmits a CELL UPDATE message to the SS on the uplink CCCH to perform a periodical cell updating procedure. The SS transmits a RRC CONNECTION RELEASE message on downlink CCCH. The UE shall return to idle mode

after release of all current signalling flows and radio access bearers. SS verifies that UE is in idle mode state by paging the UE with CN identity, in which case the UE shall attempt to establish a RRC connection.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		CELL UPDATE	The value "periodical cell update" shall be set in IE "Cell update cause" and this message shall be sent upon expiry of timer T305.
2	←		RRC CONNECTION RELEASE	SS transmits a RRC CONNECTION RELEASE message to the UE.
3			Void	
4			Void	
5	←		PAGING TYPE 1	Page using TMSI for CS domain or P-TMSI for PS domain depending on CN domain supported by the UE.
6	→		RRC CONNECTION REQUEST	

Specific Message Contents

CELL UPDATE (Step 1)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Periodic cell updating'~~

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 'Periodic cell updating'

RRC CONNECTION RELEASE (Step 2)

Use the same message sub-type found in Annex A.

PAGING TYPE 1 (Step 5)

Use the same message type found in Annex A, with the following exception.

~~Information Element~~	~~Value/remark~~
~~Paging record list~~	~~Only 1 entry~~
~~Paging record~~	
~~CHOICE Used paging identity~~	~~CN identity~~
~~- Paging cause~~	~~Terminating Call with one of the supported services~~
~~- CN domain identity~~	~~Supported Domain (PS Domain or CS Domain)~~
~~- CHOICE UE Identity~~	~~IMSI~~
~~- IMSI~~	~~Set to the IMSI value stored in the TEST USIM card.~~

Information Element	Value/remark
Paging record list	Only 1 entry
Paging record	
CHOICE Used paging identity	CN identity
- Paging cause	Terminating Call with one of the supported services
- CN domain identity	Supported Domain (PS Domain or CS Domain)
- CHOICE UE Identity	IMSI
- IMSI	Set to the IMSI value stored in the TEST USIM card.

8.3.1.17.5 Test requirement

In step 1 the UE shall transmit a CELL UPDATE message on the uplink CCCH and set value "periodical cell update" into IE "Cell update cause".

After step 5 the UE transmit a RRC CONNECTION REQUEST message.

8.3.1.18 Cell Update: Radio Link Failure (T314>0, T315=0)

8.3.1.18.1 Definition

8.3.1.18.2 Conformance requirement

When a UE loses the radio connection due to e.g. radio link failure in CELL_DCH state. UE must release the radio bearer which is associated with T315 if T315 is set to 0. After a successful cell re-selection and subsequent transition to CELL_FACH state, the UE transmits CELL UPDATE message on the uplink CCCH.

If the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message and the maximum allowable number of retransmission has not been reached, the UE shall select a suitable UTRA cell and transmit a CELL UPDATE message.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.18.3 Test purpose

To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T315 and try to find a new cell after detecting that a radio link failure has occurred.

To confirm that the UE performs a cell selection procedure when it fails to configure the physical channel(s) indicated in the CELL UPDATE CONFIRM message.

8.3.1.18.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 is active, Cell 2 is inactive).

UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) in cell 1, depending on the CN domain(s) supported by the UE.

Test Procedure

Table 8.3.1.18

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

Table 8.3.1.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is brought to CELL_DCH state in a cell 1 after making a successful outgoing call attempt. After the call has been established, SS transmits UTRAN MOBILITY INFORMATION message to UE to change to value of T315 timer. UE shall respond with a UTRAN MOBILITYBINFORMATION CONFIRM message. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.18. The UE shall detect a radio link failure in cell 1 and indicate to the non-access stratum the release of the radio bearer which is associated with T315. Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated physical channel parameters. SS shall not configure according to this message and its downlink transmission power settings according to columns "T0" in table 8.3.1.18. UE shall fail to establish the dedicated channel in cell 2. UE shall re-select to cell 1 and transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure". Then SS responds with a CELL UPDATE CONFIRM message to end the procedure. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		UTRAN MOBILITY INFORMATION	T315=0
2	→		UTRAN MOBILITY INFORMATION CONFIRM	
3			Void	
4				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.18. SS starts to listen to the uplink CCCH of cell 2.
5			Void	
6				The UE detects the radio link failure which is associated with T315. The UE indicates to the non-access stratum the release of the radio bearer.
7	→		CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
8	←		CELL UPDATE CONFIRM	Including dedicated physical channel parameters.
9				SS does not configure according to the message in step 8. SS configures cell 1 and 2 according to column "T0" in table 8.3.1.18.
10	→		CELL UPDATE	UE shall select cell 1 and enter CELL_FACH state to transmit this message
11	←		CELL UPDATE CONFIRM	See message content.
12	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

UTRAN MOBILITY INFORMATION (Step 1)

The contents of UTRAN MOBILITY INFORMATION message in this test case is identical to those in Annex A with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
- T315	0

CELL UPDATE (Step 7)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'
RB timer indicator	
- T314 expired	FALSE
- T315 expired	TRUE

CELL UPDATE CONFIRM (Step 8)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in the RADIO BEARER SETUP message in initial condition.

CELL UPDATE (Step 10)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~-SRNC Identity~~	~~Check to see if set to value assigned in cell 1.~~
~~- S-RNTI~~	~~Check to see if set to value assigned in cell 1.~~
~~Cell Update Cause~~	~~Check to see if set to 'radio link failure'~~

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'

CELL UPDATE CONFIRM (Step 12)

Use the same message sub-type found in Annex A, with the following exceptions:

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

8.3.1.18.5 Test requirement

After step 1, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message.

After step 6, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 9, the UE shall transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure".

After step 12, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.19 Void

8.3.1.20 Cell Update: Reception of CELL UPDATE CONFIRM Message that causes invalid configuration

8.3.1.20.1 Definition

8.3.1.20.2 Conformance Requirement

If the UE encounters a CELL UPDATE CONFIRM message that set the variable INVALID_CONFIGURATION to TRUE while executing a cell update procedure, it shall check the current value of its internal counter V302. If V302 is not greater than N302, the UE shall set IE "failure cause" to "invalid configuration", re-transmit a CELL UPDATE message on uplink CCCH, restart T302 timer and increment V302. It shall use the same "Cell Update Cause" as before receiving the erroneous downlink message.

8.3.1.20.3 Test Purpose

To confirm that the UE retransmits a CELL UPDATE message when it receives a CELL UPDATE CONFIRM message that will trigger an invalid configuration in the UE, if the number of retransmissions has not reached the maximum allowed value.

8.3.1.20.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: CELL_PCH (state 6-12) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to CELL_PCH state at the beginning of the test. SS pages the UE by sending a PAGING TYPE 1 message using the U-RNTI identity assigned during RRC connection establishment procedure. The UE shall transmit a CELL UPDATE message on the uplink CCCH. Upon receiving such a message, the SS replies with a CELL UPDATE CONFIRM message which is set to give an invalid configuration. The UE shall re-transmit CELL UPDATE message. SS responds with a valid CELL UPDATE CONFIRM message to end the procedure. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PAGING TYPE 1	The UE is in the CELL_PCH state. SS pages for the UE using the allocated connected mode identity (U-RNTI).
2	→		CELL UPDATE	If CELL UPDATE message is received, check that the value "paging response" is set in IE "Cell update cause".
3	←		CELL UPDATE CONFIRM	SS transmits an invalid message.
4	→		CELL UPDATE	IE "failure cause" is set to "invalid configuration"
5	←		CELL UPDATE CONFIRM	
6	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

CELL UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Paging Response'~~

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 'Paging Response'

CELL UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Annex A, with the following exception:

Information Element	Value/remark
RRC State Indicator	CELL_DCH
~~Uplink DPCH info~~	~~Not Present~~
Uplink DPCH info	Not Present

CELL UPDATE (Step 4)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~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 'Paging Response'~~
~~Failure cause~~	~~Check to see if it is set to 'invalid configuration'~~

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 'Paging Response'
Failure cause	Check to see if it is set to 'invalid configuration'

PAGING TYPE 1 (Step 1)

Use the same message sub-type titled "TM (Packet in PS)" in default message content of TS 34.108 with following exceptions:

~~Information Element~~	~~Value/remark~~
~~Page record list~~	
~~- Paging record~~	
~~- CHOICE Used paging identity~~	~~UTRAN identity~~
~~- U-RNTI~~	
~~- - SRNC Identity~~	~~'0000 0000 0001'~~
~~- S-RNTI~~	~~'0000 0000 0000 0000 0001'~~

Information Element	Value/remark
Page record list - Paging record - CHOICE Used paging identity - U-RNTI - SRNC Identity - S-RNTI	 UTRAN identity '0000 0000 0001' '0000 0000 0000 0000 0001'

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Annex A, with the following exceptions:

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

8.3.1.20.5 Test Requirement

After step 1 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response".

After step 3 the UE shall transmit a CELL UPDATE message with IE "cell update cause" set to "paging response" and IE "failure cause" set to "invalid configuration".

After step 5, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.21 Cell Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list

8.3.1.21.1 Definition

8.3.1.21.2 Conformance requirement

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

1.- Cell reselection:

- if none of the criteria for performing cell update with the causes specified above in the current clause is met; and
- if the UE is in CELL_FACH or CELL_PCH state; and
- if the UE performs cell re-selection or the variable C_RNTI is empty:
  - perform cell update using the cause "cell reselection".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
   - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
   - The cell is not barred.
   - The cell is not part of the list of "forbidden LAs for roaming"
   - The cell selection criteria are fulfilled.
3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that

downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.1.21.3 Test purpose

1 To confirm that the UE executes a cell update procedure after a successful reselection of another UTRA cell with a PLMN identity different from the original cell but with a PLMN identity that is part of the equivalent PLMN list in the UE. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

NOTE: Verifies conformance requirement 1, 2 and 3.

2. To confirm that the UE refrains from executing a cell update procedure to a better UTRA cell with another PLMN identity when that PLMN identity is not part of the equivalent PLMN list in the UE.

NOTE: Verifies conformance requirement 1, 2 and 3.

NOTE: Test case in 8.3.1.1 is a test where the UE reselects to a cell with the same PLMN identity as the registered PLMN.

8.3.1.21.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.1.1-1, while cell 2 and cell 3 is inactive.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored equivalent PLMN list containing PLMN-1 and PLMN-2. The equivalent PLMN list stored in the UE shall not contain PLMN-3.

Test Procedure

The SS activates Cell 1-3 according table 8.3.1.21.

Table 8.3.1.21

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
PLMN identity		PLMN-1			PLMN-2			PLMN-3		
CPICH RSCP (FDD)	dBm	-73	-79	-79	Cell 2 is switched off	-73	-79	Cell 3 is switched off	Cell 3 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	-62	Cell 2 is switched off	-62	-68	Cell 3 is switched off	Cell 3 is switched off	-62

Table 8.3.1.21-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

a) At T0, the SS activates Cell 1.

b) At T1, the SS activates Cell 2, and monitors Cell 2 for received messages from UE.

c) UE re-selects to Cell 2, and sends a CELL UPDATE

d) At T2, the SS activates Cell 3, and monitors Cell 3 for received messages from UE.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				At T0: UE is camped on Cell 1 and registered to PLMN1
2	→		CELL UPDATE	At T1: Sent in Cell 2 The value "cell reselection" set in IE "Cell update cause".
3	←		CELL UPDATE CONFIRM	
4	→		UTRAN MOBILITY INFORMATION CONFIRM	
5				At T2: No message sent by UE

Specific Message Contents

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type titled "CELL UPDATE CONFIRM message" in Annex A with following exceptions:

Information Element	Value/remark
- New C-RNTI ~~- URA identity~~	Present ~~Not present~~
- URA identity	Not present

8.3.1.21.5 Test requirement

The UE shall send a CELL UPDATE at T1 but refrain from sending a cell update (or any other message) after T2.

8.3.1.22 Cell update: Restricted cell reselection to a cell belonging to forbidden LA list (Cell_FACH)

8.3.1.22.1 Definition

8.3.1.22.2 Conformance requirement

1. -Cell reselection:

   - if none of the criteria for performing cell update with the causes specified above in the current clause is met; and

   - if the UE is in CELL_FACH or CELL_PCH state; and

   - if the UE performs cell re-selection or the variable C_RNTI is empty:

     - perform cell update using the cause "cell reselection".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.

- The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
- The cell is not barred.
- The cell is not part of the list of "forbidden LAs for roaming"
- The cell selection criteria are fulfilled.

3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.1.22.3 Test purpose

To confirm that the UE executes a cell update procedure after a successful reselection of another UTRA cell with a LA identity that is not part of the list of LAs stored in the UE as "forbidden location areas for roaming". To confirm that if the UE get a release message and is moved to idle mode, performs a location registration where the LA list is updated and the UE again enters connected mode, that the UE refrains from selecting that same UTRA cell if that is part of the forbidden LA list.

NOTE: Test case in 8.3.1.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

NOTE: Test case in 8.1.3.2 is a test where normal RRC connection release on DCCH in CELL_FACH state is tested.

NOTE: Test case in 8.1.9 is a test where normal RRC connection request and location registration is tested.

8.3.1.22.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.1.22, while cell 2 is inactive.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have an empty list of LAs stored that are "forbidden location areas for roaming". The UE shall be registered to CS through cell 1 with LA-ID 1.

Test Procedure

Table 8.3.1.22

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
LA identity		LA-ID 1		LA-ID 2	
CPICH RSCP (FDD)	dBm	-73	-79	Cell 2 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 2 is switched off	-68

Table 8.3.1.22-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

a) At T1, verify that the UE reselects to cell 2 and sends a cell update.

b) SS sends a RRC connection release message to the UE from cell2.

c) The UE performs a location registration to cell 2 (RRC Conection request, setup, initial direct transfer, DL direct transfer (with LA forbidden for roaming), RRC connection release.)

d) The UE reselects cell 1 again although this is not the best cell.

e) The UE performs a location registration to cell 1 (RRC Conection request, setup, initial direct transfer, DL direct transfer (without LA forbidden for roaming)).

f) Keep the UE in RRC Connected mode in CELL_FACH state.

g) Make sure the UE refrains from reselecting cell2 and sends a cell update (or any other message) in cell2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		CELL UPDATE	At T1: Sent in Cell 2 The value "cell reselection" set in IE "Cell update cause".
2	←		RRC CONNECTION RELEASE	The value "Normal event" is set in IE "Release cause"
3	→		RRC CONNECTION RELEASE COMPLETE	
4	→		RRC CONNECTION REQUEST	The value "Registration" is set in IE "Establishment cause"
5	←		RRC CONNECTION SETUP	
6	→		RRC CONNECTION SETUP COMPLETE	
7	→		INITIAL DIRECT TRANSFER	Includes MM message LOCATION UPDATING REQUEST
8	←		DOWNLINK DIRECT TRANSFER	Includes MM message LOCATION UPDATING REJECT with reject cause "Roaming not allowed in this location area"
9	←		RRC CONNECTION RELEASAE	The value "Normal event" is set in IE "Release cause"
10	→		RRC CONNECTION RELEASE COMPLETE	The value "Normal event" is set in IE "Release cause"
11	→		RRC CONNECTION REQUEST	Sent in Cell 1. The value "Registration" is set in IE "Establishment cause"
12	←		RRC CONNECTION SETUP	
13	→		RRC CONNECTION SETUP COMPLETE	
14	→		INITIAL DIRECT TRANSFER	Includes MM message LOCATION UPDATING REQUEST
15	←		DOWNLINK DIRECT TRANSFER	Includes MM message LOCATION UPDATING ACCEPT

Specific Message Contents

FFS

8.3.1.22.5 Test requirement

The UE shall send a CELL UPDATE in Cell 2 at T1, attempt Location registration in Cell 2, but, since the location registration is rejected in Cell 2, not send any more messages in Cell 2

8.3.1.23 Cell Update: HCS cell reselection in CELL_FACH

8.3.1.23.1 Definition

8.3.1.23.2 Conformance requirement

This procedure is used to update UTRAN with the current cell of the UE after it has performed a cell reselection in CELL_FACH state with HCS parameters applied.

Reference

3GPP TS 25.331 clause 8.3.1.

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

8.3.1.23.3 Test purpose

To confirm that the UE can read HCS related SIB information and act upon all HCS parameters. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.23.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To inTable 8.3.1.21-1. Cell 2 and 3 are switched off.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE

Specific Message Content

For system information blocks 3, 4, 11 & 12 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 3 (FDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- $S_{intrasearch}$	16 dB
- $S_{intersearch}$	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- $S_{search,RAT}$	-32 dB
- $S_{HCS,RAT}$	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Q_{hyst1s}	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qrxlevmin	-103 dBm
- $Qhyst1_S$	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- $Qhyst1_S$	10 (gives actual value of 20 dB)
- $Qhyst2_S$	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- $S_{intrasearch}$	10 dB
- $S_{intersearch}$	10 dB
- $S_{searchHCS}$	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- $S_{search,RAT}$	-32 dB
- $S_{HCS,RAT}$	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-103 dBm
- Q_{hyst1_S}	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Test Procedure

Table 8.3.1.23-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm	-61	-76	-61	-80	-80	-67	-80	-70	-73
H* (After PenaltyTime)		15	0	15	-4	-4	9	-4	6	3
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (After PenaltyTime)		-41	-41	-41	-60	-60	-47	-60	-53	-53

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.21-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.21-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2	←		BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.1-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall find still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_FACH State
3				SS changes the power levels as per column 'T1' in the table 8.3.1.21-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4	→		CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" Received in Cell 3
5	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
6	→		UTRAN MOBILITY INFORMATION CONFIRM	
7				SS changes the power levels as per column 'T2' in the table 8.3.1.21-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8	→		CELL UPDATE	Received in Cell 2
9	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
10	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

Contents of System Information Block type 3 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	-20dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~In step 4 and 8~~
~~Cell Update Cause~~	~~Check to see if set to 'Cell Re-selection'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Check to see if set to '0000 0000 0001' In step 4 and 8 Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 9)

Use the same message sub-type found in Annex A, with the following exceptions:

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

8.3.1.23.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 5 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 9 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.24 Cell Update: HCS cell reselection in CELL_PCH

8.3.1.24.1 Definition

8.3.1.24.2 Conformance requirement

This procedure is used to update UTRAN with the current cell of the UE after it has performed a cell reselection in CELL_PCH state with HCS parameters applied.

Reference

3GPP TS 25.331 clause 8.3.1.

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

8.3.1.24.3 Test purpose

To confirm that the UE can read HCS related SIB information and act upon all HCS parameters. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.24.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in table 8.3.1.21-1. Cell 2 and 3 are switched off.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Specific Message Content

For system information blocks 3, 4, 11 & 12 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 3 (FDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- $Qhyst1_S$	10 (gives actual value of 20 dB)
- $Qhyst2_S$	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qrxlevmin	-103 dBm
- $Qhyst1_S$	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Test Procedure

Table 8.3.1.24-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm	-61	-76	-61	-80	-80	-67	-80	-70	-73
H* (After Penalty Time)		15	0	15	-4	-4	9	-4	6	3
R* (After Penalty Time)		-41	-41	-41	-60	-60	-47	-60	-53	-53
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (After PenaltyTime)		-41	-41	-41	-60	-60	-47	-60	-53	-53

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_PCH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.22-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink DCCH. UE shall return to CELL_PCH state in Cell 3 and will not transmit anything on PRACH. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.22-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 2 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink DCCH. UE shall return to CELL_PCH state in Cell 2 and will not transmit anything on PRACH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state in cell 1
2	←		BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.1-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall find still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_PCH State
3				SS changes the power levels as per column 'T1' in the table 8.3.1.21-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4	→		CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 3
5	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
7				SS changes the power levels as per column 'T2' in the table 8.3.1.21-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8	→		CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 2
9	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".

Specific Message Contents

Contents of System Information Block type 3 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	-20dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~Cell Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~In step 4 and 7~~ ~~Check to see if set to 'Cell Re-selection'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell Update Cause	 Check to see if set to '0000 0000 0001' In step 4 and 7 Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 8)

Use the same message sub-type found in Annex A, with the following exceptions:

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

8.3.1.24.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 6 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

8.3.2 URA Update

8.3.2.1 URA Update: Change of URA

8.3.2.1.1 Definition

8.3.2.1.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE after a change of URA has occurred in URA_PCH state. It may also be used for supervision of the RRC connection, even if no change of URA takes place.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.1.3 Test purpose

To confirm that the UE executes an URA update procedure after the successful change of URA. To confirm UE responds correctly when it re-selects to a new cell while waiting for URA UPDATE CONFIRM message from SS.

8.3.2.1.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 and 2 are active with URA-ID 1 and the downlink transmission power shown in column marked "T0" in table 8.3.2.1, while cell 3 is active with URA-ID 2.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, with URA-ID 1 from the list of URA-ID in cell 1.

Test Procedure

Table 8.3.2.1

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 (FDD)	dBm/3.84MHz	-60	-75	-75	-75	-60	-75	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-75	-60	-75	-75	-75	-60

The test begins with the downlink power transmission of all cells set according to 'T0' column in table 8.3.2.1. The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. The SS then adjusts the transmission power again according to 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 2. Since same URA identity is broadcasted in cell 1 and 2, the UE shall not perform any URA update procedure due to the change of URA. Next SS adjusts the transmission power according to 'T2' column. UE shall perform a cell reselection to cell 3 and when the UE finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits a URA UPDATE CONFIRM message, which includes the IEs "RRC State Indicator" and IE "URA-ID" to the UE on the downlink DCCH. The IE "RRC State Indicator" is set to "URA_PCH". UE returns to URA_PCH state in cell 3 without sending any uplink response message. Next SS adjusts the transmission power according to 'T1' column. UE shall re-select to cell 2 and transmit a URA UPDATE message to SS. However, SS do not acknowledge but adjusts the transmission power according to 'T0' column. UE shall perform cell re-selection to cell 1 and then sent a URA UPDATE message to SS. Finally SS shall transmit URA UPDATE CONFIRM message to UE.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is updated with only 1 URA identity carried currently by cell 1. The starting state of the UE is URA_PCH
2				SS set the power transmission of all cells according to column 'T1' of table 8.3.2.1.
3				UE shall perform a cell reselection but shall not transmit URA UPDATE message with the update cause of "change of URA".
4				SS set the power transmission of all cells according to column 'T2' of table 8.3.2.1.
5	→		URA UPDATE	The UE shall perform a cell reselection first and when it finds that its current URA-ID 1 is not in the newly broadcasted list of URA-IDs, it shall then transmit this message and set value "change of URA" into IE "URA update cause".
6	←		URA UPDATE CONFIRM	Message comprises IE "RRC State Indicator" set "URA_PCH", and also IE "URA Identity" equals to "URA-ID 2".
7				SS set the power transmission of all cells according to column 'T1' of table 8.3.2.1.
8	→		URA UPDATE	
9				SS do not respond to the URA UPDATE message from UE and set the power transmission of all cells according to column 'T0' of table 8.3.2.1.
10	→		URA UPDATE	
11	←		URA UPDATE CONFIRM	

Specific Message Contents

URA UPDATE (Step 5, 8 and 10)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~URA Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to 'change of URA'~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/remark
URA identity	URA-ID 2

URA UPDATE CONFIRM (Step 11)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/remark
URA identity	URA-ID 1

8.3.2.1.5 Test requirement

After step 2 the UE shall not transmit a URA UPDATE message.

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit a URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and a transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 9 the UE shall find the new cell and transmit a URA UPDATE message setting value "change of URA" into IE "URA update cause".

8.3.2.2 URA Update: Periodical URA update and Reception of Invalid message

8.3.2.2.1 Definition

8.3.2.2.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE when the UE detects that it is still within the service area after the expiry of periodic URA updating timer T305.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.2.3 Test purpose

To confirm that the UE executes a URA update procedure after the expiry of timer T305. To verify that the UE handles an invalid URA UPDATE CONFIRM message correctly when executing the URA update procedure.

8.3.2.2.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of timer T305, set according to the value specified in system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". SS replies with an invalid URA UPDATE CONFIRM message sent on downlink CCCH, and check to see if the UE handles this event properly. The UE shall attempt to retransmit the identical URA UPDATE message. After the SS receives the second URA UPDATE message, it transmits a correct URA UPDATE CONFIRM message, which includes the IE "new U-RNTI", to the UE on the downlink DCCH. Then the UE shall then transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH. The UE returns to CELL_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state. SS wait until T305 timer has expired.
2	→		URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3	←		URA UPDATE CONFIRM	See specific message content.
4	→		URA UPDATE	UE shall not return to idle mode immediately, but attempts to re-transmit this message.
5	←		URA UPDATE CONFIRM	Including IE "new U-RNTI"
6	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

URA UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0000 0000 0000 0000 0001'~~
~~URA Update Cause~~	~~Check to see if set to 'Periodic URA update'~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

URA UPDATE (Step 4)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0000 0000 0000 0000 0001'~~
~~RRC Transaction identifier~~	~~Check to see if set to the value given in URA UPDATE CONFIRM message in step 3.~~
~~URA Update Cause~~	~~Check to see if set to 'Periodic URA update'~~
~~Protocol error indicator~~	~~TRUE~~
~~Protocol error information~~	
~~- Protocol error cause~~	~~ASN.1 violation or encoding error~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
RRC Transaction identifier	Check to see if set to the value given in URA UPDATE CONFIRM message in step 3.
URA Update Cause	Check to see if set to 'Periodic URA update'
Protocol error indicator	TRUE
Protocol error information	
- Protocol error cause	ASN.1 violation or encoding error

URA UPDATE CONFIRM (Step 3)

Information Element	Value/remark
All IEs	Not Present

URA UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Annex A, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~New U-RNTI~~	
~~SRNC Identity~~	~~'0000 0000 0001'~~
~~S-RNTI~~	~~'0000 0000 0000 0000 1111'~~

Information Element	Value/remark
New U-RNTI	
SRNC Identity	'0000 0000 0001'
S-RNTI	'0000 0000 0000 0000 1111'

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type IE of this message is checked.

8.3.2.2.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, move to CELL_FACH state, and transmit a URA UPDATE message which sets the value "periodical cell update" into IE "URA update cause".

After step 3 the UE shall re-transmit URA UPDATE message with IE "Protocol error indicator" set to 'TRUE' and IE "Protocol error information" set to "ASN.1 violation and encoding error".

After step 5 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH and returns to the CELL_FACH state.

8.3.2.3 URA Update: re-entering of service area after T305 expiry

8.3.2.3.1 Definition

8.3.2.3.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE if the UE detects that it is out of service area after the expiry of timer T305, and then subsequently re-enters the service area before the expiry of T307.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.3.3 Test purpose

To confirm that the UE executes a URA update procedure when the UE re-enters the service area before the expiry of timer T307, after being out of service area at the expiry of timer T305.

8.3.2.3.4 Method of test

Initial Condition

System Simulator: 1 cell with URA-ID 1 and the downlink transmission power shown in column marked "T0" in table 8.3.2.3.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, with URA-ID 1 in the list of URA-ID.

Test Procedure

Table 8.3.2.3

Parameter	Unit	Cell 1	
		T0	T1
UTRA RF Channel Number		Ch. 1	
CPICH Ec	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.2.3 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is initially in URA_PCH state. The content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.2.3 so that S<0. When the UE detects the expiry of timer T305 according to the system information, the UE finds that it is out of service area. The UE is expected to search for cell to camp. Then SS configures its downlink transmission power settings according to columns "T0" in table 8.3.2.3 so that S>0. The UE shall detect that it returns to normal service before T307 expires. The UE shall move to CELL_FACH state and starts transmitting a URA UPDATE message which contains the value "periodical URA update" in IE "URA update cause" to the SS on the uplink CCCH. After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "new C-RNTI", and "new U-RNTI" to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE starts operating from URA_PCH state.
1a	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents).
1b	←		PAGING TYPE 1	Include IE "BCCH modification info"
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.2.3 such that the cell 1 is no longer suitable for camping i.e. S<0.
3				The UE shall attempt to perform a URA update upon the expiry of timer T305. It shall discover that it is out of service and starts searching for cell to camp.(T307 timer starts)
4				SS configures its downlink transmission power settings according to columns "T0" in table 8.3.2.3 before T307 expires.
5	→		URA UPDATE	Value "periodical URA update" shall be set in IE "URA update cause"
6	←		URA UPDATE CONFIRM	The message includes IEs "new C-RNTI" , and "new U-RNTI"
7	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

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

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

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

Information Element	Value/remark
Qrxlevmin	-70

PAGING TYPE 1 (Step 1b)

Use the same message sub-type found in Annex A, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~	~~Not Present~~
~~BCCH modification info~~	
~~MIB Value tag~~	~~2~~
~~BCCH modification time~~	~~Not present~~

Information Element	Value/remark
Paging record list	Not Present
BCCH modification info	
MIB Value tag	2
BCCH modification time	Not present

URA UPDATE (Step 5)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0000 0000 0000 0000 0001'~~
~~URA Update Cause~~	~~Check to see if set to 'periodical URA update'~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'periodical URA update'

URA UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Annex A, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~New U-RNTI~~	
~~- SRNC Identity~~	~~'0000 0000 0001'~~
~~- S-RNTI~~	~~'0000 0000 0000 1111 1111'~~
~~New C-RNTI~~	~~Arbitrary 16-bit string which is different the assigned C-RNTI in RRC CONNECTION SETUP message.~~

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0000 0000 0000 1111 1111'
New C-RNTI	Arbitrary 16-bit string which is different the assigned C-RNTI in RRC CONNECTION SETUP message.

8.3.2.3.5 Test requirement

After step 2 the UE shall detect that it is out of service area and shall not send a URA UPDATE on the uplink CCCH channel.

After step 4 the UE shall transmit a URA UPDATE message which sets value "periodical URA update" into IE "URA update cause".

After step 6 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

8.3.2.4 URA Update: loss of service after expiry of timers T307 and T305

8.3.2.4.1 Definition

8.3.2.4.2 Conformance requirement

This procedure is required to handle the case when the UE fails to update UTRAN with the current URA of after expiry of timers T307 and T305 consecutively. The UE shall move to idle mode subsequently.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.4.3 Test purpose

To confirm that the UE moves to idle mode after the expiry of timer T307, following an expiry of timer T305 when it discovers that it is out of service area.

8.3.2.4.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.3.2.4

Parameter	Unit	Cell 1	
		T0	T1
UTRA RF Channel Number		Ch. 1	
CPICH Ec	dBm/3.84MHz	-60	-80
P-CCPCH RSCP (TDD)	dBm	-60	-80

Table 8.3.2.4 illustrates the downlink power to be applied at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

The UE is in URA_PCH state. The content of the SYSTEM INFORMATION BLOCK TYPE 3 and 4 is modified. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.2.3 so that S<0. When the UE detects the expiry of periodic URA updating timer T305 according to the system information, the UE detects that it is out of service area. After the expiry of timer T307, the UE moves to the idle state. SS configures its downlink transmission power settings according to columns "T0" in table 8.3.2.3 so that S>0. SS verifies that UE is in idle mode state by sending a PAGING TYPE 1 message to the UE using UE identity. UE shall respond with a RRC CONNECTION REQUEST message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				Initially, the UE is in the URA_PCH state.
1a	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 3 and 4	SS changes the contents of MASTER INFORMATION BLOCK and SYSTEM INFORMATION BLOCK (see specific message contents).
1b	←		PAGING TYPE 1	Include IE "BCCH modification info"
2				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.2.4 so that the UE detects that it is out of service area.
3				Upon the expiry of timer T305, the UE shall search for cell to camp and triggers T307 timer. SS listens to the uplink CCCH to verify that URA UPDATE message is not transmitted.
4				After the expiry of timer T307, the UE enters idle state.
5	←		PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated UE identity.
6	→		RRC CONNECTION REQUEST	The UE shall respond to this page as it has already entered the idle mode.

Specific Message Contents

MASTER INFORMATION BLOCK (Step 1a)

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

Information Element	Value/remark
MIB Tag	2

SYSTEM INFORMATION BLOCK TYPE 3 and 4 (Step 1a)

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

Information Element	Value/remark
Qrxlevmin	-70

PAGING TYPE 1 (Step 1b)

Use the same message sub-type found in Annex A, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~Paging record list~~	~~Not Present~~
~~BCCH modification info~~	
~~MIB Value tag~~	~~2~~
~~BCCH modification time~~	~~Not present~~

Information Element	Value/remark
Paging record list	Not Present
BCCH modification info	
MIB Value tag	2
BCCH modification time	Not present

8.3.2.4.5 Test requirement

After step 2 the UE shall not transmit any URA UPDATE message on the uplink CCCH.

After step 5, the UE shall transmit a RRC CONNECTION REQUEST message to respond to the PAGING TYPE 1 message.

8.3.2.5 URA Update: Success after Confirmation error of URA-ID list

8.3.2.5.1 Definition

8.3.2.5.2 Conformance requirement

UE transmits a URA UPDATE message to the UTRAN when it needs to update UTRAN with the current URA of the UE. UTRAN shall respond to the URA UPDATE message by sending a URA UPDATE CONFIRM message. When the indicated URA-ID in the received URA UPDATE CONFIRM message is not found in the list of URA-IDs that is broadcasted in system information block type 2, the UE transmits a URA UPDATE message repeatedly until its internal counter V302 is greater than N302.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.5.3 Test purpose

To confirm that the UE retries to perform the URA update procedure following a confirmation error of URA-ID list.

8.3.2.5.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

At the start of this test, the UE is brought to URA_PCH state and assigned a URA with URA-ID 1. When the UE detects the expiry of timer T305 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The reason for performing URA updating shall be set to "periodic URA update" in IE "URA update cause". After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "RRC state indicator" set to "URA_PCH" and IE "URA identity" set to "URA-ID 2" to the UE on the downlink DCCH. The UE finds that the indicated URA-ID is not included in the list of URA-IDs broadcasted in system information block type 2, and then the UE shall retry to transmit a URA UPDATE message for a confirmation error of URA-ID list. SS continue to send the same URA UPDATE CONFIRM message until N302+1 URA UPDATE messages have been received. Then SS transmits a URA UPDATE CONFIRM message to the UE which includes IE "URA Identity" set to "URA-ID 1" and IE "new U-RNTI". The UE shall find this URA-ID in its URA-ID list and transmits an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is URA_PCH state. SS initializes counter K to 0
2	→		URA UPDATE	This message shall contain value "periodic URA update" set in IE "URA update cause" after expiry of timer T305.
3				SS increments K by 1. If K is not greater than N302, proceed to step 4. If K is greater than N302, SS proceeds to step 5.
4	←		URA UPDATE CONFIRM	SS transmits this message, setting the value "URA-ID 2" to IE "URA Identity". And then returns to step 2.
5	←		URA UPDATE CONFIRM	SS transmits this message, setting IE "URA Identity" to "URA-ID 1". This message also comprises IE "New U-RNTI".
6	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

URA UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~URA Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to 'Periodic URA update'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI URA Update Cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'Periodic URA update'

URA UPDATE CONFIRM (Step 4)

Use the same message sub-type as specified in Annex A, with the following exceptions:

Information Element	Value/remark
URA Identity	2

URA UPDATE CONFIRM (Step 5)

Use the same message sub-type as specified in Annex A, with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~New U-RNTI~~ ~~-SRNC Identity~~ ~~-S-RNTI~~ ~~URA Identity~~	 ~~'0000 0000 0001'~~ ~~'0000 0000 0000 0101 0101'~~ ~~1~~

Information Element	Value/remark
New U-RNTI -SRNC Identity -S-RNTI URA Identity	 '0000 0000 0001' '0000 0000 0000 0101 0101' 1

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Only the message type IE in this message is checked.

8.3.2.5.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, move to CELL_FACH state, transmit a URA UPDATE message on the uplink CCCH and set value "periodic URA update" into IE "URA update cause".

After step 4 the UE shall re-transmit a URA UPDATE message after it detects a confirmation error of URA-ID list for the URA-ID indicated in the URA UPDATE CONFIRM message. A total of (N302+1) URA UPDATE messages shall be received by the SS.

After step 5 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH.

8.3.2.6 URA Update: Failure (V302 is greater than N302: Confirmation error of URA-ID list)

8.3.2.6.1 Definition

8.3.2.6.2 Conformance requirement

UE transmits a URA UPDATE message to the UTRAN when it needs to update UTRAN with the current URA of the UE. When the indicated URA-ID in the received URA UPDATE CONFIRM message is not in the list of URA-IDs that is broadcasted in system information block type 2, the UE transmits URA UPDATE messages repeatedly until its internal counter V302 is greater than N302. If V302 is greater than N302 then the UE enters idle state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.6.3 Test purpose

To confirm that the UE make repeated attempts to perform the URA update procedure following a detection of a confirmation error of URA-ID list. It then moves to idle state when internal counter V302 is greater than N302.

8.3.2.6.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is originally in URA_PCH state updated with URA-ID 1. When the UE detects the expiry of timer T305 according to the system information, the UE shall move to CELL_FACH state and transmit a URA UPDATE message to the SS on the uplink CCCH. In this message, the value "periodic URA update" shall be set in IE "URA update cause". After the SS receives this message, it transmits a URA UPDATE CONFIRM message which includes the IE "RRC state indicator" set to "URA_PCH" and indicating the IE "URA Identity" to be "URA-ID 2" to the UE on the downlink DCCH. The UE finds that the indicated URA-ID is not included in the list of URA-IDs broadcasted. Then the UE shall retry to transmit a URA UPDATE message for N302 times and each time the SS responds with the URA UPDATE CONFIRM message similar to the previous one. After that, the UE shall enter idle state. SS transmits a PAGING TYPE 1 message with UE's identity. UE shall respond with a RRC CONNECTION REQUEST message.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state at the start of the test. SS sets internal counter K to 0.
2	→		URA UPDATE	The message shall indicate "periodic URA update" in IE "URA update cause". This message is sent following the expiry of timer T305. SS increments counter K by 1.
3	←		URA UPDATE CONFIRM	The SS transmit this message and set IE "URA Identity" to "URA-ID 2". When K is greater than N302 proceeds to step 4, else executes step 2.
4			Void	The UE shall enter idle state.
5	←		PAGING TYPE 1	SS pages the UE at its assigned paging occasion using the allocated UE identity.
6	→		RRC CONNECTION REQUEST	The UE shall respond to this page as it has already entered the idle mode.

Specific Message Contents

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type defined in Annex A, with the following exceptions:

Information Element	Value/remark
URA Identity	2

8.3.2.6.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH, setting value "periodic URA update" in IE "URA update cause".

After step 3 and if K is not greater than N302, the UE shall retry to transmit a URA UPDATE message after it detects the confirmation error of URA-ID list for the URA-ID included in the URA UPDATE CONFIRM message.

After step 3 and if K is greater than N302, the UE shall stop transmitting URA UPDATE message and then enters idle state.

After step 5 the UE shall transmit a RRC CONNECTION REQUEST message to respond to the PAGING TYPE 1 message.

8.3.2.7 URA Update: Success after T302 timeout

8.3.2.7.1 Definition

8.3.2.7.2 Conformance requirement

The UE transmits an URA UPDATE message to the UTRAN when it needs to update UTRAN with the current URA identity stored the UE. When the UE fails to receive any URA UPDATE CONFIRM message after T302 timer expires, it transmits a URA UPDATE message repeatedly at an interval of T302 timer value until its internal counter V302 is greater than N302.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.7.3 Test purpose

To confirm that the UE attempts to repeat the URA update procedure upon the expiry of timer T302.

8.3.2.7.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH. When the UE detects the expiry of timer T305 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH, setting value "periodic URA update" into IE "URA update cause". The SS ignores this message. The UE shall then retry to transmit a URA UPDATE message after the expiry of timer T302. SS transmits a URA UPDATE CONFIRM message to the UE to end the procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state at the beginning of test. SS waits for T305 to expire.
2	→		URA UPDATE	This message shall contain value "periodic URA update" in IE "URA update cause" sent upon the expiry of timer T305.
3				SS shall not reply.
4	→		URA UPDATE	This message shall contain value "periodic URA update" in IE "URA update cause" sent upon the expiry of timer T302.
5	←		URA UPDATE CONFIRM	

Specific Message Contents

URA UPDATE CONFIRM (Step 5)

Use the same message sub-type as in Annex A.

8.3.2.7.5 Test requirement

After step 1 the UE shall detect the expiry of timer T305, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH. The updating cause shall be set to "periodic URA update" in IE "URA update cause".

After step 3 the UE shall retry to transmit a URA UPDATE message at the expiry of timer T302.

8.3.2.8 Void

8.3.2.9 URA Update: Failure (UTRAN initiate an RRC connection release procedure on CCCH)

8.3.2.9.1 Definition

8.3.2.9.2 Conformance requirement

The UE transmits a URA UPDATE message to the UTRAN when it needs to update UTRAN with information on the current URA of the UE. If the UE receives a RRC CONNECTION RELEASE message on downlink CCCH, it shall enter idle state.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.2.9.3 Test purpose

To confirm that the UE moves to idle state upon the reception of RRC CONNECTION RELEASE message on downlink CCCH during a URA update procedure.

8.3.2.9.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of periodic URA updating timer T305, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". The SS transmits RRC CONNECTION RELEASE message on downlink CCCH. The UE shall return to idle mode after release of all current signalling flows and radio access bearers.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the URA_PCH state. SS wait until T305 timer has expired.
2	→		URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3	←		RRC CONNECTION RELEASE	SS transmits RRC CONNECTION RELEASE message to the UE on the downlink CCCH.
4				The UE releases L2 signalling radio bearer and radio resources then the UE goes to idle mode.

Specific Message Contents

URA UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~URA Update Cause~~	 ~~Check to see if set to '0000 0000 0001'~~ ~~Check to see if set to '0000 0000 0000 0000 0001'~~ ~~Check to see if set to 'Periodic URA update'~~

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI URA Update Cause	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001' Check to see if set to 'Periodic URA update'

RRC CONNECTION RELEASE (Step 3)

Use the same message sub-type found in Annex A

8.3.2.9.5 Test requirement

After step 1 the UE shall transmit a URA UPDATE message on the uplink CCCH and set value "periodic URA update" into IE "Cell update cause".

After step 3 the UE shall enter idle state.

8.3.2.10 URA Update: Reception of URA UPDATE CONFIRM message that causes invalid configuration

8.3.2.10.1 Definition

8.3.2.10.2 Conformance Requirement

If the UE encounters a URA UPDATE CONFIRM message that set the variable INVALID_CONFIGURATION to TRUE while executing a URA update procedure, it shall check the current value of its internal counter V302. If V302 is

not greater than N302, the UE shall re-transmits URA UPDATE message on uplink CCCH, restart T302 timer and increments V302. On the other hand, if V302 is greater than N302, the UE shall abandon cell update procedure and enters idle mode.

8.3.2.10.3 Test Purpose

To confirm that the UE retransmits a URA UPDATE message when it receives a URA UPDATE CONFIRM message that will trigger an invalid configuration in the UE, if the number of retransmissions has not reached the maximum allowed value.

8.3.2.10.4 Method of Test

Initial Condition

System Simulator: 1 cell

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in URA_PCH state. When the UE detects the expiry of timer T305 according to the system information, the UE moves to CELL_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. This message shall contain value "periodical URA update" in IE "URA update cause". Upon receiving such a message, the SS replies with a URA UPDATE CONFIRM message with IE "RRC State Indicator" set to "CELL_DCH". The UE shall detect its variable "invalid configuration" is set and re-transmit URA UPDATE message. SS then transmit a valid URA UPDATE CONFIRM UPDATE message to end the procedure.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the URA_PCH state. SS wait until T305 timer has expired.
2	→		URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3	←		URA UPDATE CONFIRM	
4	→		URA UPDATE	IE "Protocol error indicator" is set to TRUE and IE "Protocol error information" is set to "Information element value not comprehended".
5			Void	
6			Void	
7	←		URA UPDATE CONFIRM	

URA UPDATE (Step 2)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0000 0000 0000 0000 0001'~~
~~URA Update Cause~~	~~Check to see if set to 'Periodic URA update'~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'

URA UPDATE (Step 4)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0000 0000 0000 0000 0001'~~
~~URA Update Cause~~	~~Check to see if set to 'Periodic URA update'~~
~~Protocol error indicator~~	~~TRUE~~
~~Protocol error information~~	
~~- Protocol error cause~~	~~Information element value not comprehended~~

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'Periodic URA update'
Protocol error indicator	TRUE
Protocol error information	
- Protocol error cause	Information element value not comprehended

URA UPDATE CONFIRM (Step 3)

Use the same message sub-type found in Annex A, with the following exception:

Information Element	Value/remark
RRC State Indicator	CELL_DCH

8.3.2.10.5 Test Requirement

After step 1 the UE shall detect the expiry of timer T305, then it shall move to CELL_FACH state and transmit a URA UPDATE message on the uplink CCCH, setting value "periodic URA update" into IE "URA update cause".

After step 3 the UE shall transmit a URA UPDATE message on the uplink CCCH, setting value 'TRUE" in IE "URA update cause" and value "Information element value not comprehended" in "Protocol error cause".

8.3.2.11 URA Update: Cell reselection to cell of another PLMN belonging to the equivalent PLMN list

8.3.2.11.1 Definition

8.3.2.11.2 Conformance requirement

1. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

   - URA reselection:

     - if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or

- if the list of URA identities in system information block type 2 is empty; or
- if the system information block type 2 can not be found:
  - perform URA update using the cause "change of URA".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
   - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
   - The cell is not barred, see clause 5.3.4.1 in TS 25.304.
   - The cell is not part of the list of "forbidden LAs for roaming"
   - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.2.11.3 Test purpose

1. To confirm that the UE executes a URA update procedure after a successful reselection of another UTRA cell with a URA identity that is not the URA of the UE and with a PLMN identity different from the original cell but with a PLMN that is part of the equivalent PLMN list in the UE. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

NOTE: Verifies conformance requirements 1, 2 and 3.

2. To confirm that the UE refrains from executing a URA update procedure to a better UTRA cell with another PLMN identity when that PLMN identity is not part of the equivalent PLMN list in the UE.

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same PLMN identity as the registered PLMN.

8.3.2.11.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.1-1, while cell 2 and cell 3 is inactive.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored equivalent PLMN list containing PLMN-1 and PLMN-2. The equivalent PLMN list stored in the UE shall not contain PLMN-3. The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

Test Procedure

Table 8.3.2.11-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
PLMN identity		PLMN-1			PLMN-2			PLMN-3		
URA identity		URA-ID 1			URA-ID 2			URA-ID 3		
CPICH RSCP (FDD)	dBm	-73	-79	-79	Cell 2 is switched off	-73	-79	Cell 3 is switched off	Cell 3 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	-68	Cell 2 is switched off	-62	-68	Cell 3 is switched off	Cell 3 is switched off	-62

Table 8.3.2.11-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

a) At T0, the SS activates Cell 1.

b) At T1, the SS activates Cell 2, and monitors Cell 2 for received messages from UE.

c) UE re-selects to Cell 2, and sends a URA UPDATE message

d) At T2, the SS activates Cell 3, and monitors Cell 3 for received messages from UE.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				At T0: UE is camped on Cell 1 and registered to PLMN1
2	→		URA UPDATE	At T1: Sent in Cell 2 The value "change of URA" set in IE "URA update cause".
3	←		URA UPDATE CONFIRM	
4	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

FFS

8.3.2.11.5 Test requirement

The UE shall send a URA UPATE message after T1 and refrain from sending a URA update (or any other message) after T2.

8.3.2.12 Restricted cell reselection to a cell belonging to forbidden LA list (URA_PCH)

8.3.2.12.1 Definition

8.3.2.12.2 Conformance requirement

1. A UE in URA_PCH state shall initiate the URA update procedure in the following cases:

- URA reselection:
  - if the UE detects that the current URA assigned to the UE, stored in the variable URA_IDENTITY, is not present in the list of URA identities in system information block type 2; or
  - if the list of URA identities in system information block type 2 is empty; or
  - if the system information block type 2 can not be found:
    - perform URA update using the cause "change of URA".

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
   - The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
   - The cell is not barred, see clause 5.3.1 in TS 25.304.
   - The cell is not part of the list of "forbidden LAs for roaming"
   - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

8.3.2.12.3 Test purpose

To confirm that the UE refrains from selects a UTRA cell and performs a URA update if that cell has a LA identity that is part of the list of LAs stored in the UE as "forbidden location areas for roaming".

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

8.3.2.12.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.1-1, while cell 2 is inactive.

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored LA-ID 2 into the list of "forbidden location areas for roaming". The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

Test Procedure

Table 8.3.2.12-1

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
URA identity		URA-ID 1		URA-ID 2	
LA identity		LA-ID 1		LA-ID 2	
CPICH RSCP (FDD)	dBm	-73	-79	Cell 2 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 2 is switched off	-62

Table 8.3.2.12-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently.

a) At T1, verify that the UE does not reselect to cell 2 and not send a URA update in cell 2, although cell 2 is the best cell.

Expected sequence

-

Specific Message Contents

-

8.3.2.12.5 Test requirement

The UE shall not send a URA UPDATE (or any other message) in Cell 2 after T1.

8.3.2.13 URA Update: Change of URA due to HCS Cell Reselection

8.3.2.13.1 Definition

8.3.2.13.2 Conformance requirement

This procedure is to update UTRAN with the current URA of the UE after a change of URA has occurred in URA_PCH state with HCS parameter applied. It may also be used for supervision of the RRC connection, even if no change of URA takes place.

Reference

3GPP TS 25.331 clause 8.3.1.

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

8.3.2.13.3 Test purpose

To confirm that the UE can read HCS related SIB information and act upon all HCS parameters. To confirm that the UE executes an URA update procedure after the successful change of URA due to HCS Cell Reselection. To confirm UE responds correctly when it re-selects to a new cell while waiting from URA UPDATE CONFIRM message from SS.

8.3.2.13.4 Method of test

Initial Condition

System Simulator: 3 cells - Cell 1 is active with URA-ID 1 and downlink transmission power shown in column marked "T0" in table 8.3.2.11-1. Cell2 with URA-ID 1 andCell 3 with URA-ID 2 are switched off

UE: URA_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE, with URA-ID 1 from the list of URA-ID in cell 1

Specific Message Content

For system information blocks 3, 4, 11 & 12 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 3 (FDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- $S_{intrasearch}$	16 dB
- $S_{intersearch}$	0 dB
- $S_{searchHCS}$	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- $S_{search,RAT}$	-32 dB
- $S_{HCS,RAT}$	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Q_{hyst1s}	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qrxlevmin	-103 dBm
- $Qhyst1_S$	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- $Qhyst1_S$	10 (gives actual value of 20 dB)
- $Qhyst2_S$	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- $S_{intrasearch}$	10 dB
- $S_{intersearch}$	10 dB
- $S_{searchHCS}$	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- $S_{search,RAT}$	-32 dB
- $S_{HCS,RAT}$	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-103 dBm
- Q_{hyst1_S}	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Test Procedure

Table 8.3.2.13-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm	-61	-76	-61	-80	-80	-67	-80	-70	-73
H* (After PenaltyTime)		15	0	15	-4	-4	9	-4	6	3
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (After PenaltyTime)		-41	-41	-41	-60	-60	-47	-60	-53	-53

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the URA_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. SS configures Cell 2 and 3 with power level given in column "TO", and URA-Id 1 and 2 respectively and starts broadcast of BCCH on the primary CCPCH in cells 2 and 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.2.13-1. SS then adjusts the transmission power again according to 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. UE on performing cell reselection to cell 3 finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits URA UPDATE CONFIRM message which includes the IEs "RRC State Indicator" and "URA-ID" to the UE on the downlink DCCH. The "RRC State Indicator" is set to "URA_PCH". UE returns to URA_PCH state in cell 3 without sending a uplink response message. Next SS adjusts the transmission power according to 'T2' column. UE shall re-select to cell 2 after atleast penalty time of 40 seconds, and transmit URA UPDATE message to SS. However, SS do not acknowledge but adjusts the transmission power according to 'T0' column. UE shall perform cell re-selection to cell 1 and then sent URA UPDATE message to SS. Finally SS shall transmit URA UPDATE CONFIRM message to UE.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is updated with only 1 URA identity carried currently by cell 1. The starting state of the UE is URA_PCH
2	←		BCCH	SS configures cell 2 (with URA-ID 1) and Cell 3 (with URA-ID 2) and power levels as given in column T0 of table 8.3.2.13-1 and starts transmission of BCCH.
3				UE shall Remain camped on Cell 1 and in URA_PCH state even after expiry of Penalty time.
4				SS set the power transmission of all cells according to column 'T1' of table 8.3.2.13-1.
5	→		URA UPDATE	The UE shall perform a cell reselection first after the penalty time to cell 3 and when it finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it shall then transmit this message and set value "change of URA" into IE "URA update cause".
6	←		URA UPDATE CONFIRM	Message comprises IE "RRC State Indicator" set "URA_PCH", and also IE "URA Identity" equals to "URA-ID 2".
7				SS set the power transmission of all cells according to column 'T2' of table 8.3.2.13-1.
8	→		URA UPDATE	In Cell 2
9				SS do not respond to the URA UPDATE message from UE and set the power transmission of all cells according to column 'T0' of table 8.3.2.13-1.
10	→		URA UPDATE	
11	←		URA UPDATE CONFIRM	

Specific Message Contents

Contents of System Information Block type 3 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	Not Present
- Cell selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- Slimit,SearchRAT	Not Present
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	Not present
- Cell_selection_and_reselection_quality_-measure	(no data)
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	47 dB
- RAT List	This parameter is configurable
- RAT identifier	GSM
- Ssearch,RAT	-32 dB
- SHCS,RAT	Not Present
- $S_{limit,SearchRAT}$	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-103 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Treselections	0 seconds
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	39 (results in actual value of –76)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	-20dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	

- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1$_{s,n}$	-20 dB
- Qoffset2s,n	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_-measure	(no data)
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- $Qoffset1_{s,n}$	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of –76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

URA UPDATE (Step 5, 8 and 10)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 6)

Use the same message sub-type found in Annex A, with the following exceptions:.

Information Element	Value/remark
URA identity	URA-ID 2

URA UPDATE CONFIRM (Step 11)

Use the same message sub-type found in Annex A, with the following exceptions:.

Information Element	Value/remark
URA identity	URA-ID 1

8.3.2.13.5 Test requirement

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

8.3.3 UTRAN Mobility Information

8.3.3.1 UTRAN Mobility Information: Success

8.3.3.1.1 Definition

8.3.3.1.2 Conformance requirement

This procedure is used by the network to assign a new RNTI identity to the UE. It is initiated by the UTRAN when it sends a UTRAN MOBILITY INFORMATION message, which includes a new C-RNTI and/or U-RNTI on the downlink DCCH. The UE starts to use the new identities and transmits an UTRAN MOBILITY INFORMATION CONFIRM message to the UTRAN on the uplink DCCH.

Reference

3GPP TS 25.331 clauses 8.3.3, 8.6.3.9 and 8.6.3.10.

8.3.3.1.3 Test purpose

To confirm that the UE starts to use the new identities after it receives a UTRAN MOBILITY INFORMATION message from the SS.

8.3.3.1.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

Initially, the UE is in CELL_FACH state and it has been assigned a C-RNTI and U-RNTI. The SS transmits an UTRAN MOBILITY INFORMATION message which includes new C-RNTI and U-RNTI to the UE. Then the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message using the assigned new C-RNTI in MAC header as confirmation. SS waits for UE to perform periodic cell updating. When SS received a CELL UPDATE message, SS checks that UE uses the new U-RNTI in the CELL UPDATE message. Then SS sends CELL UPDATE CONFIRM. SS

waits for UE to perform periodic cell updating. When SS received a CELL UPDATE message, SS sends CELL UPDATE CONFIRM to end the test procedure.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of the UE is CELL_FACH state. UE has been allocated both C-RNTI and U-RNTI during RRC connection establishment phase.
2	←		UTRAN MOBILITY INFORMATION	Contains new C-RNTI and U-RNTI identities and a value for T305 that is different from the value defined in the system information.
3	→		UTRAN MOBILITY INFORMATION CONFIRM	The assigned new C-RNTI shall be included in MAC header.
4				SS wait for T305 (same as the value defined in system information) to expire.
5	→		CELL UPDATE	UE shall trigger cell updating. The message shall indicate the same U-RNTI assigned in the UTRAN MOBILITY INFORMATION message in step 2.
6	←		CELL UPDATE CONFIRM	
7				SS wait for T305 (the new value as specified in step 2) to expire.
8	→		CELL UPDATE	UE shall trigger cell updating. The message shall indicate the same U-RNTI assigned in the UTRAN MOBILITY INFORMATION message in step 2.
9	←		CELL UPDATE CONFIRM	

Specific Message Content

UTRAN MOBILITY INFORMATION (Step 2)

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

~~Information Element~~	~~Value/remark~~
~~New U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~New C-RNTI~~ ~~UE Timers and constants in connected mode~~ ~~- T305~~	 ~~'0000 0000 0001'~~ ~~'0101 0101 0101 0101 0101'~~ ~~'1010 1010 1010 1010'~~ ~~5 minutes~~

Information Element	Value/remark
New U-RNTI	
- SRNC Identity	'0000 0000 0001'
- S-RNTI	'0101 0101 0101 0101 0101'
New C-RNTI	'1010 1010 1010 1010'
UE Timers and constants in connected mode	
- T305	5 minutes

UTRAN MOBILITY INFORMATION CONFIRM (Step 3)

Only the message type IE is checked in this message.

CELL UPDATE (Step 5 and 8)

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

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~	
~~- SRNC Identity~~	~~Check to see if set to '0000 0000 0001'~~
~~- S-RNTI~~	~~Check to see if set to '0101 0101 0101 0101 0101'~~
~~Cell Update Cause~~	~~Check to see if set to 'periodical cell updating'~~

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 '0101 0101 0101 0101 0101'
Cell Update Cause	Check to see if set to 'periodical cell updating'

CELL UPDATE CONFIRM (Step 6 and 9)

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

8.3.3.1.5 Test requirement

After step 2 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH that using the assigned new C-RNTI in MAC header.

After step 4 and 7 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "periodical cell updating". The IE "U-RNTI" shall be identical to the IE "New RNTI" found in UTRAN MOBILITY INFORMATION message sent by the SS in step 2.

8.3.3.2 UTRAN Mobility Information: Failure (Invalid message reception)

8.3.3.2.1 Definition

8.3.3.2.2 Conformance Requirements

When the UE receives an invalid UTRAN MOBILITY INFORMATION message, it shall transmit a UTRAN MOBILITY INFORMATION FAILURE message on the DCCH using AM RLC and set the value "protocol error" in the IE "failure cause". The IE "protocol error information" in this message shall also be set to an appropriate value. The UE shall not utilize any identities relayed in the erroneous message, and it shall resume normal operations.

8.3.3.2.3 Test Purpose

To confirm that the UE ignore the erroneous UTRAN MOBILITY INFORMATION message and report this event to the UTRAN by sending UTRAN MOBILITY INFORMATION FAILURE message, stating the appropriate failure cause and information.

8.3.3.2.4 Method of test

Initial Conditions

System Simulator: 1 cell.

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

Test Procedure

The UE is brought to CELL_FACH state. SS transmits a UTRAN MOBILITY INFORMATION message to the UE on the DCCH using AM-RLC mode. In this message, the all IEs except "Message Type" are not present. The UE shall respond by transmitting the UTRAN MOBILITY INFORMATION FAILURE message, indicating "protocol error" in IE "failure cause" and also "ASN.1 violation and encoding error" in IE "Protocol error information". After receiving the UTRAN MOBILITY INFORMATION FAILURE message, SS waits for T305 to expire. The UE shall transmit a CELL UPDATE message with the original U-RNTI identity assigned. SS sends CELL UPDATE CONFIRM message to the UE on the downlink DCCH.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of the UE is CELL_FACH state.
2	←		UTRAN MOBILITY INFORMATION	See specific message content.
3	→		UTRAN MOBILITY INFORMATION FAILURE	UE shall transmit this message to report the error in UTRAN MOBILITY INFORMATION message. It shall include the appropriate cause in the message.
4				SS waits for a period up to timer T305 to allow the UE to start performing a cell updating procedure.
5	→		CELL UPDATE	
6	←		CELL UPDATE CONFIRM	

Specific Message Content

UTRAN MOBILITY INFORMATION (Step 2)

Information Element	Value/remark
All IEs	Not Present

UTRAN MOBILITY INFORMATION FAILURE (Step 3)

Information Element	Value/remark
Message Type RRC transaction identitifer Integrity check info	 Not checked. The presence if this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Failure Cause ~~- Failure Cause~~ ~~- Protocol Error Information~~ - Failure Cause - Protocol Error Information	 ~~Check to see if set to 'Protocol error'~~ ~~Check to see if set to ASN.1 violation and encoding error'~~ Check to see if set to 'Protocol error' Check to see if set to ASN.1 violation and encoding error'

CELL UPDATE (Step 5)

The same message found in Annex A shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

~~Information Element~~	~~Value/remark~~
~~U-RNTI~~ ~~- SRNC Identity~~ ~~- S-RNTI~~ ~~Cell update cause~~	 ~~Check to see if set to '0000 0000 0001'B~~ ~~Check to see if set to '0000 0000 0000 0000 0001'B~~ ~~Check to see if set to 'periodical cell updating'~~

Information Element	**Value/remark**
U-RNTI - SRNC Identity - S-RNTI Cell update cause	 Check to see if set to '0000 0000 0001'B Check to see if set to '0000 0000 0000 0000 0001'B Check to see if set to 'periodical cell updating'

CELL UPDATE CONFIRM (Step 6)

Use the same message sub-type as in Annex A.

8.3.3.2.5 Test Requirement

After step 2 the UE shall transmit UTRAN MOBILITY INFORMATION FAILURE message, indicating the value "protocol error" in IE "failure cause" and also "ASN.1 violation and encoding error" in IE "protocol error information".

After step 4 the UE shall initiate a periodic cell updating procedure by transmitting CELL UPDATE message on the CCCH. In this message, the U-RNTI identity shall be set to the same value as assigned during the RRC connection establishment procedure.

8.3.4 Active set update in soft handover

8.3.4.1 Active set update in soft handover: Radio Link addition

8.3.4.1.1 Definition

8.3.4.1.2 Conformance requirement

Radio link addition is triggered in the network's RRC layer. The RRC entity in the network first configures the new radio link. Transmission and reception then begin immediately. This procedure is to update the active set of the connection between the UE and UTRAN. The UTRAN then transmits an ACTIVE SET UPDATE message to the UE.

The UE configures layer 1 to begin reception for the additional radio link. An ACTIVE SET UPDATE COMPLETE message is sent to the UTRAN without waiting for the Physical Layer synchronization..

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.1.3 Test purpose

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

8.3.4.1.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.4.1

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

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

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

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

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

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

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

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

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

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

Expected sequence

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

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

Specific Message Content

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

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

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

MEASUREMENT REPORT (Step 2)

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

ACTIVE SET UPDATE (Step 3)

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

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

MEASUREMENT REPORT (Step 5a)

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

MEASUREMENT REPORT (Step 9a)

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

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

MEASUREMENT REPORT (Step 10a)

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

Information Element	Value/remark
Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	 1b Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108

8.3.4.1.5 Test requirement

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

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

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

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

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

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

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

8.3.4.2 Active set update in soft handover: Radio Link removal

8.3.4.2.1 Definition

8.3.4.2.2 Conformance requirement

This procedure is to update the active set of the connections between the UE and the UTRAN after the UTRAN has commanded a removal of a radio link from the current active set. The UTRAN RRC transmits an ACTIVE SET UPDATE message to the UE RRC. The UE RRC requests UE L1 to terminate transmission and reception of the radio link to be removed. The UE shall continue to communicate normally with the UTRAN using the new active set, without losing the connection link. After this the UE acknowledges the radio link removal by sending an ACTIVE SET UPDATE COMPLETE message to the UTRAN on DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.2.3 Test purpose

To confirm that the UE continues to communicate with the SS on the remaining radio link after radio link removal on the active set. To confirm that the UE is not using the removed radio link to communicate with the SS.

8.3.4.2.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.4.2

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

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

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

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

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

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

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

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

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

Expected sequence

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

Specific Message Contents

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

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

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

MEASUREMENT REPORT (Step 2)

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

ACTIVE SET UPDATE (Step 3)

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

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

MEASUREMENT REPORT (Step 6)

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

ACTIVE SET UPDATE (Step 7)

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

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

CELL UPDATE (Step 13)

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

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

CELL UPDATE CONFIRM (Step 14)

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

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

8.3.4.2.5 Test requirement

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

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

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

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

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

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

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

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

8.3.4.3.1 Definition

8.3.4.3.2 Conformance requirement

When radio links are to be replaced, the UTRAN RRC first configures the UTRAN L1 to activate the radio link(s) that are being added. The UTRAN RRC then transmits an ACTIVE SET UPDATE message to the UE RRC, which shall configure the UE L1 to terminate transmission and reception on the removed radio link(s) and begin transmission and reception on the added radio link(s). At the completion of the reconfiguration of radio links, the UE shall acknowledge the replacement with an ACTIVE SET UPDATE COMPLETE message.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.3.3 Test purpose

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

8.3.4.3.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.4.3

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

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

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

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

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

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

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

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

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

SS configures its downlink transmission power settings according to columns "T4" in table 8.3.4.3 so as to generate a radio link failure condition. The UE shall detect the radio link failure. UE shall re-select to cell 1 and transmit a CELL UPDATE message. SS transmits a CELL UPDATE CONFIRM message after it receive CELL UPDATE message from UE. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities.

Expected sequence

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

Specific Message Content

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

- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE

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

MEASUREMENT REPORT (Step 0b)

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

ACTIVE SET UPDATE (Step 0c)

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

~~Information Element~~	~~Value/remark~~
~~Radio link addition information~~	
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Set to same code as assigned for cell 2~~
~~- Downlink DPCH info for each RL~~	~~Calculated value from Cell synchronisation information~~
~~- DPCH frame offset~~	

Information Element	**Value/remark**
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	Calculated value from Cell synchronisation information
- DPCH frame offset	

MEASUREMENT REPORT (Step 2)

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

ACTIVE SET UPDATE (Step 3)

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

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

CELL UPDATE (Step 9)

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

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

CELL UPDATE CONFIRM (Step 10)

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

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

8.3.4.3.5 Test requirement

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

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

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

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

After step 5 the UE shall transmit a UE CAPABILITY INFORMATION message.

After step 8 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

After step 10, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.4.4 Active set update in soft handover: Invalid Configuration

8.3.4.4.1 Definition

8.3.4.4.2 Conformance requirement

If the UTRAN attempts to add a radio link but the additional radio link is specified in both IE "Radio Link Addition Information" and IE "Radio Link Removal Information", the UE transmits an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC and maintain its current communication status with the radio links.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.4.3 Test purpose

To confirm that the UE transmits an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC, if the received ACTIVE SET UPDATE message includes a radio link which is specified in both IE "Radio Link Addition Information" and IE "Radio Link Removal Information".

8.3.4.4.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.4.4

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

Table 8.3.4.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE establishes a radio access bearer in the CELL_DCH state in cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.4. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. SS then transmits an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the same primary scrambling code in IE "Primary CPICH Info" of both IE"Radio Link Addition Information" and IE "Radio Link Removal Information". When the UE receives this message, it transmits an ACTIVE SET UPDATE FAILURE message which is set to "Invalid configuration" in IE "failure cause" on the uplink DCCH using AM RLC to the SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.4
2	→		MEASUREMENT REPORT	
3	←		ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which includes the same primary scrambling code in IE"Primary CPICH Info" of both IE"Radio Link Addition Information" and IE "Radio Link Removal Information".
4	→		ACTIVE SET UPDATE FAILURE	The message shall state "Invalid configuration" in IE "failure cause".

Specific Message Contents

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in the default message content clause, with the following exceptions:

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter set
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Integrity check info	Not Checked
Failure cause	Check to see if it's set to 'Invalid configuration'

8.3.4.4.5 Test requirement

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

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message, setting "Invalid configuration" in IE "failure cause" and sent on the uplink DCCH using AM RLC.

8.3.4.5 Active set update in soft handover: Reception of an ACTIVE SET UPDATE message in wrong state

8.3.4.5.1 Definition

8.3.4.5.2 Conformance requirement

If the UE is in another state than CELL_DCH state upon reception of the ACTIVE SET UPDATE message, the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.5.3 Test purpose

To confirm that the UE transmit an ACTIVE SET UPDATE FAILURE message whenit receives an ACTIVE SET UPDATE message in any state other then CELL_DCH.

8.3.4.5.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.3.4.5

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

Table 8.3.4.5 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE establishes a radio access bearer service in the CELL_FACH state in cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.2. SS begins to configure the new radio link to be added from cell 2 and then the SS transmits to the UE an ACTIVE SET UPDATE message in cell 1 on DCCH using AM RLC which includes the IE "Radio Link Addition Information" indicating the addition of cell 2 into the active set. When the UE receives this message, UE shall transmit ACTIVE SET UPDATE FAILURE message, with the IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state", on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.5
2			Void	
3	←		ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information".
4	→		ACTIVE SET UPDATE FAILURE	IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".

Specific Message Content

ACTIVE SET UPDATE

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

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	Calculated value from Cell synchronisation information
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- Spreading factor	Reference TS 34.108 clause 6.10 Parameter set
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present

8.3.4.5.5 Test requirement

After step 1, the UE shall not transmit MEASUREMENT REPORT message.

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Message not compatible with receiver state" shall be set in IE "Protocol Error Information".

8.3.4.6 Void

8.3.4.7 Active set update in soft handover: Invalid Message Reception

8.3.4.7.1 Definition

8.3.4.7.2 Conformance Requirement

The UE shall keep its old configuration when the UE receives an ACTIVE SET UPDATE message, which does not include any IEs except IE "Message Type" and transmit an ACTIVE SET UPDATE FAILURE message which set value "protocol error" in IE "failure cause" and also value "ASN.1 violation or encoding error" in IE "Protocol error cause".

Reference

3GPP TS 25.331 clause 8.3.4

8.3.4.7.3 Test Purpose

To confirm that the UE retains its active set list and transmits an ACTIVE SET UPDATE FAILURE message when it receives an invalid ACTIVE SET UPDATE message.

8.3.4.7.4 Method of test

Initial Condition

System Simulator: 2 cells – both cell 1 and cell 2 are active.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE (Integrity protection algorithm is not applied at the start of test)

Test Procedure

Table 8.3.4.7

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

Table 8.3.4.7 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

The UE establishes a radio access bearer in CELL_DCH in cell 1. SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.7. UE shall be triggered to transmit a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. SS transmits an ACTIVE SET UPDATE message which does not include any IEs except IE "Message Type". The UE shall transmit an ACTIVE SET UPDATE FAILURE message, stating the reason "ASN.1 violation or encoding error" in the IE "Protocol error information".

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.7
2	→		MEASUREMENT REPORT	
3	←		ACTIVE SET UPDATE	The SS transmits this message on downlink DCCH using AM RLC which does not include any IEs except IE "Message Type"
4	→		ACTIVE SET UPDATE FAILURE	The message shall state "ASN.1 violation error or encoding error" in IE "protocol error information".

Specific Message Contents

ACTIVE SET UPDATE (Step 3)

Information Element	Value/remark
All IEs	Not Present

ACTIVE SET UPDATE FAILURE (Step 4)

Information Element	Value/remark
Protocol Error Information - Protocol Error Cause	 ASN.1 violation or encoding error

8.3.4.7.5 Test Requirement

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

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "ASN.1 violation or encoding error" shall be set in IE "Protocol Error Information".

8.3.5 Hard Handover

[Editor's note: This test is included in the "Physical channel reconfiguration", "Radio bearer establishment", "Radio bearer reconfiguration", "Radio bearer release" and "Transport channel reconfiguration".]

8.3.6 Inter-system hard handover from GSM to UTRAN

The content of this clause has been moved to 3GPP TS 51.010-1, clause 60.

8.3.7 Inter-system hard handover from UTRAN to GSM

Clauses 8.3.7 contains test procedures to be used for executing Inter-system Handover from UTRAN to GSM tests. Table 8.3.7-1 contains a summary of the different combinations of parameters being tested, together with a reference to the appropriate generic test procedure. If a test uses a parameter which the UE under test does not support, the test shall be skipped. Test cases in this clause are applicable only to the UE supporting both UTRAN and GSM. The test TEST USIM shall support service 27 to carry out these test cases.

Table 8.3.7-1

From	To	State of call	Ref. clause	Exec counter	Remark
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM AMR	U10	8.3.7.1	1	call active state
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM EFR	U10	8.3.7.1	2	call active state
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.1	3	call active state
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM HR	U10	8.3.7.1	4	call active state
UTRAN (Streaming/unknown/ uplink:14.4 DL:14.4 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS)	GSM 14.4 kbps CS data	U10	8.3.7.2	1	Same data rate
UTRAN (Streaming/unknown/ uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS)	GSM 28.8 kbps CS data	U10	8.3.7.2	2	Same data rate
UTRAN (Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS)	GSM 57.6 kbps CS data	U10	8.3.7.2	3	Same data rate
UTRAN (Streaming/unknown/ uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS)	GSM 14.4 kbps CS data	U10	8.3.7.3	1	Data rate down grading
UTRAN (Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS)	GSM 14.4 kbps CS data	U10	8.3.7.3	2	Data rate down grading
UTRAN (Streaming/unknown/ uplink:57.6 DL:57.6 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBS)	GSM 28.8 kbps CS data	U10	8.3.7.3	3	Data rate down grading
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U1	8.3.7.4	1	During call establishment
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.5	1	failure case

UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.6	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.7	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.8	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.9	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.10	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.11	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U10	8.3.7.12	1	failure case
UTRAN AMR (conversational/speech/ uplink:12.2 DL:12.2 kbps/CS RAB + uplink:3.4 DL3.4 kbps SRBS)	GSM FR	U1	8.3.7.13	1	call under establishment

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

8.3.7.1.1 Definition

8.3.7.1.2 Conformance requirement

When the UE receives an HANDOVER FROM UTRAN COMMAND message from UTRAN the UE shall take the following actions:

- Establish the connection to the other radio access system, by using the contents of the IE "Inter system message". This IE contains candidate/ target cell identifier(s) and radio parameters relevant for the other radio access system.

- For each IE "Remaining radio access bearer", associate the radio access bearer given by the IE "RAB info" to the radio resources in the target system given by the IE "Inter system message". Other information for making the association may be included in the IE "Inter system message" and requirements may be stated in the specifications relevant for the target system [FFS].

- Switch the current connection to the other radio access system.

NOTE 1: Requirements concerning the establishment of the radio connection towards the other radio access system and the signalling procedure are outside the scope of the present document.

NOTE 2: The release of the UMTS radio resources is initiated by the other system.

NOTE 3: Currently only one radio access bearer can be associated with the IE "Inter-system message", and this association is limited to the radio access bearers in the CS domain. It is assumed that all the radio access bearers in the PS domain, if any, remain after the handover.

Reference(s)

TS 25.331 clause 8.3.7.3.

8.3.7.1.3 Test purpose

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

8.3.7.1.4 Method of test

Initial conditions

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

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 2.

Test Procedure

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

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

Expected sequence

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

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

Specific message contents

For execution:

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

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

For execution 2:

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

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

For execution 3:

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

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

For execution 4:

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

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

8.3.7.1.5 Test requirement

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

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

8.3.7.2.1 Definition

8.3.7.2.2 Conformance requirement

When the UE receives an HANDOVER FROM UTRAN COMMAND message from UTRAN the UE shall take the following actions:

- Establish the connection to the other radio access system, by using the contents of the IE "Inter system message". This IE contains candidate/ target cell identifier(s) and radio parameters relevant for the other radio access system.

- For each IE "Remaining radio access bearer", associate the radio access bearer given by the IE "RAB info" to the radio resources in the target system given by the IE "Inter system message". Other information for making the association may be included in the IE "Inter system message" and requirements may be stated in the specifications relevant for the target system [FFS].

- Switch the current connection to the other radio access system.

NOTE 1: Requirements concerning the establishment of the radio connection towards the other radio access system and the signalling procedure are outside the scope of the present document.

NOTE 2: The release of the UMTS radio resources is initiated by the other system.

NOTE 3: Currently only one radio access bearer can be associated with the IE "Inter-system message", and this association is limited to the radio access bearers in the CS domain. It is assumed that all the radio access bearers in the PS domain, if any, remain after the handover.

Reference(s)

TS 25.331 Clause 8.3.7.3.

8.3.7.2.3 Test purpose

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

8.3.7.2.4 Method of test

Initial conditions

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

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 2.

Test Procedure

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

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

Expected sequence

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

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

Specific message contents

For execution :

HANDOVER FROM UTRAN COMMAND-GSM

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

If the UE supports 14.4 kbps single slot:

HANDOVER COMMAND

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

If the UE supports HSCSD:

HANDOVER COMMAND

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

For execution 2:

HANDOVER FROM UTRAN COMMAND-GSM

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

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

HANDOVER COMMAND

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

If the UE supports HSCSD:

HANDOVER COMMAND

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

For execution 3:

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

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

8.3.7.2.5 Test requirement

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

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

8.3.7.3.1 Definition

8.3.7.3.2 Conformance requirement

When the UE receives an HANDOVER FROM UTRAN COMMAND message from UTRAN the UE shall take the following actions:

- Establish the connection to the other radio access system, by using the contents of the IE "Inter system message". This IE contains candidate/ target cell identifier(s) and radio parameters relevant for the other radio access system.

- For each IE "Remaining radio access bearer", associate the radio access bearer given by the IE "RAB info" to the radio resources in the target system given by the IE "Inter system message". Other information for making the association may be included in the IE "Inter system message" and requirements may be stated in the specifications relevant for the target system [FFS].

- Switch the current connection to the other radio access system.

NOTE 1: Requirements concerning the establishment of the radio connection towards the other radio access system and the signalling procedure are outside the scope of the present document.

NOTE 2: The release of the UMTS radio resources is initiated by the other system.

NOTE 3: Currently only one radio access bearer can be associated with the IE "Inter-system message", and this association is limited to the radio access bearers in the CS domain. It is assumed that all the radio access bearers in the PS domain, if any, remain after the handover.

Reference(s)

TS 25.331 Clause 8.3.7.3.

8.3.7.3.3 Test purpose

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

8.3.7.3.4 Method of test

Initial conditions

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

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 2.

Test Procedure

The SS starts the UTRAN cell and brings the UE into data call active state (CC state U10) with a suitable configuration (e.g. Streaming/unknown/uplink:28.8 DL:28.8 kbps/CS RAB + uplink:3.4 DL:3.4 kbps SRBs for M = 1). The SS starts GSM cell and configures a traffic channel (e.g. 14.4 kbps data channel for M = 1), then sends HANDOVER FROM UTRAN COMMAND indicating the traffic channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell.

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

Expected sequence

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

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

Specific message contents

For execution 1:

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

For execution 2:

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

For execution 3:

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

8.3.7.3.5 Test requirement

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

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

8.3.7.4.1 Definition

8.3.7.4.2 Conformance requirement

When the UE receives an HANDOVER FROM UTRAN COMMAND message from UTRAN the UE shall take the following actions:

- Establish the connection to the other radio access system, by using the contents of the IE "Inter system message". This IE contains candidate/ target cell identifier(s) and radio parameters relevant for the other radio access system.

- For each IE "Remaining radio access bearer", associate the radio access bearer given by the IE "RAB info" to the radio resources in the target system given by the IE "Inter system message". Other information for making the association may be included in the IE "Inter system message" and requirements may be stated in the specifications relevant for the target system [FFS].

- Switch the current connection to the other radio access system.

NOTE 1: Requirements concerning the establishment of the radio connection towards the other radio access system and the signalling procedure are outside the scope of the present document.

NOTE 2: The release of the UMTS radio resources is initiated by the other system.

NOTE 3: Currently only one radio access bearer can be associated with the IE "Inter-system message", and this association is limited to the radio access bearers in the CS domain. It is assumed that all the radio access bearers in the PS domain, if any, remain after the handover.

Reference(s)

TS 25.331 Clause 8.3.7.3.

8.3.7.4.3 Test purpose

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

8.3.7.4.4 Method of test

Initial conditions

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

UE : CC State U1 in cell 1

Related ICS/IXIT statement(s)

- UE supports both GSM and UTRAN Radio Access Technologies,

- UE supports UTRAN AMR,

- UE supports GSM FR,

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

Foreseen final state of the UE

The UE is in CC state U1 on cell 2.

Test Procedure

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

Expected sequence

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

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

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

8.3.7.4.5 Test requirement

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

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

8.3.7.5.1 Definition

8.3.7.5.2 Conformance requirement

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

- resume the connection to UTRAN using the resources used before receiving the HANDOVER FROM UTRAN COMMAND message; and
- transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.

Reference(s)

TS 25.331 Clause 8.3.7.5.

8.3.7.5.3 Test purpose

To test that the UE reactivates the old channel and transmits HANDOVER FROM UTRAN FAILURE message to the network on the old channel in UTRAN cell when it receives an HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover can not be established.

8.3.7.5.4 Method of test

Initial conditions

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

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS starts GSM cell without activating any dedicated channel in the cell, then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but can not complete the handover. The SS checks that the handover is failed by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into UTRAN U10 state in cell 1
2	SS			The SS configures cell 2 as a GSM cell but without any traffic channel.
3	←		HANDOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: the target channel for GSM FR which does not exist in the GSM cell.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→		HANDOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	physical channel failure
Inter-system message	Not Checked

8.3.7.5.5 Test requirement

After step n+1 the SS shall receive HANDOVER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.7.6 Inter system handover from UTRAN/To GSM/Speech/Failure (L2 Establishment)

8.3.7.6.1 Definition

8.3.7.6.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology , as is unable to obtain L2 establishment it shall

- resume the connection to UTRAN using the resources used before receiving the HANDOVER FROM UTRAN COMMAND message; and
- transmit the HANDOVER FROM UTRAN FAILURE message on uplink DCCH using AM RLC.

Reference(s)

3GPP TS 25.331 clause 8.3.7

TS 04.06 Clause 5.4.1.3

TS 04.08 Clause 3.1.5

8.3.7.6.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "physical channel failure" in IE "Inter_RAT HO failure cause", when it receives a HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover cannot be established due to failure in L2 establishment.

8.3.7.6.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 2 is GSM. GSM 51010-1 section 26.6.5.1 shall be referenced for the default parameters of cell 2.

UE: CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. SS activates a dedicated GSM traffic channel then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. When the UE does not succeed in establishing the connection to the target radio access technology it shall revert back to UTRA configuration establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND transmit the HANDOVER FROM UTRAN FAILURE.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2	SS			The SS configures cell 2 as a GSM cell with traffic channel.
3	←		HANDOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→		HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 2 (GSM cell) It implies that the UE has switched to GSM cell.
6	→		HANDOVER ACCESS	
7	→		HANDOVER ACCESS	
8	→		HANDOVER ACCESS	
9	←		PHYSICAL INFORMATION	Allows a proper transmission by the MS. Sent in unacknowledged mode as soon as the SS has detected a HANDOVER ACCESS. As soon as MS detects it then it stops T3124. On SS side T3105 could be started N times at the maximum as long as the step 8 is not performed
10	→		SABM	To establish L2 connection
11	SS			SS does not sent UA frame
12	UE			On T200 expiration, SS sends N200 times the SABM frame (steps 10) Then MS deactivates new channels and reactivates old UTRA resources it had before receiving the handover command
13	→		HANDOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell. Sent in acknowledge mode The cause in the IE "inter-RAT change failure" is set to "physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	physical channel failure
Inter-system message	Not Checked

8.3.7.6.5 Test requirement

The SS shall receive HANDOVER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.7.7 Inter system handover from UTRAN/To GSM/Speech/Failure (L1 Synchronization)

8.3.7.7.1 Definition

8.3.7.7.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology, as is unable to obtain L1 synchronization it shall

- resume the connection to UTRAN using the resources used before receiving the HANDOVER FROM UTRAN COMMAND message; and
- transmit the HANDOVER FROM UTRAN FAILURE message on uplink DCCH using AM RLC.

Reference(s)

TS 25.331 Clause 8.3.7.5

TS 04.06 Clause 5.4.1

8.3.7.7.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "physical channel failure" in IE "Inter_RAT HO failure cause", when it receives a HANDOVER FROM UTRAN COMMAND and the connection to GSM for handover cannot be established due failure in L1 Synchronization.

8.3.7.7.4 Method of test

Initial conditions

System Simulator : 2 cell - Cell 1 is UTRAN, Cell 2 is GSM. GSM 51.010 version 4.4.0 section 26.6.5.1 shall be referenced for the default parameters of cell 2.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10). The SS starts GSM cell activating dedicated channel in the cell, then sends HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The power level of target GSM cell is kept at very low level. The UE receives the command and configures itself accordingly but cannot complete the

handover. The SS checks that the handover is failed by checking that the UE transmits the HANDOVER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1.
2	SS			The SS configures cell 2 as a GSM cell with a traffic channel.
3	←		HANDOVER FROM UTRAN COMMAND-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM FR in GSM Cell.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
5	→		HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 2 (GSM cell) It implies that the UE has switched to GSM cell.
6	→		HANDOVER ACCESS	
7	SS			The target GSM Trafic Channel is Switched off
8	→		HANDOVER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell. The cause in the IE "inter-RAT change failure" is set to "physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	physical channel failure
Inter-system message	Not Checked

8.3.7.7.5 Test requirement

The SS shall receive HANDOVER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.7.8 Inter system handover from UTRAN/To GSM/Speech/Failure (Invalid Inter-RAT message)

8.3.7.8.1 Definition

8.3.7.8.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology, as the Inter-RAT message received is invalid, it shall

- resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANDOVER COMMAND message; and
- transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.6

8.3.7.8.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "Inter-RAT protocol error" in IE "Inter_RAT HO failure cause", when it receives a Handover From UTRAN message, with the IE "Inter-RAT message" received within the HANDOVER FROM UTRAN COMMAND message not including a valid inter RAT handover message in accordance with the protocol specifications for the target RAT.

8.3.7.8.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS then sends an HANDOVER FROM UTRAN COMMAND message not including a valid inter RAT handover message in accordance with the protocol specifications for the target RAT, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and finds that the Inter Rat message is Invalid. The SS checks that the handover is failed by checking that the UE transmits the INTER-SYSTEM HANDOVER FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2	←		HandoverFromUTRAN Command-GSM	Send on cell 1 (UTRAN cell) and the message carries an Invalid HANDOVER FROM UTRAN COMMAND -GSM
3	→		InterSystemHandoverFailure	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

Contains an Invalid Handover Command.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	Inter-RAT protocol error
Inter-system message	Not checked

8.3.7.8.5 Test requirement

In step 3 the SS shall receive INTER-SYSTEM HANDOVER FAILURE message on the old channel of the UTRAN cell.

8.3.7.9 Inter system handover from UTRAN/To GSM/Speech/Failure (Unsupported configuration)

8.3.7.9.1 Definition

8.3.7.9.2 Conformance requirement:

If the UE does not succeed to establish the connection to the other radio access technology, as the configuration specified in the Inter-RAT message is not supported, it shall

- resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANDOVER COMMAND message; and
- transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.8

8.3.7.9.3 Test purpose

To Test that the UE shall keep its old configuration and transmit a HANDOVER FROM UTRAN FAILURE message, which is set to "configuration unsupported" in IE "Inter_RAT HO failure cause", when it receives a Handover From UTRAN message, with the IE "Inter-RAT message" received within the HANDOVER FROM UTRAN COMMAND message including a Configuration not Supported by the UE.

8.3.7.9.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS then sends an HANDOVER FROM UTRAN COMMAND message including a Configuration not Supported by the UE in inter RAT handover message, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and

finds that the configuration given in Inter Rat message is not supported. The SS checks that the handover is failed by checking that the UE transmits the INTER-SYSTEM HANDOVER FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2	←		HandoverFromUTRAN Command-GSM	Send on cell 1 (UTRAN cell) and the message carries an unsupported configuration.
3	→		InterSystemHandoverFailure	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

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

HANDOVER COMMAND

Contains a Configuration not supported By the UE (Handover to a Band not supported by the UE)

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	configuration unsupported

Inter-system message	Not checked

8.3.7.9.5 Test requirement

In step 3 the SS shall receive INTER-SYSTEM HANDOVER FAILURE message on the old channel of the UTRAN cell.

8.3.7.10 Inter system handover from UTRAN/To GSM/Speech/Failure (Reception by UE in CELL_FACH)

8.3.7.10.1 Definition

8.3.7.10.2 Conformance requirement

If the UE does not succeed to establish the connection to the other radio access technology, as the Message received is not compatible with receiver state, it shall

- resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANDOVER COMMAND message; and
- transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.8a

8.3.7.10.3 Test purpose

The UE shall keep its old configuration when the UE receives a HANDOVER FROM UTRAN COMMAND message when in CELL_FACH state and then transmit a HANDOVER FROM UTRAN COMMAND FAILURE message on the DCCH using AM RLC, which sets value "protocol error" in IE "Inter_RAT HO failure cause" and is set to "Message not compatible with receiver state" in IE "Protocol error cause".

8.3.7.10.4 Method of test

Initial conditions

System Simulator : 1 UTRAN Cell

UE : RRC State CS-DCCH_FACH (state 6-6) as specified in clause 7.4 of TS 34.108, on Cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in RRC is in State CS-DCCH_FACH (state 6-6) as specified in clause 7.4 of TS 34.108, on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into RRC Cell__FACH_DTCH. It then Transmits Radio Bearer reconfiguration PDU to move UE to Cell_FACH state. The SS starts GSM cell without activating any dedicated channel in the cell, then sends INTER-SYSTEM HANDOVER COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the handover. The SS checks that the handover is failed by checking that the UE transmits the INTER-SYSTEM HANDOVER FAILURE message to the SS in UTRAN cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into CS-DCCH_FACH (state 6-6) _FACH state in cell 1
2	←		InterSystemHandoverCommand-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM
3	→		InterSystemHandoverFailure	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	Protocol Error
-Diagnostics Type	Type1
-Protocol Error Cause	Message Not Compatible With Receiver State
Inter-system message	Not Checked

8.3.7.10.5 Test requirement

After step 2 the SS shall receive INTER-SYSTEM HANDOVER FAILURE message on the old channel of the UTRAN cell.

8.3.7.11 Inter system handover from UTRAN/To GSM/Speech/Failure (Invalid message reception)

8.3.7.11.1 Definition

8.3.7.11.2 Conformance requirement:

If the UE does not succeed to establish the connection to the other radio access technology, as the Handover Message received is short to decode into a valid message, it shall

- resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANDOVER COMMAND message; and
- transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7

8.3.7.11.3 Test purpose

The UE shall keep its old configuration when the UE receives a Handover From UTRAN message, which will be short to decode into a valid Handover From UTRAN message. It shall then transmit an RRC STATUS message on the uplink DCCH. The IE "Protocol error information" shall contain an IE "Protocol error cause" set to "ASN.1 violation or encoding error";

8.3.7.11.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS then sends an HANDOVER FROM UTRAN COMMAND message, which will be short to decode into a valid Handover From UTRAN message, to the UE through DCCH of the serving UTRAN cell. The SS checks that the handover is failed by checking that the UE transmits an RRC STATUS message on the uplink DCCH. The IE "Protocol error information" shall contain an IE "Protocol error cause" set to "ASN.1 violation or encoding error";

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2	←		HandoverFromUTRAN Command-GSM	Send on cell 1 (UTRAN cell) and the message is short in length to be decoded into a valid Handover From UTRAN command
3	→		RRCStatus	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

A Short Message that shall not result in a valid Handover From UTRAN Command shall be sent.

RRC STATUS (Step 3)

Information Element	Value/remark
Protocol error information	Checked to see if set to "ASN.1 Violation or Encoding error"

8.3.7.11.5 Test requirement

In step 3 the SS shall receive RRC Status message in the UTRAN cell.

8.3.7.12 Inter system handover from UTRAN/To GSM/Speech/Failure (Physical channel Failure and Reversion Failure)

8.3.7.12.1 Definition

8.3.7.12.2 Conformance requirement:

If the UE does not succeed to establish the connection to the other radio access technology and fail to resume the connection to UTRAN using the resources used before receiving the INTER-SYSTEM HANDOVER COMMAND message, it shall

- perform a cell update procedure; and
- transmit the INTER-SYSTEM HANDOVER FAILURE message on uplink DCCH using AM RLC. When the successful delivery of the INTER-SYSTEM FAILURE message has been confirmed by RLC, the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.5

8.3.7.12.3 Test purpose

The UE shall perform a cell update when the UE fails to revert to the old configuration after the detection of physical channel failure in the target RAT cell as given in HANDOVER FROM UTRAN procedure. After the UE completes cell update procedure, the UE transmit HANDOVER FROM UTRAN FAILURE message on the DCCH using AM RLC, which is set IE "failure cause" to "physical channel failure".

8.3.7.12.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 2 is GSM. GSM 11.10-1 section 26.6.5.1 shall be referenced for the default parameters of cell 2.

UE : CC State U10 in cell 1

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

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

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS starts the UTRAN cell and brings the UE into call active state (CC state U10) with AMR. The SS starts GSM cell without activating any dedicated channel in the cell, then sends INTER-SYSTEM HANDOVER COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the handover and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS shall not use the old configuration. The UE transmit CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits the INTER-SYSTEM HANDOVER FAILURE message to the SS in UTRAN cell, on the DCCH using AM RLC, setting the value of IE "failure cause" to " physical channel failure".

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2	SS			The SS configures cell 2 as a GSM cell but without any traffic channel.
3	←		HandoverFromUTRAN Command-GSM	Send on cell 1 (UTRAN cell) and the message indicates: The target channel for GSM FR, which does not exist in the GSM cell.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the InterSystemHandoverCommand-GSM
5	SS			SS removes the Physical channel (DPCH) allocated to the mobile before handover command transmission
6	→		CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
7	←		CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
8				The SS configure the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10	→		InterSystemHandoverFailure	The IE "failure cause" shall be set to "physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for M = 3.

CELL UPDATE (Step n+1)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Annex with the following exceptions:

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

CELL UPDATE CONFIRM (Step n+2)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
- UARFCN uplink (Nu)	Reference to TS34.108 clause 5.1 Test frequencies
- UARFCN downlink (Nd)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	33dBm
CHOICE Mode	FDD
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	2
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	-a
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

HANDOVER FROM UTRAN FAILURE

Information Element	Value/remark
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink HANDOVER FROM UTRAN COMMAND –GSM message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT handover failure	
-Inter-RAT handover failure cause	physical channel failure
Inter-system message	Not Checked

8.3.7.12.5 Test requirement

In step 3 the SS shall receive RRC Status message in the UTRAN cell.

8.3.7.13 Inter system handover from UTRAN/To GSM/ success / call under establishment

8.3.7.13.1 Definition

8.3.7.13.2 Conformance requirement:

When the UE receives an HANDOVER FROM UTRAN COMMAND message from UTRAN the UE shall take the following actions:

- Establish the connection to the other radio access system, by using the contents of the IE "Inter system message". This IE contains candidate/ target cell identifier(s) and radio parameters relevant for the other radio access system.
- For each IE "Remaining radio access bearer", associate the radio access bearer given by the IE "RAB info" to the radio resources in the target system given by the IE "Inter system message". Other information for making the association may be included in the IE "Inter system message" and requirements may be stated in the specifications relevant for the target system [FFS].
- Switch the current call under establishment to the other radio access system.

Reference

3GPP TS 25.331 clause 8.3.7.3

Test purpose

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

To Test that the UE continues the call in GSM cell, after Succesful completion of the Handover.

8.3.7.13.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell.

UE : CC State U10 in cell 1.

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS activates the UTRAN cell and GSM Cell. The UE is triggered to initialise an MO speech call. During the call establishment phase, the SS is configured to not transmit the RLC Acknowledgment for SETUP message. SS configures a dedicated channel in GSM Cell, then sends the UE an HANDOVER FROM UTRAN COMMAND indicating the

dedicated channel in the target GSM cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel of the GSM cell. The SS checks whether the handover is performed by checking that the UE transmits the HANDOVER COMPLETE message to the SS in GSM cell. The SS checks MS correctly retransmits CC SETUP message, that was not acknowledged by UTRAN RLC Layer before the Handover, following completion of the handover to GSM cell.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			To trigger the UE to initialise an MO call
2	→		SETUP	SS does not Acknowledge it
3	SS			The SS starts the GSM cell and configure a dedicated channel SDCCH.
4	←		HANDOVER FROM UTRAN COMMANDGSM	Send on cell 1 (UTRAN cell) and the message indicates: the dedicated channel SDCCH.
5	UE			The UE accepts the handover command and switches to the GSM dedicated channel specified in the HANDOVER FROM UTRAN COMMAND-GSM
6	→		HANDOVER ACCESS	The SS receives this burst on the dedicated channel of cell 2 (GSM cell) It implies that the UE has switched to GSM cell.
7	→		HANDOVER ACCESS	
8	→		HANDOVER ACCESS	
9	→		HANDOVER ACCESS	
10	←		PHYSICAL INFORMATION	
11	→		SABM	
12	←		UA	
13	→		HANDOVER COMPLETE	The SS receives the message on the dedicated channel of GSM cell.
14	->		SETUP	The SS receives the message on the dedicated channel of GSM cell.
15	<-		CHANNEL RELEASE	

Specific message contents

HANDOVER FROM UTRAN COMMAND-GSM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	now
RAB Info	Not present
Inter-system message	
- System type	GSM
- Frequency Band	GSM/DCS 1800 Band
- CHOICE GSM message	Single GSM message
- Message	GSM HANDOVER COMMAND formatted as Variable Length BIT STRING without Length Indicator. The contents of the HANDOVER COMMAND see next table.

HANDOVER COMMAND

Same as the HANDOVER COMMAND for M = 4 in clause 26.6.5.2 of GSM 11.10-1 version 8.2.0 Release 1999

8.3.7.13.5 Test requirement

At step 14 the SS shall receive SETUP message on the dedicated channel of the GSM cell, and at step.

8.3.8 Inter system cell reselection to UTRAN

[Editor's note: This test is FFS until R2000 core specification will be defined.]

8.3.9 Inter system cell reselection from UTRAN

[Editor's note: This test is FFS until R2000 core specification will be defined.]

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

8.4.1.1.1 Definition

8.4.1.1.2 Conformance requirement

Upon a state transition from idle mode to CELL_DCH state, the UE shall begin or continue to monitor the list of cells assigned in the IE "intra-frequency cell info list" which is specified in System Information Block type 11 or 12 messages on BCCH. When entering CELL_DCH state, the UE shall send MEASUREMENT REPORT message(s) when the condition(s) in "intra-frequency measurement reporting criteria" IE received are fulfilled. In CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, which contains a "measurement identity" IE with the same value as the "intra-frequency measurement identity" in System Information Block Type 11 or 12 message, it shall terminate existing monitoring activities for the neighbouring cells previously known from System Information Block type 11 or 12 messages. It shall perform the measurement and reporting tasks based on the latest MEASUREMENT CONTROL message received.

Reference

3GPP TS 25.331 clause 8.4.1.8.1, 8.4.1.3

8.4.1.1.3 Test Purpose

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). 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	-80	-60	-60	-80	-80

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.

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 = "1f", 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 dropped below the threshold value specified in the previous MEASUREMENT CONTROL message.

SS sends then a new MEASUREMENT CONTROL message to add cells 1 and 2 to the list of the cells the UE shall measure. Since the RSCP for cell 2 is below the threshold for event 1f 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 = "1B", 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 1b 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 P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
5	→		Void	
6	→		MEASUREMENT REPORT	SS waits 64 seconds
6a	→		MEASUREMENT REPORT	SS shall receive consecutive MEASUREMENT REPORT messages at 64 seconds interval.
7	←		MEASUREMENT CONTROL	A measurement with "measurement identity" IE set to "1" is assigned, with the IE "CHOICE reporting criteria" set to "intra-frequency measurement reporting criteria". See specific message content for the rest of the message.
8				SS waits for 64 seconds and verifies that no further MEASUREMENT REPORT messages are detected on the uplink DCCH.
9				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.1-1.
10	→		MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 3 and containing report the measured CPICH RSCP value of cell 3.
10a	←		MEASUREMENT CONTROL	A MEASUREMENT CONTROL is sent to the UE to modify the list of the cells the UE shall monitor.
10b	→		MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 2.
11				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.1-2.

Step	Direction		Message	Comment
	UE	SS		
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 1b.
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	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- 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 selection and Re-selection	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	256 chips
- Read SFN Indicator	TRUE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset1_{s,n}$	Not Present (Default is 0dB)
- $Qoffset2_{s,n}$	Not Present
- Maximum allowed UL TX power	+33dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- 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
- UE internal measurement system information	Not Present

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	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- 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 selection and Re-selection	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	256 chips
- Read SFN Indicator	TRUE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset1_{s,n}$	Not Present (Default is 0dB)
- $Qoffset2_{s,n}$	Not Present
- Maximum allowed UL TX power	+33dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- 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
- UE internal measurement system information	Not Present

MEASUREMENT REPORT (Step 6 and 6a)

~~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 it is absent~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 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~~

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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 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	256 chips
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	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)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- 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	
- Triggering condition 1	1f
- Triggering condition 2	Monitored set cells
- Reporting range	Not Present

Information Element	Value/Remark
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	Not Present
- Threshold used frequency	1 dB
- Reporting deactivation threshold	-70 dBm
- Replacement activation threshold	Not Present
- Time to trigger	Not Present
- Amount of reporting	0 msec
- 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

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	256 chips
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	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)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- 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	
- Triggering condition 1	1f
- Triggering condition 2	Monitored set cells
- Reporting range	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	Not Present
- Threshold used frequency	1 dB
- Reporting deactivation threshold	-70 dBm

- Replacement activation threshold	Not Present
- Time to trigger	Not Present
- Amount of reporting	0 msec
- 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/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~~	~~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~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 1~~
~~- CPICH Ec/No~~	~~Check to see if this IE is 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~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE 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 "1f"~~
~~- 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~~

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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is 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
- SFN-SFN observed time difference	Check to see if this IE 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 "1f"
- 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~~

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/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	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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is 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
- SFN-SFN observed time difference	Check to see if this IE 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
- SFN-SFN observed time difference	Check to see if this IE 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 "1f"
- 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

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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is 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
- SFN-SFN observed time difference	Check to see if this IE 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
- SFN-SFN observed time difference	Check to see if this IE 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 "1f"
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	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	1b
- Triggering condition 1	Monitored Cells
- Triggering condition 2	Not Present
- Reporting range	8 dB

Information Element	Value/Remark
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	5000 msec
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	Not Present
DPCH compressed mode status info	Not Present

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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	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	1b
- Triggering condition 1	Monitored Cells
- Triggering condition 2	Not Present
- Reporting range	8 dB
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present

- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	5000 msec
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	Not Present
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 14)

~~Information Element~~	~~Value/Remarks~~
~~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 "1b"~~
~~- 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~~

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 "1b"
- 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 2 has dropped below 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 '1f' 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 dropped below the threshold stated in the MEASUREMENT CONTROL message transmitted by the SS in step 7. 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 MEASURMEASUREMENT REPORT message containing IE "Event results", indicating the triggering of event '1b' by cell 2. The MEASUREMENT REPORT message shall not contain any measured results.

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

After entering CELL_DCH state from idle mode, the UE shall stop monitoring the list of cells assigned in the IE "inter-frequency cell info" IE in System Information Block 11 or 12 messages. In CELL_DCH state, when the UE receives a MEASUREMENT CONTROL message requesting for a measurement of inter-frequency measurement type to be setup, it shall start inter-frequency measurement and the associated reporting activities if "DPCH compressed mode status info" IE in the message simultaneously activates at least one compressed mode pattern sequence. When the UE receives a MEASUREMENT CONTROL message with "Reporting cell status" IE omitted, it shall not include "Cell measured results" IE for any cells in MEASUREMENT REPORT messages sent on uplink DCCH.

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

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. 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. 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.

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).

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 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 "inter-frequency cells info list" IE.

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. 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 Type 11.

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. It shall stop compressed mode operations at the activation time stated in PHYSICAL CHANNEL RECONFIGURATION message. After the activation time has elapsed, 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. The "DPCH compressed status info" IE in this message activates the transmission gap pattern sequence with TGPSI = 1. 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.

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 P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
5			Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
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. "DPCH compressed mode status info" IE is set to simultaneously activate compressed mode pattern.
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 32 seconds after step 11. This message shall not contain IE "Inter-frequency cell measured results"

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~~	
~~- 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 info list~~	
~~- Inter-frequency cell id~~	~~4~~
~~- Frequency info~~	
~~- UARFCN uplink (Nu)~~	~~Set to the uplink UARFCN of cell 4~~
~~- UARFCN downlink (Nd)~~	~~Set to the downlink UARFCN of cell 4~~
~~- Cell info~~	
~~- Cell individual offset~~	~~0 dB~~
~~- Reference time difference to cell~~	~~0 chips~~
~~- Read SFN Indicator~~	~~FALSE~~
~~- CHOICE mode~~	~~FDD~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Set to same code as used for cell 4~~
~~- Primary CPICH TX power~~	~~Not Present~~
~~- TX Diversity Indicator~~	~~FALSE~~
~~- Cell selection and re-selection info~~	
~~- $Qoffset_{s,n}$~~	~~0 dB~~
~~- Maximum allowed UL TX power~~	~~0 dBm~~
~~- HCS neighbouring cell information~~	~~Not Present~~
~~- Qqualmin~~	~~-20 dB~~
~~- Qrxlevmin~~	~~-115dBm~~
~~- Inter-RAT measurement system information~~	~~Not Present~~
~~- Traffic volume measurement system information~~	~~Not Present~~
~~- UE internal measurement system information~~	~~Not Present~~

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	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 info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	Set to the uplink UARFCN of cell 4
- UARFCN downlink (Nd)	Set to the downlink UARFCN of cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION SETUP (Step 2)

Use the message found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- 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	Active
- TGCFN	(Current CFN + (256 - TTI/10msec))mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- 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

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- 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	Active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- 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

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/remark
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
- Number of DPDCH	Not Present (Use default value of 1)
- Spreading factor	SF is reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present (Use default value of 0)
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
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	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits (SF=128,256)	Not Present
- DPCH compressed mode info	
- Transmission gap pattern sequence	
- TGPSI	1
- TPGS status Flag	Inactive
- 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)

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	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	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	Active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

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	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	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	Active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 10)

~~Information Element~~	~~Value/Remarks~~
~~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~~
~~- SFN-SFN observed time difference~~	~~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~~

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
- SFN-SFN observed time difference	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	Modify
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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not Present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	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

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Modify
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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not Present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	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/Remarks
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

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.

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

8.4.1.3.1 Definition

8.4.1.3.2 Conformance requirement

The UE shall begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 11 or 12 messages, upon a transition from idle mode to CELL_FACH state. If IE "intra-frequency measurement reporting criteria" is specified in System Information Block Type 11 or 12 messages, the UE shall store this information and shall apply these reporting rules in a subsequent transition to CELL_DCH state. If the UE receives IE "Intra-frequency reporting for RACH reporting" and IE "Maximum number of Reported cells on RACH" in System Information Block type 11 or 12 messages, the UE shall use these measurement information and report the measured results when sending messages on RACH.

Reference

3GPP TS 25.331, clause 8.4.1.9.1, 8.4.1.7.1

8.4.1.3.3 Test Purpose

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. 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. 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, 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 8.4.1.3-1 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 P6 (clause 7.4.2.2.2) 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	Remove no intra-frequency cells
- 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
- Cell selection and Re-selection info	Not present
- 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	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	
- $Qoffset1_{s,n}$	Not Present (Default is 0 dB)
- $Qoffset2_{s,n}$	Not Present
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Intra-frequency Measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE

Information Element	Value/Remark
- 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	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- CHOICE reported cell	
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

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	Remove no intra-frequency cells
- 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
- Cell selection and Re-selection info	Not present
- 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	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	
- $Qoffset1_{s,n}$	Not Present (Default is 0 dB)
- $Qoffset2_{s,n}$	Not Present
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Intra-frequency Measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	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 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
- UE internal measurement system information	Not Present

CELL UPDATE (Step 7)

~~Information Element~~	~~Value/Remarks~~
~~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.~~

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/Remarks
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
- SFN-SFN observed time difference	Check to see if this IE 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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	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

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
- SFN-SFN observed time difference	Check to see if this IE 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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	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.

8.4.1.4 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

After entering CELL_FACH state from idle mode, the UE shall start to monitor the cells listed in IE "inter-frequency cell info list" assigned in the System Information Block type 11 or 12 messages.

Reference

3GPP TS 25.331, clause 8.4.1.9.2

8.4.1.4.3 Test Purpose

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 PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2			Void	
3	→		Void	
4	←		Void	
5	→		Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4-1.
8	→		CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9	←		CELL UPDATE CONFIRM	Use message content.
10	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

System Information Block type 11 (Step 1)

Information Element	Value/Remark
SIB12 Indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	Set to uplink UARFCN of cell 4
- UARFCN downlink (Nd)	Set to the downlink UARFCN of cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

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 info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	Set to uplink UARFCN of cell 4
- UARFCN downlink (Nd)	Set to the downlink UARFCN of cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

CELL UPDATE (Step 8)

~~Information Element~~	~~Value/Remarks~~
~~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~~

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI assigned during the execution of procedure P6.
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 9)

Use the message sub-type in default message content defined in Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.

After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.

After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

1> stop intra-frequency type measurement reporting;

1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or

1> if the transition is not due to a reconfiguration message:

2> delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY.

1> begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331).

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH:

2> resume the measurement reporting.

1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331);

2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331):

3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5.3 Test Purpose

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. 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". 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. 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: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.5-1 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		←	Master Information Block System Information Block type 11	UE is in CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1. System Information Block Type 11 to be broadcast does not specify any measurement type to be configured in the UE in CELL_DCH.
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 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.

Step	Direction		Message	Comment
	UE	SS		
12	←		CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
13	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
14	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
15	→		MEASUREMENT REPORT	Repeated at 500 milliseconds interval

Specific Message Content

MASTER INFORMATION BLOCK (Step 1)

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 (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~~	~~Not Present~~
~~- Intra-frequency measurement identity~~	~~Not present~~
~~- Intra-frequency cell info list~~	
~~- CHOICE intra-frequency cell removal~~	~~Remove no intra-frequency cells~~
~~- New intra-frequency info list~~	
~~- 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~~
~~- Cell selection and Re-selection info~~	~~Not present~~
~~- Cells for measurement~~	~~Not Present~~
~~-Intra-frequency measurement quantity~~	
~~-Intra-frequency reporting quantity for RACH reporting~~	~~Not Present~~ ~~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~~

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	Not Present
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- 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
- 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

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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	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

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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	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/Remarks~~
~~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~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 1~~
~~- CPICH Ec/No~~	~~Check to see if this IE is absent~~
~~- CPICH RSCP~~	~~Check to see if this IE is present~~
~~- Pathloss~~	~~Check to see if this IE is absent~~
~~- Cell measured results~~	
~~- Cell Identity~~	~~Check to see if it is absent~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 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~~

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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 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~~	~~Remove no intra-frequency cells~~
~~- New intra-frequency info list~~	
~~- 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~~
~~- Cell selection and Re-selection info~~	~~Not present~~
~~- 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~~	
~~- $Qoffset_{s,n}$~~	~~0 dB~~
~~- Maximum allowed UL TX power~~	~~0 dBm~~
~~- HCS neighbouring cell information~~	~~Not Present~~
~~- 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~~
~~- UE internal measurement system information~~	~~Not Present~~

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	Remove no intra-frequency cells
- New intra-frequency info list	
- 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
- Cell selection and Re-selection info	Not present
- 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	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- 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
- UE internal 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	Remove no intra-frequency cells
- New intra-frequency cells	
- 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
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- 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

Information Element	Value/Remark
- 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
- UE internal measurement system information	Not present

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	Remove no intra-frequency cells
- New intra-frequency cells	
- 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
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- 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
- UE internal 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/Remarks~~
~~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~~

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/Remarks
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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 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

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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 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
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's CPICH RSCP value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values CPICH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".

After step 15, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 9. It shall send MEASUREMENT REPORT messages at 500 milliseconds interval. In these messages, triggering of event '1a' shall be reported in IE "Event results" with IE "Primary CPICH info" containing the primary scrambling code for cell 3.

The message shall contain IE "measured result" to report CPICH RSCP values of cell 1, 2 and 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

When transiting from CELL_DCH state to CELL_FACH state, the UE shall stop all measurement reporting activities related to inter-frequency measurements assigned in a MEASUREMENT CONTROL message. After a transition from CELL_DCH state to CELL_FACH state, the UE shall begin to monitor cells listed in the IE "inter-frequency cell info" in the System Information Block type 11 or 12 messages.

Reference

3GPP TS 25.331, clause 8.4.1.6.2

8.4.1.6.3 Test Purpose

To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL_DCH state to CELL_FACH. 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: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.6-1 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 11 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. 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'sRSCP value. SS transmits PHYSICAL CHANNEL

RECONFIGURATION message again and reconfigures common physical channels. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and then move to CELL_FACH state.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 11. In SIB 11, 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 [x] seconds to allow 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 11	UE is CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) in cell 1. System Information Block type 11 is modified with respect to the default settings. All measurement and reporting activities are disabled in this message.
2			Void	
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 11	SS modifies MIB and SIB 11. 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	

NOTE: The value [x] seconds is to be calculated from TS 25.133 clause 5.5.2. The maximum allowable time for cell re-selection duration is governed by the requirements in TS 25.304 and TS 25.133.

Specific Message Content

System Information Block Type 11 (Step 1)

~~Information Element~~	~~Value/Remark~~
~~References to other system information blocks~~	~~Not Present~~
~~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~~
~~- UE Internal measurement system information~~	~~Not Present~~

Information Element	**Value/remark**
References to other system information blocks	Not Present
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
- UE Internal 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/Remarks
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 PPilot-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)	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Active
- TGCFN	(Current CFN+(256 - TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0

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 PPilot-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)	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0

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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	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

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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	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/Remarks~~
~~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~~
~~- SFN-SFN observed time difference~~	~~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~~

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
- SFN-SFN observed time difference	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)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 11 (Step 12)

~~Information Element~~	~~Value/Remarks~~
~~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~~	~~No inter-frequency cells removed~~
~~- New inter-frequency cells~~	
~~- Inter-frequency cell id~~	~~4~~
~~- Frequency info~~	
~~- CHOICE mode~~	~~FDD~~
~~- UARFCN uplink (Nu)~~	~~Set to uplink UARFCN for cell 4~~
~~- UARFCN downlink (Nd)~~	~~Set to downlink UARFCN 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~~	~~Set to the scrambling code of cell 4~~
~~- 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~~
~~- UE Internal measurement system information~~	~~Not Present~~

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	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Set to uplink UARFCN for cell 4
- UARFCN downlink (Nd)	Set to downlink UARFCN 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	Set to the scrambling code of cell 4
- 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
- UE Internal 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/Remarks~~
~~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~~

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

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 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH:

2> resume the measurement reporting.

1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):

3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

…

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;

1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

…

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:

…

4> for any other measurement type:

5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> resume the measurements according to the new stored measurement control information.

3> otherwise:

…

2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:

3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.

1> if the IE "measurement command" has the value "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a and 8.4.1.7.1

8.4.1.7.3 Test Purpose

- To confirm that UE retrieves stored measurement control information for intra-frequency measurement measurement type with "measurement validity" assigned to "CELL_DCH", after it enters CELL_DCH state from CELL_FACH state.
- To confirm that the UE continues to monitor the neighbouring cells listed "intra-frequency cell info" IE in the System Information Block type 11 or 12 messages, if no intra-frequency measurements applicable to CELL_DCH are stored.
- To confirm that the UE transmits MEASUREMENT REPORT messages if reporting criteria stated in IE "intra-frequency measurement reporting criteria" in System Information Block type 11 or 12 messages are fulfilled.
- To confirm that a MEASUREMENT CONTROL message received in CELL_DCH state overrides the measurement and associated reporting contexts maintained in the UE by virtue of System Information Block type 11 or 12 messages.

8.4.1.7.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.7-1

Para-meter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm /3.84 MHz	-60	-122	-70	-60	-75	-75

The UE is brought to CELL_FACH state in cell 1. System Information Block type 12 message is changed with respect to the default message contents, with cell 2 included in the IE "intra-frequency cell info". Event 1e is selected in IE "Reporting information for state CELL_DCH", and "Intra-frequency measurement quantity" is set to CPICH RSCP.

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 MEASUREMENT REPORT messages containing IE "Measured results" to report cell 2's CPICH RSCP value and IE "event results" to report triggering of event type "1e". After receiving the MEASUREMENT REPORT messages, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info" and IE "CHOICE reporting criteria" set to "periodic reporting". After receiving such a message, the UE shall transmit another set of MEASUREMENT REPORT messages. SS verifies that only measurement readings for cell 3 's CPICH RSCP are report in IE "cell measured results" in these messages.

Next, 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 for 16 seconds and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received. SS transmits MEASUREMENT CONTROL message on the downlink DCCH. The key parameters specified in this message are: measurement command = 'setup', measurement type = 'intra-frequency measurement', measurement object = 'cell 2', reporting criteria = 'periodic reporting', measurement validity IE is present and "UE state" = "CELL_DCH". SS waits for 16 seconds, 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 and start to monitor cell 2. The UE shall also resume periodic reporting of cell 2's CPICH RSCP measured results by sending MEASUREMENT REPORT messages. 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 step 5 (see specific message content).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures common physical channel. The UE shall transit to CELL_FACH state and then respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. SS monitor the uplink DCCH once more to verify that no MEASUREMENT REPORT messages are detected. SS modifies the contents of Master Information Block and System Information Block type 12 messages, and then send SYSTEM INFORMATION CHANGE INDICATION message to UE. This is followed by a reconfiguration of the downlink transmission power of the respect cells according to the settings in columns "T1" in table 8.4.1.7-1. SS starts timer T305 and then waits for it to expire. The UE shall discover an "out-of-service" condition and 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". SS transmits a CELL UPDATE CONFIRM message, which includes "New C-RNTI", on the DCCH. Then the UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message. Next, SS sends a RADIO BEARER RECONFIGURATION message on the downlink DCCH, assigning dedicated physical channels in both uplink and downlink directions. The UE shall respond with a RADIO BEARER RECONFIGURATION COMPLETE message and then return to CELL_DCH state. SS checks that the UE does not generate any MEASUREMENT REPORT messages on the uplink DCCH.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents" clause.
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	Only cell 3 is included in the IE "intra-frequency cell info".
6	→		MEASUREMENT REPORT	UE shall report cell 3's CPICH RSCP reading in IE "cell measured results".
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 for 16 seconds and checks that no MEASUREMENT REPORT messages are sent by UE.
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 for 16 seconds 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 begins to report cell 2's measured results for CPICH RSCP.
15	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activitiest related to "measurement identity" = 12.
16				SS waits for 16 seconds and verifies that UE stop transmitting MEASUREMENT REPORT messages.
17	←		MEASUREMENT CONTROL	This message is the same as in step 5
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.

Step	Direction		Message	Comment
	UE	SS		
21	←		Master Information Block System Information Block type 12	System Information Block type 12 messages are modified to include cell 2 and cell 3 into neighbouring cells list for intra-frequency type measurements.
21a	←		SYSTEM INFORMATION CHANGE INDICATION	SS reconfigures the downlink transmission power settings for cell 1 to cell 3 according to columns "T1" in table 8.4.1.7-1, runs timer T305, and then waits until T305 expires.
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				SS checks that no MEASUREMENT REPORT messages are received on uplink DCCH.

Specific Message Content

System Information Block type 12 (Step 1)

Information Element	Value/Remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- 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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Intra-frequency measurement quantity	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity	Not Present
- Intra-frequency measurement for RACH reporting	No report
- Maximum number of reported cells on RACH	
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference reporting indicator	FALSE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference reporting indicator	FALSE
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	Not present
- Reporting quantities for detected cells	Intra-frequency measurement reporting criteria
- CHOICE report criteria	
- Parameter required for each event	1e
- Intra-frequency event identity	Not Present
- Triggering condition 1	Monitored set cells
- Triggering condition 2	Not present
- Reporting range	Not present
- Cells forbidden to affect reporting	FDD
- CHOICE Mode	
- Primary CPICH Info	
- Primary scrambling code	Set to the scrambling code of cell 2
- 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	Infinity

Information Element	Value/Remark
- Reporting Interval	16 seconds
- 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
- UE internal measurement system information	Not Present

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- 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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Intra-frequency measurement quantity	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity	Not Present
- Intra-frequency measurement for RACH reporting	No report
- Maximum number of reported cells on RACH	
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	No report
- SFN-SFN observed time difference reporting indicator	FALSE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	
- Reporting quantities for monitored set cells	No report
- SFN-SFN observed time difference reporting indicator	FALSE
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	Not present
- Reporting quantities for detected cells	Intra-frequency measurement reporting criteria
- CHOICE report criteria	
- Parameter required for each event	1e
- Intra-frequency event identity	Not Present
- Triggering condition 1	Monitored set cells
- Triggering condition 2	Not present
- Reporting range	Not present
- Cells forbidden to affect reporting	FDD
- CHOICE Mode	
- Primary CPICH Info	
- Primary scrambling code	Set to the scrambling code of cell 2
- 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	Infinity
- Reporting Interval	16 seconds
- 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
- UE internal measurement system information	Not Present

RADIO BEARER RECONFIGURATION (Step 2, Step 12 and Step 24)

Use the same message type found in Annex A, with condition set to A4.

MEASUREMENT REPORT (Step 4)

~~Information Element~~	~~Value/Remarks~~
~~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~~
	~~Check to see if this IE is absent~~
~~- SFN-SFN observed time difference~~	
~~- 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~~	

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
- SFN-SFN observed time difference	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 5 and Step 17)

Information Element	Value/Remark
Measurement Identity	10
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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected 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

Information Element	Value/Remark
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- 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

Information Element	Value/remark
Measurement Identity	10
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	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected 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	Infinity
- Reporting interval	16 seconds
- 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/Remarks
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
	Check to see if this IE is absent
- SFN-SFN observed time difference	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	Check to see if this IE is set to '1e'
- CHOICE event result	
- 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	

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
	Check to see if this IE is absent
- SFN-SFN observed time difference	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	

PHYSICAL CHANNEL RECONFIGURATION (Step 7 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 (Step 10)

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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	cell 2
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected 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

Information Element	Value/Remark
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- 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

Information Element	Value/remark
Measurement Identity Measurement Command	12 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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	cell 2
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected 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	Infinity

- Reporting interval	16 seconds
- 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 (Step 14)

~~Information Element~~	~~Value/Remarks~~
~~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~~	
~~- Cell Identity~~	~~Check to see if this IE is absent~~
	~~Check to see if this IE is absent~~
~~- SFN-SFN observed time difference~~	
~~- 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~~	~~Check to see if this IE is set to '1e'~~
~~- CHOICE event result~~	
~~- 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~~	

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
- SFN-SFN observed time difference	
- 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/Remarks~~
~~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~~

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

Master Information Block (Step 21)

Information Element	Value/Remarks
MIB Value Tag	2

System Information Block type 12 (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	13
- Intra-frequency cell info list	*Cell 2 and Cell 3 are added*
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	CPICH RSCP
- Measurement reporting mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting / Event Triggering Report Mode	Periodic Reporting
- CHOICE report criteria	Perioidical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	250 msec
- 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

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	13
- Intra-frequency cell info list	*Cell 2 and Cell 3 are added*
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	Set to id of cell 2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Intra-frequency cell id	Set to id of cell 3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	CPICH RSCP
- Measurement reporting mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting / Event Triggering Report Mode	Periodic Reporting
- CHOICE report criteria	Perioidical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	250 msec
- 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/Remarks~~
~~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~~

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.

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 delete all measurement and reporting contexts obtained from System Information Block type 12 messages. It shall transmit MEASUREMENT REPORT messages which contain measured results of cell 3's CPICH RSCP value only

After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.

After step 13 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 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 not resume measurements and any associated reporting activities for cell 3's CPICH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS in the uplink DCCH.

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

When transiting from CELL_FACH state to CELL_DCH state, the UE shall stop monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 or 12 messages. If the UE has stored measurement control information of type "inter-frequency" for which the IE "measurement validity" is present and the IE "UE state for reporting" has been assigned to "CELL_DCH", it shall resume the stored measurement reporting activities after it has re-entered CELL_DCH state from CELL_FACH state. The UE shall activate or deactivate inter-

frequency measurements by decoding the "DPCH compressed mode status info" IE in MEASUREMENT CONTROL messages.

Reference

3GPP TS 25.331 clause 8.4.1.7.2, 8.4.1.3

8.4.1.8.3 Test Purpose

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 or 12 when it transits from CELL_FACH state to CELL_DCH state. To confirm that the UE resumes inter-frequency measurements and reporting stored for which the measurement control information has IE "measurement validity" assigned to the value "CELL_DCH", after it re-enters CELL_DCH state from CELL_FACH state. To confirm that the UE resumes inter-frequency measurement and reporting activities after it has received a MEASUREMENT CONTROL message specifying that a stored compressed mode pattern sequence be re-activated.

8.4.1.8.4 Method of test

Initial Condition

System Simulator: 3 cells – Cells 1, cell 4 and cell 5 are active.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.8-1 illustrates the downlink power to be applied for the 3 cells in this test.

Table 8.4.1.8-1

Para-meter	Unit	Cell 1	Cell 4	Cell 5
UTRA RF Channel Number		Ch. 1	Ch. 2	Ch. 2
CPICH Ec	dBm/3.84 MHz	-60	-75	-75

The UE is in CELL_DCH state in cell 1. SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info". In the MEASUREMENT CONTROL message, the parameters of the IE "inter-frequency measurement reporting criteria" are as follow: event-triggered with event identity ='2c', reporting quantity = "CPICH RSCP", threshold for non-used frequency = '-85 dBm', hysteresis = '1.0dB', time to trigger = '10 seconds', amount of reporting = '1' and reporting interval = '0'. In the same message, IE "Measurement validity" is present and "UE state" is assigned the value 'CELL_DCH'. SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH after it has transmitted the MEASUREMENT CONTROL message.

SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures PRACH and S-CCPCH physical channels. The UE shall reconfigure itself to receive and transmit using the new common physical channels assigned, and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH. SS modifies the content of Master Information Block and System Information Block type 12 messages, such that cell 4 is added in the list of cells assigned in the IE "inter-frequency cell info". SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. Once again, SS verifies that the UE does not transmit MEASUREMENT REPORT messages in the uplink direction.

SS sends PHYSICAL CHANNEL RECONFIGURATION message, and configures dedicated physical. In this message, SS commands the UE to start applying compressed mode mechanism for DPCH. The UE shall move to CELL_DCH state and then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message. SS waits for 10 seconds. The UE shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 5. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message. SS verifies that this message does not contain measured results for cell 4.

SS transmitts a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC. In this message, SS modifies the measurement control information for measurement identity = "14" and set IE "CHOICE reporting criteria" to "periodic reporting criteria".The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval. SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1. The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities. Following this, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE. SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall be able to receive MEASUREMENT REPORT messages continuously at 2 seconds interval.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1.
2	←		MEASUREMENT CONTROL	SS specifies inter-frequency measurement and reporting parameters for cell 5, with "measurement validity" IE present and "UE state" set to "CELL_DCH".
3				SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
4	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical resources.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
6	←		Master Information Block System Information Block type 12	SS modifies MIB and SIB 12 in order to include cell 4 into the list of cells in IE "inter-frequency cell info".
7	←		SYSTEM INFORMATION CHANGE INDICATION	After SS transmits this message, SS confirms that there are no transmissions of MEASUREMENT REPORT message in the uplink direction.
8	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels with compressed mode parameters
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
10	→		MEASUREMENT REPORT	UE shall resume inter-frequency measurement task for cell 5 and report the measured CPICH RSCP value for cell 5.
11	←		MEASUREMENT CONTROL	SS changes the reporting criteria for cell 5 to 'periodic reporting'
12	→		MEASUREMENT REPORT	UE shall begin to transmit this message at 2 seconds interval.
13	←		PHYSICAL CHANNEL RECONFIGURATION	SS deactivates the currently used pattern sequence for compressed mode operation.
14	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE stays in CELL_DCH state. SS verifies that no MEASUREMENT REPORT messages are received.
15	←		MEASUREMENT CONTROL	SS activates the pattern sequence stored by the UE.

Step	Direction		Message	Comment
	UE	SS		
16	→		MEASUREMENT REPORT	SS checks that MEASURE-MENT REPORT messages are received at 2 seconds interval.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	14
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	
- Frequency info	5
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0 dB
- Time to trigger	10 seconds
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	
- Frequency info	5
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0 dB
- Time to trigger	10 seconds
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in Annex A titled "(Packet to CELL_FACH from CELL_DCH in PS)".

Master Information Block (Step 6)

Information Element	Value/Remark
Value Tag	2

System Information Block type 12 (Step 6)

~~Information Element~~	~~Value/Remark~~
~~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 cells removal~~	~~No inter-frequency cells removed~~
~~- New inter-frequency info list~~	
~~- Inter-frequency cell id~~	~~Set to id of cell 4~~
~~- Cell info~~	
~~- Cell individual offset~~	~~0 dB~~
~~- Reference time difference to cell~~	~~0 chips~~
~~- Read SFN Indicator~~	~~FALSE~~
~~- CHOICE Mode~~	~~FDD~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Set to same code as used for cell 4~~
~~- Primary CPICH TX power~~	~~Not Present~~
~~- TX Diversity Indicator~~	~~FALSE~~
~~- Cell selection and Re-selection info~~	~~Not Present - use default values~~
~~- Inter-RAT measurement system information~~	~~Not Present~~
~~- Traffic volume measurement system information~~	~~Not Present~~
~~- UE internal measurement system information~~	~~Not Present~~

Information Element	Value/remark
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 cells removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_FACH 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	
- 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	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Active
- TGCFN	(Current CFN+(256 - TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0

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	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0

MEASUREMENT REPORT (Step 10)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 14
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 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- 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
- SFN-SFN observed time difference	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 5
- 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	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5

Information Element	Value/remark
Measurement identity	Check to see if set to 14
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 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- 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
- SFN-SFN observed time difference	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 5
- 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	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5

MEASUREMENT CONTROL (Step 11)

Information Element	Value/Remark
Measurement Identity	14
Measurement Command	Modify
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	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- 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
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	2000 milliseconds
DPCH compressed mode status info	Not Present

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Modify
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	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- 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
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	2000 milliseconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12, 16)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 14~~
~~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 5~~
~~- UARFCN (downlink)~~	~~Check to see if set to the UARFCN of the downlink frequency for cell 5~~
~~- UTRA carrier RSSI~~	~~Check to see if it is absent~~
~~- Inter-frequency cell measurement results~~	
~~- Cell measured results~~	
~~- Cell Identity~~	~~Check to see if is absent~~
~~- SFN-SFN observed time difference~~	~~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 5~~
~~- 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~~
~~- CFN-SFN observed time difference~~	~~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~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 14
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 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if is absent
- SFN-SFN observed time difference	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 5
- 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
- CFN-SFN observed time difference	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 13)

Use the same message transmitted in step 8 with the following modifications:

~~Information Element~~	~~Value/Remarks~~
~~Downlink information common for all radio links~~	
~~- DPCH compressed mode info~~	
~~- TGPSI~~	~~1~~
~~- TGPS Status Flag~~	~~Inactive~~
~~- TGCFN~~	~~Not Present~~
~~- Transmission gap pattern sequence configuration parameters~~	~~Not Present~~

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present

MEASUREMENT CONTROL (Step 15)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~14~~
~~Measurement Command~~	~~Modify~~
~~Measurement Reporting Mode~~	~~Not Present~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	~~Not Present~~
~~DPCH compressed mode status info~~	
~~- TGPS reconfiguration CFN~~	~~(Current CFN+(256 – TTI/10msec)) mod 256~~
~~- Transmission gap pattern sequence~~	
~~- TGPSI~~	~~1~~
~~- TGPS Flag~~	~~Active~~
~~- TGCFN~~	~~(Current CFN+(256 – TTI/10msec)) mod 256~~

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Flag	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

8.4.1.8.5 Test Requirement

After step 2 the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH of cell 1.

After step 9 the UE shall transmit a MEASUREMENT REPORT message, containing the IE "measured results" reporting cell 5's CPICH RSCP value. The UE shall also report the triggering of event '2c' by including IE "Event results" in the MEASUREMENT REPORT message. The UE shall not transmit any MEASUREMENT REPORT messages pertaining to cell 4's measurements.

After step 11 the UE shall send MEASUREMENT REPORT messages, containing cell 5's CPICH RSCP measured value in IE "Measured results" at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

After step 14 the UE shall not transmit any MEASUREMENT REPORT messages.

After step 15 the UE shall resume the transmission of MEASUREMENT REPORT messages with identical contents as in those received after step 11.

8.4.1.9 Measurement Control and Report: Unsupported measurement in the UE

8.4.1.9.1 Definition

8.4.1.9.2 Conformance requirement

If the UTRAN instructs the UE to perform a measurement that is not supported by the UE, the UE shall keep the measurement configuration that was valid before the MEASUREMENT CONTROL message was received. Then the UE shall transmit a MEASUREMENT CONTROL FAILURE message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.4.1.4

8.4.1.9.3 Test purpose

To confirm that the UE transmits a MEASUREMENT CONTROL FAILURE message, with the value "unsupported measurement" in IE "failure cause" when the SS instructs the UE to perform an unsupported measurement by sending a MEASUREMENT CONTROL message. To confirm that the UE retains its existing valid measurement configuration, after receiving a MEASUREMENT CONTROL message containing an unsupported measurement.

8.4.1.9.4 Method of test

Initial Condition

System Simulator: 1cell

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

[Editor's note: It is assumed in this test that the UE under test does not possess any inter-RAT measurement capability. The mandatory type(s) of measurement capability that shall be implemented by the UE is to be discussed]

Test Procedure

The UE is in the CELL_DCH state. SS sends MEASUREMENT CONTROL message to command the UE to perform internal measurement and reporting for UE transmitted power. The UE shall transmit MEASUREMENT REPORT messages on DCCH at 1 second interval. The SS transmits a MEASUREMENT CONTROL message to configure inter-RAT measurements. The UE hall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC. SS verifies that the UE continues to transmit MEASURMENT REPORT messages on uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state.
2	←		MEASUREMENT CONTROL	UE internal measurement and reporting is requested.
3	→		MEASUREMENT REPORT	Contains estimated reading for UE transmitted power.

Step	Direction		Message	Comment
	UE	SS		
4	←		MEASUREMENT CONTROL	Inter-RAT measurements are requested in this message
5	→		MEASUREMENT CONTROL FAILURE	The value "unsupported measurement" is set in IE "failure cause".
6	→		MEASUREMENT REPORT	SS verifies that UE continue to send this message on uplink DCCH.

Specific Message Content

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~~	~~Periodical Reporting~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement quantity~~	
~~- CHOICE mode~~	~~FDD~~
~~- Measurement quantity~~	~~UE Transmitted Power~~
~~- Filter Coefficient~~	~~0~~
~~- UE internal reporting quantity~~	
~~- UE Transmitted Power~~	~~TRUE~~
~~- CHOICE mode~~	~~FDD~~
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~- CHOICE report criteria~~	~~Periodical reporting criteria~~
~~- Amount of reporting~~	~~Infinity~~
~~- Reporting interval~~	~~1000 msec~~
~~DPCH compressed mode status~~	~~Not Present~~

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	
CHOICE measurement type	Not Present
- UE internal measurement quantity	UE internal measurement
- CHOICE mode	
- Measurement quantity	FDD
- Filter Coefficient	UE Transmitted Power
- UE internal reporting quantity	0
- UE Transmitted Power	
- CHOICE mode	TRUE
- UE Rx-Tx time difference	FDD
- CHOICE report criteria	FALSE
- Amount of reporting	Periodical reporting criteria
- Reporting interval	Infinity
DPCH compressed mode status	1000 msec

MEASUREMENT REPORT (Step 3 and Step 6)

Information Element	Value/Remark
Measurement Identity number	Check to see if it's set to '1'
Measured Results	
- CHOICE measurement	Check to see if it's set to "UE internal measured results"
- CHOICE mode	Check to see if it's set to "FDD"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	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

Information Element	Value/remark
Measurement Identity number	Check to see if it's set to '1'
Measured Results	
- CHOICE measurement	Check to see if it's set to "UE internal measured results"
- CHOICE mode	Check to see if it's set to "FDD"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	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 4)

Information Element	Value/Remark
RRC transaction identifier	Select an arbitrary an integer between 0 and 3
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-RAT measurement
- Inter-RAT cell info list	
- CHOICE inter-RAT cell removal	Remove no inter-RAT cells
- New inter-RAT cells	
- Inter-RAT cell id	1
- CHOICE *Radio Access Technology*	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Cells for measurement	
- Inter-RAT cell id	2
- Inter-RAT measurement quantity	
- CHOICE system	GSM
- Measurement quantity	GSM Carrier RSSI
- Filter Coefficient	0
- BSIC verification required	Not required
- Inter-RAT reporting quantity	
- UTRAN estimate quantity	FALSE
- CHOICE system	GSM
- Pathloss	FALSE
- Observed time difference to GSM cell	FALSE
- GSM Carrier RSSI	TRUE
- Reporting cell status	Not Present
- CHOICE report criteria	No reporting
DPCH compressed mode status info	Not Present

Information Element	Value/remark
RRC transaction identifier	Select an arbitrary an integer between 0 and 3
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-RAT measurement
- Inter-RAT cell info list	
- CHOICE inter-RAT cell removal	Remove no inter-RAT cells
- New inter-RAT cells	
- Inter-RAT cell id	1
- CHOICE *Radio Access Technology*	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Cells for measurement	
- Inter-RAT cell id	2
- Inter-RAT measurement quantity	
- CHOICE system	GSM
- Measurement quantity	GSM Carrier RSSI
- Filter Coefficient	0
- BSIC verification required	Not required
- Inter-RAT reporting quantity	
- UTRAN estimate quantity	FALSE
- CHOICE system	GSM
- Pathloss	FALSE
- Observed time difference to GSM cell	FALSE
- GSM Carrier RSSI	TRUE
- Reporting cell status	Not Present
- CHOICE report criteria	No reporting
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 5)

~~Information Element~~	~~Value/Remarks~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 4.~~
~~Failure cause~~	~~Check if it is set to "Unsupported measurement"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 4.
Failure cause	Check if it is set to "Unsupported measurement"

8.4.1.9.5 Test requirement

After step 2 the UE shall transmit a MEASUREMENT REPORT messages at 1 second interval. In these messages, the IE "CHOICE measurement" shall be set to "UE internal measured results", and it shall contain the measured UL transmitted power reading in IE "UE Transmitted Power".

After step 4 the UE shall transmit a MEASUREMENT CONTROL FAILURE message. In this message, the value "unsupported measurement" shall be specified in IE "failure cause".

After step 5 the UE shall continue to transmit MEASUREMENT REPORT messages on the uplink DCCH, with the contents of the messages identical to that received by SS after step 2.

8.4.1.10 Measurement Control and Report: Failure (Invalid Message Reception)

8.4.1.10.1 Definition

8.4.1.10.2 Conformance requirement

When the UE received an invalid MEASUREMENT CONTROL message it shall reply with a MEASUREMENT CONTROL FAILURE message stating the appropriate protocol error information. It shall continue its ongoing processes and procedures as if the MEASUREMENT CONTROL message has not been received.

Reference

3GPP TS 25.331 clauses 8.4.1.5 and 9.2

8.4.1.10.3 Test Purpose

To confirm that the UE continues its ongoing processes and procedures after it has received an invalid MEASUREMENT CONTROL message. To confirm that the UE transmits MEASUREMENT CONTROL FAILURE message, after it has received an invalid MEASUREMENT CONTROL message.

8.4.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

The UE is initially brought to CELL_DCH. SS transmits a MEASUREMENT CONTROL message to the UE, commanding it to start transmitting report messages for the reporting quantity "UE Transmitted Power". SS waits for the UE to transmit MEASUREMENT RERORT message on the uplink DCCH. After the MEASUREMENT REPORT message is received, SS transmits an invalid MEASUREMENT CONTROL message again. The UE shall reply with MEASURMENT CONTROL FAILURE message as it has detected a protocol error. It shall continue to report its UL transmission power level using MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2	←		MEASUREMENT CONTROL	SS transmits this message on downlink DCCH to instruct UE to start reporting the quantity "UE transmitted power".
3	→		MEASUREMENT REPORT	UE shall send this message periodically at 32 seconds interval
4	←		MEASURMENT CONTROL	See message content.

Step	Direction		Message	Comment
	UE	SS		
5	→		MEASUREMENT CONTROL FAILURE	UE shall continue its current measurement and reporting processes and procedures after sending this message.
6	→		MEASUREMENT REPORT	UE shall continue to transmit this message to the SS at 32 seconds interval.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~3~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Periodical Reporting~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement quantity~~	
~~- Measurement quantity~~	~~UE Transmitted Power~~
~~- Filter coefficient~~	~~0~~
~~- UE internal reporting quantity~~	
~~- UE Transmitted Power~~	~~TRUE~~
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~CHOICE report criteria~~	~~Periodical reporting criteria~~
~~- Amount of reporting~~	~~Infinity~~
~~- Reporting interval~~	~~32 seconds~~
~~DPCH compressed mode status info~~	~~Not Present~~

Information Element	**Value/remark**
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE Transmitted Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 3 and Step 6)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 3~~
~~Measured Results~~	
~~CHOICE measurement~~	~~Check to see if set to "UE internal measurement results"~~
~~- CHOICE mode~~	~~Check to see if it's set to "FDD"~~
~~- UE Transmitted Power~~	~~Check to see if the reported power is compatible with RF class~~
~~- UE Rx-Tx report entries~~	~~Check to see if this IE is absent~~
~~Measured Results on RACH~~	~~Check to see if this IE is absent~~
~~Additional Measured results~~	~~Check to see if this IE is absent~~
~~Event Results~~	~~Check to see if this IE is absent~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 3
Measured Results	
CHOICE measurement	Check to see if set to "UE internal measurement results"
- CHOICE mode	Check to see if it's set to "FDD"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 4)

Information Element	**Value/Remark**
All IEs	Not Present

MEASUREMENT CONTROL FAILURE (Step 5)

~~Information Element~~	~~Value/Remark~~
~~Failure cause~~	~~Check to see if set to "protocol error"~~
~~Protocol error information~~	~~Check to see if set to "ASN.1 violation or encoding error"~~

Information Element	**Value/remark**
Failure cause	Check to see if set to "protocol error"
Protocol error information	Check to see if set to "ASN.1 violation or encoding error"

8.4.1.10.5 Test Requirement

After step 4 the UE shall transmit MEASUREMENT CONTROL FAILURE message, stating the IE "failure cause" as "protocol error" and IE "protocol error information" as "ASN.1 violation or encoding error".

After step 5 the UE shall continue to send MEASUREMENT REPORT, with the measurement identity number set to 3 and "measured results" IE containing measured readings of UE Tx power, at 32 seconds interval.

8.4.1.11 Measurement Control and Report: Compressed Mode Configuration Failure during radio bearer reconfiguration procedure

8.4.1.11.1 Definition

8.4.1.11.2 Conformance requirement

During a radio bearer reconfiguration procedure, the UTRAN might request the activation of a new transmission gap pattern sequence configuration. If the UE detects a runtime error due to overlapping compressed mode configuration, it shall delete the transmission gap pattern sequence configuration associated with highest value of TGPSI. The UE shall also terminate any inter-frequency / inter-RAT measurements corresponding to the deleted transmission gap pattern sequence. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM-RLC, with the IE "failure cause" set to "compressed mode runtime error".

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.15

8.4.1.11.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a RADIO BEARER RECONFIGURATION message which includes IE "DPCH compressed mode info" that causes an illegal overlap involving more than one parallel transmission gap pattern sequences. To confirm that the UE terminate any inter-frequency measurements corresponding to the deleted transmission gap pattern sequence.

8.4.1.11.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) as specified in TS34.108 clause 7.4, depending on the CN domain supported.

Test Procedure

Table 8.4.1.11-1 illustrates the downlink power to be applied for the 2 cells in this test case.

Table 8.4.1.11-1

Parameter	Unit	Cell 1	Cell 4
UTRA RF Channel Number		Ch. 1	Ch. 2
CPICH Ec	dBm/ 3.84 MHz	-60	-70

The UE is in the CELL_DCH state in cell 1. SS sends a MEASUREMENT CONTROL message on the downlink DCCH to request the UE to start inter-frequency measurement for cell 4's CPICH Ec/No value, and also to report the UTRA RSSI in the UARFCN in which cell 4 resides. Simultaneously, the stored transmission gap pattern sequence configuration associated with TGPSI=1 is indicated to be activated in this message. The UE shall transmit MEASUREMENT REPORT messages periodically at 16 seconds interval to report the RSSI value of UTRA carrier in which cell 4 resides. Next, SS sends a second MEASUREMENT CONTROL message. In this message, a new measurement task is to be established for the measurement and reporting of "GSM carrier RSSI" on a periodic basis. A deactivated transmission pattern gap sequence configuration (with TGPSI=2) is associated with this new measurement task.

The SS transmits a RADIO BEARER RECONFIGURATION message and commands the activation of transmission gap pattern sequence with TGPSI=2. The UE then shall transmit a PHYSICAL CHANNEL RECONFIGURATION

FAILURE message on the DCCH using AM-RLC. In this message, the value of IE "failure cause" shall be set to "compressed mode runtime error". The UE shall terminate all inter-RAT measurement tasks associated with TGPSI=2. The UE shall continue to send MEASUREMENT REPORT messages to report the UTRA RSSI in the UARFCN in which cell 4 resides.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state.
2	←		MEASUREMENT CONTROL	SS starts inter-frequency measurements for cell 4's CPICH Ec/No using transmission gap pattern sequence with TGPSI=1. SS commands UE to report the UTRA RSSI in the UARFCN in which cell 4 resides.
3	→		MEASUREMENT REPORT	UE reports UTRA RSSI for the UARFCN of cell 4 periodically.
4	←		MEASUREMENT CONTROL	SS assigns inter-RAT measurements for "GSM carrier RSSI". This measurement task is associated with transmission gap pattern sequence with TGPSI=2. The IE "TGPS status flag" is set to "Inactive".
5	←		RADIO BEARER RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=2 and activates it simultaneously
6				UE shall delete transmission gap pattern sequence configuration associated with TGPSI=2.
7	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	IE "Failure cause" shall be set to "Compressed mode runtime error"
8	→		MEASUREMENT REPORT	The contents shall be the same as that in step 3.

Specific Message Contents

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	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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 Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- 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
- 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	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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 Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- 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
- 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	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT REPORT (Step 3 and Step 8)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to "1"~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Inter-frequency measured results list"~~
~~- Inter-frequency measurement results~~	
~~- Frequency info~~	
~~- UARFCN (uplink)~~	~~Check to see if set to the UARFCN of the uplink frequency for cell 4~~
~~- UARFCN (downlink)~~	~~Check to see if set to the UARFCN of the downlink frequency for cell 4~~
~~- UTRA carrier RSSI~~	~~Check to see if it is present~~
~~- Inter-frequency cell measurement results~~	
~~- Cell measured results~~	
~~- Cell Identity~~	~~Check to see if it is absent~~
~~- SFN-SFN observed time difference~~	~~Check to see if it is absent~~
~~- Cell synchronisation information~~	~~Check to see if it is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if set to the same code for cell 4~~
~~- CPICH Ec/No~~	~~Check to see if it is absent~~
~~- CPICH RSCP~~	~~Check to see if it is absent~~
~~- Pathloss~~	~~Check to see if it is absent~~
~~Measured Results on RACH~~	~~Check to see if it is absent~~
~~Event Results~~	~~Check to see if it is absent~~

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	7
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	7
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

RADIO BEARER RECONFIGURATION (Step 5)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" or "Non-speech in CS" or "Speech in CS" found in Annex A with the following exceptions:

Information Element	Value/remark
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Active
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	0
- TGPL1	3
- TGPL2	5
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 7)

Information Element	Value/remark
Failure cause	Checked to see if set to "compressed mode runtime error"
- Protocol error information	Checked to see if it is absent
- Deleted TGPSI	Checked to see if it is set to "2"

8.4.1.11.5 Test requirement

After step 6 the UE shall keep transmission gap pattern sequence configuration associated with TGPSI=1. It shall delete the transmission gap pattern sequence configuration associated with TGPSI=2, and delete the inter-RAT measurements corresponding to it. It shall transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH, with the IE "Failure cause" set to "Compressed mode runtime error".

After step 7 the UE shall continue to send MEASUREMENT REPORT messages periodically, to report the UTRA RSSI value for the UARFCN in which cell 4 resides. The MEASUREMENT REPORT messages sent by the UE shall not contain CPICH RSCP readings for cell 4.

8.4.1.12 Measurement Control and Report: Compressed Mode Configuration Failure during transport channel reconfiguration procedure

8.4.1.12.1 Definition

8.4.1.12.2 Conformance requirement

During a transport channel reconfiguration procedure, the UTRAN might request the activation of a new transmission gap pattern sequence configuration. If the UE detects a runtime error due to overlapping compressed mode configuration, it shall delete the transmission gap pattern sequence configuration associated with highest value of TGPSI. The UE shall also terminate any inter-frequency / inter-RAT measurements corresponding to the deleted transmission gap pattern sequence.The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM-RLC, with the cause value in IE "failure cause" set to "compressed mode runtime error".

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.15

8.4.1.12.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a TRANSPORT CHANNEL RECONFIGURATION message which includes IE "DPCH compressed mode info" that causes an illegal overlap involving more than one parallel transmission gap pattern sequences. To confirm that the UE terminate any measurements corresponding to the deleted transmission gap pattern sequence.

8.4.1.12.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) as specified in TS34.108 clause 7.4, depending on the CN domain supported.

Test Procedure

For this test case, the downlink transmission power settings shall follow that specified in table 8.4.1.11-1 in clause 8.4.1.11.4.

The UE is in the CELL_DCH state in cell 1. SS sends a MEASUREMENT CONTROL message on the downlink DCCH to request the UE to start inter-frequency measurement for cell 4's CPICH Ec/No value, and also to report the UTRA RSSI in the UARFCN in which cell 4 resides. Simultaneously, the stored transmission gap pattern sequence configuration associated with TGPSI=1 is indicated to be activated in this message. The UE shall transmit MEASUREMENT REPORT messages periodically at 16 seconds interval to report the RSSI value of UTRA carrier in which cell 4 resides. Next, SS sends a second MEASUREMENT CONTROL message. In this message, a new measurement task is to be established for the measurement and reporting of "GSM carrier RSSI" on a periodic basis. A deactivated transmission pattern gap sequence configuration (with TGPSI=2) is associated with this new measurement task.

The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message and commands the activation of transmission gap pattern sequence with TGPSI=2. The UE then shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM-RLC. In this message, the value of IE "failure cause" shall be set to "compressed mode runtime error". The UE shall terminate all inter-RAT measurement tasks associated with TGPSI=2. The UE shall continue to send MEASUREMENT REPORT messages to report the UTRA RSSI in the UARFCN in which cell 4 resides.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state.
2	←		MEASUREMENT CONTROL	SS starts inter-frequency measurements for cell 4's CPICH Ec/No using transmission gap pattern sequence with TGPSI=1. Report the UTRA RSSI in the UARFCN in which cell 4 resides.
3	→		MEASUREMENT REPORT	UE reports UTRA RSSI for the UARFCN of cell 4 periodically.
4	←		MEASUREMENT CONTROL	SS assigns inter-RAT measurements for "GSM carrier RSSI". This measurement task is associated with transmission gap pattern sequence with TGPSI=2 The IE "TGPS status flag" is set to "Inactive".
5	←		TRANSPORT CHANNEL RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=2 and activates it simultaneously
6				UE shall delete transmission gap pattern sequence configuration associated with TGPSI=2.
7	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	IE "Failure cause" shall be set to "Compressed mode runtime error"
8	→		MEASUREMENT REPORT	The contents shall be the same as that in step 3.

Specific Message Contents

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	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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 Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- 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	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	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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 Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- 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	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	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/Remarks
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	7
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	7
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

TRANSPORT CHANNEL RECONFIGURATION (Step 5)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" or "Non-speech in CS" or "Speech in CS" found in Annex A with the following exceptions:

Information Element	Value/remark
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Active
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	0
- TGPL1	3
- TGPL2	5
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 7)

Information Element	Value/remark
Failure cause	Checked to see if set to "compressed mode runtime error"
- Protocol error information	Checked to see if it is absent
- Deleted TGPSI	Checked to see if it is set to "2"

8.4.1.12.5 Test requirement

After step 6 the UE shall keep transmission gap pattern sequence configuration associated with TGPSI=1. It shall delete the transmission gap pattern sequence configuration associated with TGPSI=2, and delete the inter-RAT measurements corresponding to it. It shall transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH, with the IE "Failure cause" set to "Compressed mode runtime error".

After step 7 the UE shall continue to send MEASUREMENT REPORT messages periodically, to report the UTRA RSSI value for the UARFCN in which cell 4 resides. The, MEASUREMENT REPORT messages sent by the UE shall not contain CPICH RSCP readings for cell 4.

8.4.1.13 Measurement Control and Report: Compressed Mode Configuration Failure during physical channel reconfiguration procedure

8.4.1.13.1 Definition

8.4.1.13.2 Conformance requirement

During a physical channel reconfiguration procedure, the UTRAN might request the activation of a new transmission gap pattern sequence configuration. If the UE detects a runtime error due to overlapping compressed mode configuration, it shall delete the transmission gap pattern sequence configuration associated with highest value of TGPSI. The UE shall also terminate any inter-frequency / inter-RAT measurements corresponding to the deleted transmission gap pattern sequence. The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM-RLC, with the IE "failure cause" set to "compressed mode runtime error".

Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.14

8.4.1.13.3 Test purpose

To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a PHYSICAL CHANNEL RECONFIGURATION message which includes IE "DPCH compressed mode info" that causes an illegal overlap involving more than one parallel transmission gap pattern sequences. To confirm that the UE terminate any inter-frequency measurements corresponding to the deleted transmission gap pattern sequence

8.4.1.13.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) as specified in TS34.108 clause 7.4, depending on the CN domain supported.

Test Procedure

For this test case, the downlink transmission power settings shall follow that specified in table 8.4.1.11-1 in clause 8.4.1.11.4.

The UE is in the CELL_DCH state in cell 1. SS sends a MEASUREMENT CONTROL message on the downlink DCCH to request the UE to start inter-frequency measurement for cell 4's CPICH Ec/No value, and also to report the UTRA RSSI in the UARFCN in which cell 4 resides. Simultaneously, the stored transmission gap pattern sequence configuration associated with TGPSI=1 is indicated to be activated in this message.The UE shall transmit MEASUREMENT REPORT messages periodically at 16 seconds interval to report the RSSI value of UTRA carrier in which cell 4 resides. Next, SS sends a second MEASUREMENT CONTROL message. In this message, a new measurement task is to be established for the measurement and reporting of "GSM carrier RSSI" value on a periodic basis. A deactivated transmission pattern gap sequence configuration (with TGPSI=2) is associated with this new measurement task.

The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and commands the activation of transmission gap pattern sequence with TGPSI=2. The UE then shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM-RLC. In this message, the value of IE "failure cause" shall be set to "compressed mode runtime error". The UE shall terminate all inter-RAT measurement tasks associated with TGPSI=2. The UE shall continue to send MEASUREMENT REPORT messages to report the UTRA RSSI in the UARFCN in which cell 4 resides.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state.
2	←		MEASUREMENT CONTROL	SS starts inter-frequency measurements for cell 4's CPICH Ec/No using transmission gap pattern sequence with TGPSI=1. SS commands UE to report the UTRA RSSI in the UARFCN in which cell 4 resides.
3	→		MEASUREMENT REPORT	UE reports UTRA RSSI for the UARFCN of cell 4 periodically.
4	←		MEASUREMENT CONTROL	SS assigns inter-frequency measurements for "GSM carrier RSSI". This measurement task is associated with transmission gap pattern sequence with TGPSI=2. The IE "TGPS status flag" is set to "Inactive".
5	←		PHYSICAL CHANNEL RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=2 and activates it simultaneously
6				UE shall delete transmission gap pattern sequence configuration associated with TGPSI=2.
7	→		PHYSICAL CHANNEL RECONFIGURATION FAILURE	IE "Failure cause" shall be set to "Compressed mode runtime error"
8	→		MEASUREMENT REPORT	The contents shall be the same as that in step 3.

Specific Message Contents

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	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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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 Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- 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	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	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

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	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- 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 Ec/No
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- 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	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	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/Remarks
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	7
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	7
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" or "Non-speech in CS" or "Speech in CS" found in Annex A with the following exceptions:

Information Element	Value/remark
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Active
- TGCFN	(Current CFN + (256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	0
- TGPL1	3
- TGPL2	5
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 7)

Information Element	Value/remark
Failure cause	Checked to see if set to "compressed mode runtime error"
- Protocol error information	Checked to see if it is absent
- Deleted TGPSI	Checked to see if it is set to "2"

8.4.1.13.5 Test requirement

After step 6 the UE shall keep transmission gap pattern sequence configuration associated with TGPSI=1. It shall delete the transmission gap pattern sequence configuration associated with TGPSI=2, and delete the inter-RAT measurements corresponding to it. It shall transmit PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH, with the IE "Failure cause" set to "Compressed mode runtime error".

After step 7 the UE shall continue to send MEASUREMENT REPORT messages periodically, to report the UTRA RSSI value for the UARFCN in which cell 4 resides. The MEASUREMENT REPORT messages sent by the UE shall not contain the CPICH RSCP readings for cell 4.

8.4.1.14 Measurement Control and Report: Cell forbidden to affect reporting range

8.4.1.14.1 Definition

8.4.1.14.2 Conformance requirement

When event 1A is ordered by the UTRAN in a MEASUREMENT CONTROL message, the UE shall send a MEASUREMENT REPORT message when a primary CPICH measured has entered the specified reporting range. The UTRAN can request that a certain primary CPICH be forbidden to affect the reporting range used for event 1A measurement reporting. However, the UE shall ignore such a request from the UTRAN if two conditions are fulfilled – (a) the primary CPICH concerned is included in the active set, and (b) all cells in the active set are defined as primary CPICHs forbidden to affect the reporting range.

Reference

3GPP TS 25.331 clause 14.1.2.1, clause 14.1.5.4

8.4.1.14.3 Test Purpose

To confirm that the UE reports the triggering of event 1A to the SS, if a primary CPICH currently measured by the UE enters the reporting range. To confirm that the UE ignores that a primary CPICH is forbidden to affect the reporting range when (a) the primary CPICH concerned is included in active set and (b) all cells in the active set are defined as primary CPICHs forbidden to affect the reporting range.

8.4.1.14.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.

UE: CS-DCCH+DTCH _DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.14-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.14-1

Para-meter	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	-85	-75	-70	-60	-70	-70	-85

The UE is initially in CELL_DCH state of cell 1.

SS sends a MEASUREMENT CONTROL message with cell 1, cell 2 and cell 3 listed in IE "intra-frequency cell info list". In this message the IE "CHOICE reporting criteria" is set to "intra-frequency measurement report criteria", with the IE "intra-frequency event identity" set to "1A". The IE "reporting range" is set to 12 dB in the MEASUREMENT CONTROL message. The UE shall send a MEASUREMENT REPORT on the uplink DCCH, which contains the IE "Event results" to report that intra-frequency event 1A is triggered by cell 3.

SS executes the active set update procedure, requesting that cell 3 be added to the active set. The UE shall respond with ACTIVE SET UPDATE COMPLETE message on the uplink DCCH and then include cell 3 into its current active set. SS configures itself according to the values in columns "T1" shown above. The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1A. In these messages, the IE "Events results" shall indicate that intra-frequency event 1A is triggered by cell 2. Upon reception of MEASUREMENT REPORT message, SS sends ACTIVE SET UPDATE message to request cell 2 to be added to the active set. The UE shall respond with ACTIVE SET UPDATE COMPLETE message on the uplink DCCH and then include cell 2 into its current active set.

SS sends a MEASUREMENT CONTROL message to command that all cells in the active set are forbidden to update the reporting range for event 1A. SS configures itself according to the values in columns "T2" shown above. The UE shall not transmit a MEASUREMENT REPORT message on the uplink to report the triggering of intra-frequency reporting event 1A. SS reconfigures itself according to the values in column "T0" shown in table 8.4.1.14-1 above. The UE shall transmit MEASUREMENT REPORT message to report triggering intra-frequency event identity 1A, and also to report the CPICH RSCP readings for cell 1, cell 2 and cell 3 in IE "Measured results".

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state in cell 1.
2			Void	
3			Void	
4			Void	
5	←		MEASUREMENT CONTROL	Cell 1, cell 2 and cell 3 are listed in IE "Intra-frequency cell info list". The IE "CHOICE reporting criteria" is set to "Intra-frequency measurement reporting criteria" and IE "Intra-frequency event identity" is set to "1A", with IE "reporting range" set to 12 dB.
6	→		MEASUREMENT REPORT	UE shall report that cell 3 has entered the reporting range for intra-frequency reporting event 1A.
7	←		ACTIVE SET UPDATE	UE shall add cell 3 into the active set
8	→		ACTIVE SET UPDATE COMPLETE	
9				SS configures itself according to the settings stated in column "T1" of table 8.4.1.14-1.
10	→		MEASUREMENT REPORT	UE shall report that cell 2 has entered the reporting range for intra-frequency reporting event 1A.
10a	←		ACTIVE SET UPDATE	UE shall add cell 2 into the active set
10b	→		ACTIVE SET UPDATE COMPLETE	
11	←		MEASUREMENT CONTROL	SS forbids all cells in active list to affect the reporting range
12				SS configures itself according to the settings stated in column "T2" of table 8.4.1.14-1.
13				SS verifies that no MEASUREMENT REPORT messages are received in the uplink direction
14				SS configures itself according to the settings stated in column "T3" of table 8.4.1.14-1.
15	→		MEASUREMENT REPORT	UE shall report that cell 3 has entered the reporting range for intra-frequency reporting event 1A.

Specific Message Contents

MEASUREMENT CONTROL (Step 5)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in Annex A with the following exceptions:

Information Element	Value/Remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency
- New intra-frequency info list	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell for measurement	
- Intra-frequency cell id	1, 2 and 3
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present

Information Element	Value/Remark
- 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 conditions 1	Not Present
- Triggering conditions 2	Active set cells and monitored set cells
- Reporting range	12.0 dB
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	0 msec
- Amount of reporting	1
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	e3
DPCH compressed mode status info	Not Present

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency
- New intra-frequency info list	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell for measurement	
- Intra-frequency cell id	1, 2 and 3
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	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	1a
- Triggering conditions 1	Not Present
- Triggering conditions 2	Active set cells and monitored set cells
- Reporting range	12.0 dB
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	0 msec
- Amount of reporting	1
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	e3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

~~Information Element~~	~~Value/Remarks~~
~~RRC transaction identifier~~	~~Check to see if set to 1~~
~~Measurement identity~~	~~Check to see if set to 1~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Intra-frequency measured results list"~~
~~- Intra-frequency measurement results~~	
~~- Cell measured results~~	
~~- Cell Identity~~	~~Check to see if it is absent~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 3~~
~~- CPICH Ec/No~~	~~Check to see if this IE is absent~~
~~- CPICH RSCP~~	~~Check to see if this IE is present~~
~~- Pathloss~~	~~Check to see if this IE is absent~~
~~- Cell measured results~~	
~~- Cell Identity~~	~~Check to see if it is absent~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 2~~
~~- CPICH Ec/No~~	~~Check to see if this IE is absent~~
~~- CPICH RSCP~~	~~Check to see if this IE is present~~
~~- Pathloss~~	~~Check to see if this IE is absent~~
~~Measured Results on RACH~~	~~Check to see if this IE is absent~~
~~Additional Measured Results~~	~~Check to see if this IE is absent~~
~~Event Results~~	~~Check to see if set to 'Intra-frequency measurement event results'~~
~~- Intra-frequency event identity~~	~~Check to see if set to '1a'~~
~~- Cell measurement event results~~	
~~- CHOICE Mode~~	~~Check to see if set to 'FDD'~~
~~- Primary CPICH info~~	
~~- Primary Scrambling Code~~	~~Check to see if set to the same code for cell 3~~

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

ACTIVE SET UPDATE (Step 7)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Annex A with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Radio link addition information~~	
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Set to same code as assigned for cell 3~~
~~- Downlink DPCH info for each RL~~	
~~- CHOICE mode~~	~~FDD~~
~~- Primary CPICH usage for channel estimation~~	~~P-CPICH can be used.~~
~~- DPCH frame offset~~	~~0 chips~~
~~- Secondary CPICH info~~	~~Not Present~~
~~- DL channelisation code~~	~~This IE is repeated for all existing downlink DPCHs allocated to the UE~~
~~- Secondary scrambling code~~	~~Not Present~~
~~- Spreading factor~~	~~512~~
~~- Code Number~~	~~For each DPCH, assign the same code number in the current code given in cell 1.~~
~~- Scrambling code change~~	~~Not Present~~
~~- TPC Combination Index~~	~~0~~
~~- SSDT Cell Identity~~	~~Not Present~~
~~- Close loop timing adjustment mode~~	~~Not Present~~
~~- TFCI Combining Indicator~~	~~Not Present~~
~~- SCCPCH information for FACH~~	~~Not Present~~
~~Radio link removal information~~	~~Not Present~~

Information Element	Value/remark
RRC transaction identifier	0
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 3
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- Spreading factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	Not Present

ACTIVE SET UPDATE COMPLETE (Step 8 and Step 10b)

Information Element	Value/remark
RRC transaction identifier	Check to see if it is set to 0

MEASUREMENT REPORT (Step 10)

~~Information Element~~	~~Value/Remarks~~
~~RRC transaction identifier~~	~~Check to see if set to 1~~
~~Measurement identity~~	~~Check to see if set to 1~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Intra-frequency measured results list"~~
~~- Intra-frequency measurement results~~	
~~- Cell measured results~~	
~~- Cell Identity~~	~~Check to see if it is absent~~
~~- SFN-SFN observed time difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Check to see if it's the same code for cell 2~~
~~- CPICH Ec/No~~	~~Check to see if this IE is absent~~
~~- CPICH RSCP~~	~~Check to see if this IE is present~~
~~- Pathloss~~	~~Check to see if this IE is absent~~
~~Measured Results on RACH~~	~~Check to see if this IE is absent~~
~~Additional Measured Results~~	~~Check to see if this IE is absent~~
~~Event Results~~	~~Check to see if set to 'Intra-frequency measurement event results'~~
~~- Intra-frequency event identity~~	~~Check to see if set to '1a'~~
~~- Cell measurement event results~~	
~~- CHOICE Mode~~	~~Check to see if set to 'FDD'~~
~~- Primary CPICH info~~	
~~- Primary Scrambling Code~~	~~Check to see if set to the same code for cell 2~~

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 2

ACTIVE SET UPDATE (Step 10a)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Annex A with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Radio link addition information~~	
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Set to same code as assigned for cell 2~~
~~- Downlink DPCH info for each RL~~	
~~- CHOICE mode~~	~~FDD~~
~~- Primary CPICH usage for channel estimation~~	~~P-CPICH can be used.~~
~~- DPCH frame offset~~	~~0 chips~~
~~- Secondary CPICH info~~	~~Not Present~~
~~- DL channelisation code~~	~~This IE is repeated for all existing downlink DPCHs allocated to the UE~~
~~- Secondary scrambling code~~	~~Not Present~~
~~- Spreading factor~~	~~512~~
~~- Code Number~~	~~For each DPCH, assign the same code number in the current code given in cell 1.~~
~~- Scrambling code change~~	~~Not Present~~
~~- TPC Combination Index~~	~~0~~
~~- SSDT Cell Identity~~	~~Not Present~~
~~- Close loop timing adjustment mode~~	~~Not Present~~
~~- TFCI Combining Indicator~~	~~Not Present~~
~~- SCCPCH information for FACH~~	~~Not Present~~
~~Radio link removal information~~	~~Not Present~~

Information Element	Value/remark
RRC transaction identifier	0
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- Spreading factor	512
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	Not Present

MEASUREMENT CONTROL (Step 11)

The contents of MEASUREMENT CONTROL message for this test step is identical to the same message found in Annex A with the following exceptions:

Information Element	Value/Remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	
- 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	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	*Only 1 event is specified*
- Intra-frequency event identity	1a
- Triggering conditions 1	Not Present
- Triggering conditions 2	Active set cells
- Reporting range	12 dB
- Cells forbidden to affect reporting range	
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 1
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 2
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 3
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	0 msec
- Amount of reporting	1
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cells	Report cells within active set
- Maximum number of reported cells	e3
DPCH compressed mode status info	Not Present

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
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	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	*Only 1 event is specified*
- Intra-frequency event identity	1a
- Triggering conditions 1	Not Present
- Triggering conditions 2	Active set cells
- Reporting range	12 dB
- Cells forbidden to affect reporting range	
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 1
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 2
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 3
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	0 msec
- Amount of reporting	1
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cells	Report cells within active set
- Maximum number of reported cells	e3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 15)

Information Element	Value/Remarks
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.14.5 Test requirement

After step 5, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH. The message shall contain the IE "Event results" to report that cell 3 has triggered intra-frequency event 1A.

After step 9, the UE shall transmit MEASUREMENT REPORT message on the uplink DCCH. The message shall contain IE "Event results" to report tha cell 2 has triggered intra-frequency event 1A.

After step 12, the UE shall not send MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event identity 1A.

After step 14, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH. The message shall contain IE "Event results" to report that cell 3 has triggered intra-frequency event 1A.

8.4.1.15 Measurement Control and Report: Configuration Incomplete

8.4.1.15.1 Definition

8.4.1.15.2 Conformance requirement

When the UE received a MEASUREMENT CONTROL message which results in an "configuration incomplete" condition to be detected, the UE shall retain the measurement configuration that was valid before the MEASUREMENT CONTROL message was received. It shall also send MEASUREMENT CONTROL FAILURE, with the IE "RRC transaction identifier" set to the value of the same IE in the received MEASUREMENT CONTROL message, and also the "failure cause" IE set to "incomplete configuration".

Reference

3GPP TS 25.331 clause 8.4.1.4a, 8.6.7.10, 8.6.7.13, 8.6.7.14, 8.6.7.16, 8.6.7.17, 8.6.7.18

8.4.1.15.3 Test Purpose

To confirm that the UE sends a MEASUREMENT CONTROL FAILURE message, after receiving a MEASUREMENT CONTROL message with IE "Measurement command" set to "Setup" and the following contents:

- "CHOICE measurement type" IE is set to "Intra-frequency measurement" and "Intra-frequency measurement quantity" is omitted; or
- "CHOICE measurement type" IE is set to "Inter-frequency measurement" and "Inter-frequency reporting quantity" is omitted; or
- "Reporting mode" IE is omitted. or
- "CHOICE measurement type" IE is set to "Quality measurement" and IE "Quality reporting quantity" is omitted or
- "CHOICE measurement type" IE is set to "UE internal measurement" and IE "UE internal measurement quantity" is omitted or
- "CHOICE measurement type" IE is set to "UE internal measurement" and IE "UE internal reporting quantity" is omitted or
- "CHOICE measurement type" IE is set to "Traffic volume measurement" and IE "Traffic volume measurement quantity" is omitted or
- "CHOICE measurement type" IE is set to "Traffic volume measurement" and IE "Traffic volume reporting quantity" is omitted

To confirm that the UE set the "failure cause" IE to value "incomplete configuration" in the uplink MEASUREMENT CONTROL FAILURE message.

8.4.1.15.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH_DCH (State 6-5) or PS-DCCH_DCH (State 6-7) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

The UE is initially brought to CELL_DCH. SS transmits a MEASUREMENT CONTROL message to the UE, commanding it to start an intra-frequency measurement and reporting task. However, IE "Intra-frequency measurement quantity" is absent in the message. The UE shall not establish the intra-frequency measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Next, SS sends the MEASUREMENT CONTROL message once more. In this message, SS commands the establishment of an inter-frequency measurement and reporting task, but IE "Inter-frequency reporting quantity" is omitted in this message. The UE shall not establish the intra-frequency measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Next, SS sends a third MEASUREMENT CONTROL message. In this message, SS commands the establishment of an intra-frequency measurement and reporting task, but IE "Measurement reporting mode" is omitted in this message. The UE shall not establish the intra-frequency measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Next, SS sends a fourth MEASUREMENT CONTROL message. In this message, SS commands the establishment of a quality measurement and reporting task, but IE "Quality reporting quantity" is omitted in this message. The UE shall not establish the quality measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Next, SS sends a fifth MEASUREMENT CONTROL message. In this message, SS commands the establishment of UE internal measurement and reporting task, but IE "UE internal measurement quantity" is omitted in this message. The UE shall not establish the UE internal measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Next, SS sends a sixth MEASUREMENT CONTROL message. In this message, SS commands the establishment of UE internal measurement and reporting task, but IE "UE internal reporting quantity" is omitted in this message. The UE shall not establish the UE internal measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Next, SS sends a seventh MEASUREMENT CONTROL message. In this message, SS commands the establishment of a traffic volume measurement and reporting task, but IE "Traffic volume measurement quantity" is omitted in this message. The UE shall not establish the traffic volume measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

In the final sequence, SS sends an eight MEASUREMENT CONTROL message. In this message, SS commands the establishment of a traffic volume measurement and reporting task, but IE "Traffic volume reporting quantity" is omitted in this message. The UE shall not establish the traffic volume measurement. It shall send a MEASUREMENT CONTROL FAILURE message to report that a "configuration incomplete" error has been detected.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2	←		MEASUREMENT CONTROL	SS commands the start of an intra-frequency measurement and reporting task. IE "Intra-frequency measurement quantity" is absent.
3	→		MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"
4	←		MEASURMENT CONTROL	SS commands the start of an inter-frequency measurement and reporting task. IE "Inter-frequency reporting quantity" is absent.
5	→		MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"
6	←		MEASURMENT CONTROL	SS commands the start of an inter-frequency measurement and reporting task. IE "Measurement reporting mode" is absent.
7	→		MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"

8	←	MEASUREMENT CONTROL	SS commands the start of a Quality measurement and reporting task. IE "Quality reporting quantity" is absent.
9	→	MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"
10	←	MEASUREMENT CONTROL	SS commands the start of an UE internal measurement and reporting task. IE "UE internal measurement quantity" is absent.
11	→	MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"
12	←	MEASUREMENT CONTROL	SS commands the start of an UE internal measurement and reporting task. IE "UE internal reporting quantity" is absent.
13	→	MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"
14	←	MEASUREMENT CONTROL	SS commands the start of a Traffic volume measurement and reporting task. IE "Traffic volume measurement quantity" is absent.
15	→	MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"
16	←	MEASUREMENT CONTROL	SS commands the start of a Traffic volume measurement and reporting task. IE "Traffic volume reporting quantity" is absent.
17	→	MEASUREMENT CONTROL FAILURE	UE reports the occurrence of "incomplete configuration"

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/Remark
Measurement Identity	1
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical 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 cell	Not Present
- Cell for measurement	
- Intra-frequency cell id	Set to id of cell 1
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization 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	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization 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 cell status	
- CHOICE reported cell	Report cells within active set
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

Information Element	Value/remark
Measurement Identity	1
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical 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 cell	Not Present
- Cell for measurement	
- Intra-frequency cell id	Set to id of cell 1
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization 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	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization 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 cell status	
- CHOICE reported cell	Report cells within active set
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 3)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 2~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 2
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 4) (Note 1)

Information Element	Value/Remark
Measurement Identity	2
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report 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 cell	
- Inter-frequency cell id	Set to id of cell 4
- Frequency info	
- CHOICE Mode	FDD
- UARFCN uplink (Nu)	Set to the same UARFCN as cell 4 in clause 6.1 of TS 34.108
- UARFCN downlink (Nu)	Set to the same UARFCN as cell 4 in clause 6.1 of TS 34.108
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	Not Present
- Cell for measurement	
- Inter-frequency cell id	Set to id of cell 4
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter coefficients	0
- CHOICE mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set on non-used frequency
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
- Inter-frequency set update	Not Present
DPCH compressed mode status info	Not Present

Information Element	Value/remark
Measurement Identity	2
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report 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 cell	
- Inter-frequency cell id	Set to id of cell 4
- Frequency info	
- CHOICE Mode	FDD
- UARFCN uplink (Nu)	Set to the same UARFCN as cell 4 in clause 6.1 of TS 34.108
- UARFCN downlink (Nu)	Set to the same UARFCN as cell 4 in clause 6.1 of TS 34.108
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	Not Present
- Cell for measurement	
- Inter-frequency cell id	Set to id of cell 4
- Inter-frequency measurement quantity	
- CHOICE rerporting criteria	Inter-frequency reporting criteria
- Filter coefficients	0
- CHOICE mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set on non-used frequency
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
- Inter-frequency set update	Not Present
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 5)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 4~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 4
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 6)

Information Element	Value/Remark
Measurement Identity	3
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup
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 cell	Not Present
- Cell for measurement	
- Intra-frequency cell id	Set to id of cell 1
- Intra-frequency measurement quantity	
- Filter coefficient	0
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronization 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	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronization information reporting indicator	No report
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- 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 set
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

Information Element	Value/remark
Measurement Identity	3
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup
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 cell	Not Present
- Cell for measurement	
- Intra-frequency cell id	Set to id of cell 1
- Intra-frequency measurement quantity	
- Filter coefficient	0
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization 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	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization information reporting indicator	No report
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- 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 set
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 7)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 6~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 6
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 8)

~~Information Element~~	~~Value/Remark~~
~~Measurement identity~~	~~16~~
~~Measurement command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Quality measurement~~
~~- Quality reporting quantity~~	~~Not present~~
~~- Reporting criteria~~	~~Periodical reporting criteria~~
~~- Reporting amount~~	~~Infinity~~
~~- Reporting interval~~	~~64 sec~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	**Value/remark**
Measurement identity	16
Measurement command	Setup
- CHOICE measurement type	Quality measurement
- Quality reporting quantity	Not present
- Reporting criteria	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	64 sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL FAILURE (Step 9)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 8~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	**Value/remark**
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 8
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 10)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~1~~
~~Measurement Command~~	~~Setup~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement quantity~~	~~Not present~~
~~- UE internal reporting quantity~~	
~~- UE Transmitted Power~~	~~TRUE~~
~~- CHOICE mode~~	~~FDD~~
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~- CHOICE report criteria~~	~~Periodical reporting criteria~~
~~- Amount of reporting~~	~~Infinity~~
~~- Reporting interval~~	~~1000 msec~~
~~Measurement Reporting Mode~~	~~Not Present~~
~~Additional measurements list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	Not present
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE mode	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	1000 msec
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL FAILURE (Step 11)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 10~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 10
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 12)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~1~~
~~Measurement Command~~	~~Setup~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement quantity~~	
~~- CHOICE mode~~	~~FDD~~
~~- Measurement quantity~~	~~UE Transmitted Power~~
~~- Filter Coefficient~~	~~0~~
~~- UE internal reporting quantity~~	~~Not present~~
~~- CHOICE report criteria~~	~~Periodical reporting criteria~~
~~- Amount of reporting~~	~~Infinity~~
~~- Reporting interval~~	~~1000 msec~~
~~Measurement Reporting Mode~~	~~Not Present~~
~~Additional measurements list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- CHOICE mode	FDD
- Measurement quantity	UE Transmitted Power
- Filter Coefficient	0
- UE internal reporting quantity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	1000 msec
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL FAILURE (Step 13)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 12~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 12
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 14)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~1~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	~~Not Present~~
~~- Traffic volume measurement quantity~~	~~Not present~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~True~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~False~~
~~- Measurement validity~~	~~Not Present~~
~~- Report criteria~~	~~Periodical Reporting Criteria~~
~~- Reporting amount~~	~~8~~
~~- Reporting interval~~	~~8 Sec~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	Not present
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL FAILURE (Step 15)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 14~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 14
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 16)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~1~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	~~Not Present~~
~~- Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- Traffic volume reporting quantity~~	~~Not present~~
~~- Measurement validity~~	~~Not Present~~
~~- Report criteria~~	~~Periodical Reporting Criteria~~
~~- Reporting amount~~	~~8~~
~~- Reporting interval~~	~~8 Sec~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	Not present
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL FAILURE (Step 17)

~~Information Element~~	~~Value/Remark~~
~~RRC transaction identifier~~	~~Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 16~~
~~Failure cause~~	~~Check to see if set to "incomplete configuration"~~

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 16
Failure cause	Check to see if set to "incomplete configuration"

NOTE: For the MEASUREMENT CONTROL message in step 4, cell 4 is signalled to be added as a new cell into the UE's inter-frequency cell list. However, SS does not need to transmit cell 4 in the downlink, as the UE is not expected to perform measurement and reporting for this cell.

8.4.1.15.5 Test Requirement

After step 2, 4, 6, 8, 10, 12, 14 and step 16, the UE shall transmit MEASUREMENT CONTROL FAILURE message, stating the IE "failure cause" as "incomplete configuration". The UE shall not transmit any MEASUREMENT REPORT messages during the execution of this test case.

8.4.1.16 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_FACH state

8.4.1.16.1 Definition

8.4.1.16.2 Conformance requirement

Upon transition from idle mode to CELL_FACH state, the UE shall store the measurement control information from the IE "Traffic volume measurements system information" received in System Information Block type 11 or System Information Block type 12. UE shall begin traffic volume measurement reporting according to the assigned information.

Reference

3GPP TS 25.331 clause 8.4.1.9.4

8.4.1.16.3 Test Purpose

To confirm that after a state transition from idle mode to CELL_FACH state, the UE shall begin a traffic volume type measurement, as specified in System Information Block type 11 or 12 messages on BCCH. To confirm that in

CELL_FACH state, the UE shall send a MEASUREMENT REPORT message when reporting criteria is satisfied. During CELL_FACH state, if the UE receives a MEASUREMENT CONTROL message, it shall perform the measurement and reporting tasks based on the MEASUREMENT CONTROL message received.

8.4.1.16.4 Method of test

Initial Condition

System Simulator: 1cell

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

The UE is initially in idle mode. The System Information Block type 11 message is modified with respect to the default settings to request UE to perform traffic volume measurements. Key measurement parameters are as follows: measurement quantity = "RLC Buffer Payload", report criteria = "periodic reporting criteria", reporting interval = "6 seconds", reporting amount = 'infinity'. The System Information type 12 message is not broadcasted.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. The UE shall transmit a RRC CONNECTION REQUEST message on the uplink CCCH, SS replies with RRC CONNECTION SETUP message and allocates PRACH and S-CCPCH physical channels for uplink and downlink usage. UE shall then enter CELL_FACH state.

UE shall begin traffic volume measurements, and shall send MEASUREMENT REPORT message after completing first measurement. UE shall send second MEASUREMENT REPORT message 6 seconds after first MEASUREMENT REPORT message.

SS sends MEASUREMENT CONTROL message to the UE. This message overwrites measurement information saved from System information type 11. Key measurement parameters are as follow: measurement type = "traffic volume measurement", measurement quantity = "RLC Buffer Payload", report criteria = "Event triggered, event 4B: Transport Channel Traffic Volume becomes smaller than an absolute threshold ", Time to trigger = "5 seconds", pending time after trigger = "16 seconds", "reporting threshold = '4K'. Since there is no uplink traffic, UE shall send MEASUREMENT REPORT message after 5 seconds (time to trigger interval).

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 prompts the test operator to make an outgoing call.
3	→		RRC CONNECTION REQUEST	
4	←		RRC CONNECTION SETUP	SS allocates common physical channels to UE.
5	→		RRC CONNECTION COMPLETE	UE shall enter CELL_FACH state, and transmit this message to acknowledge the RRC CONNECTION SETUP message.
6	→		MEASUREMENT REPORT	

7	→	MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 6 Seconds.
8	←	MEASUREMENT CONTROL	Traffic volume measurement reporting is requested if measurement is below threshold.
9			SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are received in 5 seconds.
10	→	MEASUREMENT REPORT	Measurement report because event 4b is triggered

Specific Message Content

System Information Block type 11 (Step 1)

~~Information Element~~	~~Value/Remarks~~
~~SIB12 indicator~~	~~FALSE~~
~~FACH measurement occasion info~~	~~Not Present~~
~~Measurement control system information~~	
~~- Use of HCS~~	~~Not used~~
~~- Cell_selection_and_reselection_quality~~	~~CPICH RSCP~~
~~- 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~~	
~~- Traffic volume measurement ID~~	~~4~~
~~- Traffic volume measurement object list~~	~~Rach~~
~~- Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~True~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~False~~
~~- Traffic volume measurement reporting criteria~~	~~Not Present~~
~~- Measurement validity~~	~~All States except CELL_DCH~~
~~- Measurement reporting mode~~	
~~- Measurement report transfer mode~~	~~Acknowledged Mode~~
~~- Periodical or event trigger~~	~~Periodical~~
~~- Report criteria system Information~~	~~Periodical reporting criteria~~
~~- Reporting amount~~	~~Infinity~~
~~- Reporting interval~~	~~6 seconds~~
~~- UE internal measurement system information~~	~~Not Present~~

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	CPICH RSCP
- 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	
- Traffic volume measurement ID	4
- Traffic volume measurement object list	Rach
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All States except CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	6 seconds
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST (Step 3)

~~Information Element~~	~~Value/Remarks~~
~~Initial UE Identity~~	~~Check to see if it is the same as the IMSI in USIM card, TMSI or P-TMSI previously allocated.~~
~~Establishment cause~~	~~Check to see if set to originating call of the compatible traffic classes supported by the UE~~
~~Measured results on RACH~~	~~Check to see if IE is absent~~

Information Element	Value/remark
Initial UE Identity	Check to see if it is the same as the IMSI in USIM card, TMSI or P-TMSI previously allocated.
Establishment cause	Check to see if set to originating call of the compatible traffic classes supported by the UE
Measured results on RACH	Check to see if IE is absent

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Annex A, which is titled "Transition to CELL_FACH".

MEASUREMENT REPORT (Step 6,7)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 4~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "traffic volume measured results list"~~
~~- Traffic volume measurement results~~	
~~- RB identity~~	~~1~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~2~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~3~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~4~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~Measured results on RACH~~	~~Check to see if this IE is absent~~
~~Additional measured results~~	~~Check to see if this IE is absent~~
~~Event results~~	~~Check to see if this IE is absent~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 4
Measured Results	
- CHOICE measurement	Check to see if set to "traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 8)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~4~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- - Traffic volume measurement object list~~	~~Not Present~~
~~- - Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- - Traffic volume reporting quantity~~	
~~- - RB buffer payload~~	~~True~~
~~- - RB buffer payload average~~	~~False~~
~~- - RB buffer payload variance~~	~~False~~
~~- Measurement validity~~	~~Not Present~~
~~- Report criteria~~	~~Traffic Volume Reporting Criteria~~
~~- - UL transport channel id~~	~~Rach Null~~
~~- - Event specific parameters~~	
~~- - Event id~~	~~4B~~
~~- - Reporting threshold~~	~~4K~~
~~- - Time to trigger~~	~~5000 ms~~
~~- - Pending time after trigger~~	~~16000 ms~~
~~- - Tx interruption after trigger~~	~~Not Present~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Event trigger~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	**Value/remark**
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Traffic Volume Reporting Criteria
- UL transport channel id	Rach Null
- Event specific parameters	
- Event id	4B
- Reporting threshold	4K
- Time to trigger	5000 ms
- Pending time after trigger	16000 ms
- Tx interruption after trigger	Not Present
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Event trigger
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 10)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~4~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Traffic volume measured results list~~
~~- - Traffic volume measurement results~~	
~~- - - RB identity~~	~~1~~
~~- - - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - - RB identity~~	~~2~~
~~- - - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - - RB identity~~	~~3~~
~~- - - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - - RB identity~~	~~4~~
~~- - - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~Measured results on RACH~~	~~Check to see if this IE is absent~~
~~Additional measured results~~	~~Check to see if this IE is absent~~
~~Event results~~	~~Traffic Volume Event Results~~
~~- UL transport channel causing event~~	~~Rach Null~~
~~- Traffic volume event identity~~	~~4B~~

Information Element	**Value/remark**
Measurement identity	4
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- - RB identity	1
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
- - RB identity	2
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
- - RB identity	3
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
- - RB identity	4
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Traffic Volume Event Results
- UL transport channel causing event	Rach Null
- Traffic volume event identity	4B

8.4.1.16.5 Test Requirement

After step 5 the UE shall send MEASUREMENT REPORT messages on the uplink DCCH containg RLC buffer payload information for all SRBs. After 6 seconds UE shall send second MEASUREMENT REPORT messages containg RLC buffer payload information for all SRBs.

After step 8 the UE shall overwrite measurement information received from system information type 11 with measurement information in MEASUREMENT CONTROL message. The UE shall not send MEASUREMENT

REPORT message within time to trigger interval. After step 9 the UE shall transmit MEASUREMENT REPORT messages with event identity 4B.

8.4.1.17 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_DCH state

8.4.1.17.1 Definition

8.4.1.17.2 Conformance requirement

Upon transition from idle mode to CELL_DCH state, the UE shall begin a traffic volume type measurement, assigned in System Information Block type 11 or System Information Block type 12.

Reference

3GPP TS 25.331 clause 8.4.1.8.4

8.4.1.17.3 Test Purpose

To confirm that after a state transition from idle mode to CELL_DCH state, the UE begin a traffic volume type measurement, as specified in System Information Block type 11 or 12 messages on BCCH. When entering CELL_DCH state, the UE shall send a MEASUREMENT REPORT message when reporting criteria is satisfied. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall perform the measurement and reporting tasks based on the MEASUREMENT CONTROL message received.

8.4.1.17.4 Method of test

Initial Condition

System Simulator: 1cell

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

The UE is initially in idle mode. The System Information Block type 11 message is modified with respect to the default settings to request UE to perform traffic volume measurements. Key measurement parameters are as follows: measurement quantity = "Average RLC Buffer Payload", report criteria = "Event triggered, event 4B", reporting threshold = "8K", report transfer mode = "Unacknowledged mode". The System Information type 12 message is not broadcasted.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. Dedicated resources are allocated to the UE during RRC connection establishment procedure.

UE shall begin traffic volume measurements after entering in CELL_DCH state. The UE shall send MEASUREMENT REPORT message because uplink traffic is below threshold.

SS sends MEASUREMENT CONTROL message to the UE. This message reconfigures measurement information saved from System information type 11. Key measurement parameters are as follow: measurement type = "traffic volume measurement", measurement quantity = "RLC Buffer Payload", report criteria = "Periodic reporting criteria", reporting interval = "8 seconds", reporting amount = "8". The UE shall periodically send MEASUREMENT REPORT message to report RLC Buffer Payload for each RB.

SS sends MEASUREMENT CONTROL message to release traffic volume measurement. UE shall not send measurement report after receiving this message.

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 prompts the test operator to make an outgoing call.
3	→		RRC CONNECTION REQUEST	
4	←		RRC CONNECTION SETUP	SS allocates dedicated physical channels to UE.
5	→		RRC CONNECTION COMPLETE	UE shall enter CELL_DCH state.
6	→		MEASUREMENT REPORT	Event 4B is triggered. This message should come on RB1.
7	←		MEASUREMENT CONTROL	Periodic Traffic volume measurement reporting is requested.
8	→		MEASUREMENT REPORT	This message should come on RB2.
9	→		MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 8 Seconds.
10	←		MEASUREMENT CONTROL	Release traffic volume measurement.
11				Wait for 8 Seconds to confirm that UE does not send measurement report message.

Specific Message Content

System Information Block type 11 (Step 1)

Information Element	Value/Remarks
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality	CPICH RSCP
- 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	
- Traffic volume measurement ID	2
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	Average RLC Buffer Payload
- Time Interval to take an average	200 msec
- Traffic volume reporting quantity	
- RB buffer payload	False
- RB buffer payload average	True
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Unacknowledged Mode
- Periodical or event trigger	Event Trigger
- Report criteria system Information	Traffic Volume Reporting Criteria
- UL transport channel id	Not Present
- Event specific parameters	
- Event id	4B
- Reporting threshold	8K
- Time to trigger	Not Present
- Pending time after trigger	Not Present
- Tx interruption after trigger	Not Present
UE internal measurement system information	Not Present

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	CPICH RSCP
- 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	
- Traffic volume measurement ID	2
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	Average RLC Buffer Payload
- Time Interval to take an average	200 msec
- Traffic volume reporting quantity	
- RB buffer payload	False
- RB buffer payload average	True
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Unacknowledged Mode
- Periodical or event trigger	Event Trigger
- Report criteria system Information	Traffic Volume Reporting Criteria
- UL transport channel id	Not Present
- Event specific parameters	
- Event id	4B
- Reporting threshold	8K
- Time to trigger	Not Present
- Pending time after trigger	Not Present
- Tx interruption after trigger	Not Present
- UE internal measurement system information	Not Present

RRC CONNECTION REQUEST (Step 3)

~~Information Element~~	~~Value/Remarks~~
~~Initial UE Identity~~	~~Check to see if it is the same as the IMSI in USIM card, TMSI or P-TMSI previously allocated.~~
~~Establishment cause~~	~~Check to see if set to originating call of the compatible traffic classes supported by the UE~~
~~Measured results on RACH~~	~~Check to see if IE is absent~~

Information Element	Value/remark
Initial UE Identity	Check to see if it is the same as the IMSI in USIM card, TMSI or P-TMSI previously allocated.
Establishment cause	Check to see if set to originating call of the compatible traffic classes supported by the UE
Measured results on RACH	Check to see if IE is absent

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Annex A, which is titled "Transition to CELL_DCH".

MEASUREMENT REPORT (Step 6)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 2~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "traffic volume measured results list"~~
~~- Traffic volume measurement results~~	
~~- RB identity~~	~~1~~
~~- RLC buffer payload~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload average~~	~~Check to see if this IE is present~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~2~~
~~- RLC buffer payload~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload average~~	~~Check to see if this IE is present~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~3~~
~~- RLC buffer payload~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload average~~	~~Check to see if this IE is present~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~4~~
~~- RLC buffer payload~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload average~~	~~Check to see if this IE is present~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~Measured results on RACH~~	~~Check to see if this IE is absent~~
~~Additional measured results~~	~~Check to see if this IE is absent~~
~~Event results~~	
~~- UL transport channel causing event~~	~~DCH 5~~
~~- Traffic volume event identity~~	~~4B~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE measurement	Check to see if set to "traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	
- UL transport channel causing event	DCH 5
- Traffic volume event identity	4B

MEASUREMENT CONTROL (Step 7)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~2~~
~~Measurement Command~~	~~Modify~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	
~~- Uplink transport channel type~~	~~DCH~~
~~- UL Target Transport Channel ID~~	~~5~~
~~- Traffic volume measurement quantity~~	
~~- Measurement quantity~~	~~RLC Buffer Payload~~
~~- Time Interval to take an average or a variance~~	~~Not Present~~
~~- Traffic volume reporting quantity~~	
~~- RLC Buffer Payload for each RB~~	~~True~~
~~- Average of RLC Buffer Payload for each RBe~~	~~False~~
~~- Variance of RLC Buffer Payload for each RB~~	~~False~~
~~- Measurement validity~~	~~Not Present~~
~~- CHOICE Reporting criteria~~	~~Periodical Reporting Criteria~~
~~- Amount of reporting~~	~~8~~
~~- Reporting interval~~	~~8 Sec~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	**Value/remark**
Measurement Identity	2
Measurement Command	Modify
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RBe	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	Not Present
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	8
- Reporting interval	8 Sec
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 8,9)

Information Element	Value/Remarks
Measurement identity	2
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- - Traffic volume measurement results	
- - RB identity	1
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
- - RB identity	2
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
- - RB identity	3
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
- - RB identity	4
- - RLC buffer payload	Check to see if this IE is present
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

Information Element	Value/remark
Measurement identity	2
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 10)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

8.4.1.17.5 Test Requirement

After step 5, due to triggering of event 4B, the UE shall send MEASUREMENT REPORT message using unacknowledged mode of RLC. After step 7, UE shall send MEASUREMENT REPORT message using Acknowledged mode of RLC. After 8 seconds UE shall send second MEASUREMENT REPORT message. After step 10, the UE shall not send MEASUREMENT REPORT message.

8.4.1.18 Measurement Control and Report: Traffic volume measurement for transition from CELL_FACH state to CELL_DCH state

8.4.1.18.1 Definition

8.4.1.18.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored;
  - if the optional IE "measurement validity" for this measurement has not been included:
    - delete the measurement;
  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL_DCH":
    - stop measurement reporting; and
    - save the measurement to be used after the next transition to CELL_FACH state;
  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - continue measurement reporting;
  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL_DCH":
    - resume this measurement and associated reporting;
- if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message when transiting to CELL_DCH state:
  - continue an ongoing traffic volume type measurement, assigned in System Information Block type 11 or System Information Block type 12.

Reference

3GPP TS 25.331 clause 8.4.1.7.4

8.4.1.18.3 Test Purpose

To confirm that the UE performs traffic volume measurements and the associated reporting when it enters CELL_DCH state from CELL_FACH state, and that such measurement contexts (and optionally, the reporting context) valid for CELL_DCH state have been previously stored.

To confirm that the UE shall continue to perform traffic volume measurement listed in the System Information Block type 11 or 12 messages, if no previously assigned measurements are present. The UE shall transmit MEASUREMENT REPORT messages if reporting conditions stated in System Information Block type 11 or 12 messages have been satisfied.

8.4.1.18.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_FACH state. MEASUREMENT CONTROL message is sent to the UE to establish traffic volume measurement context with optional IE "measurement validity" is not present. The UE shall perform measurement and reporting as assigned in MEASUREMENT CONTROL message. RADIO BEARER RECONFIGURATION procedure is used to take the UE from CELL_FACH state to CELL_DCH state. While entering CELL_DCH state from CELL_FACH state, the UE shall delete traffic volume measurement contexts if optional IE "measurement validity" is not present. So, in CELL_DCH state UE shall not perform traffic volume measurement and reporting. UE is taken to the CELL_FACH state from CELL_DCH state using RADIO BEARER RECONFIGURATION procedure. The UE shall not send MEASUREMENT REPORT message as measurement context is already deleted.

Similarly behavior of the UE when moved from CELL_FACH state to CELL_DCH state and assigned traffic volume measurement context is present with IE "measurement validity" is set to "All But CELL_DCH state" or "CELL_DCH state" or "All states" is tested.

When the UE is in CELL_FACH state, System Information is modified to assign traffic volume measurement and reporting to the UE. No previously assigned traffic volume measurement contexts are present in the UE. The UE is taken to CELL_DCH state from CELL_FACH state using RADIO BEARER RECONFIGURATION procedure. In CELL_DCH state the UE shall continue traffic volume measurement and reporting as assigned in System Information. Traffic volume measurement and reporting is released by sending MEASUREMENT CONTROL message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	Optional IE "measurement validity" is not included.
2	→		MEASUREMENT REPORT	
3	←		RADIO BEARER RECONFIGURATION	
4	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall delete measurement context setup by MEASUREMENT CONTROL message (Step 1).
5				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
6	←		RADIO BEARER RECONFIGURATION	
7	→		RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.

8			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
9	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All But CELL_DCH".
10	→	MEASUREMENT REPORT	.
11	←	RADIO BEARER RECONFIGURATION	
12	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall stop traffic volume measurement setup by MEASUREMENT CONTROL message (Step 9).
13			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
14	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 9).
15	←	RADIO BEARER RECONFIGURATION	
16	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
17	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "CELL_DCH".
18			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
19	←	RADIO BEARER RECONFIGURATION	
20	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall start traffic volume measurement setup by MEASUREMENT CONTROL message (Step 17).
21	→	MEASUREMENT REPORT	
22	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 17)
23	←	RADIO BEARER RECONFIGURATION	
24	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.

25	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All states".
26	→	MEASUREMENT REPORT	
27	←	RADIO BEARER RECONFIGURATION	
28	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall continue traffic volume measurement setup by MEASUREMENT CONTROL message (Step 25).
29	→	MEASUREMENT REPORT	
30	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 25)
31	←	RADIO BEARER RECONFIGURATION	
32	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
33	←	SIB11 modified	Traffic volume measurements and reporting is assigned to Ues
34	→	MEASUREMENT REPORT	
35	←	RADIO BEARER RECONFIGURATION	
36	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall continue traffic volume measurement assigned in System Information (Step 33).
37	→	MEASUREMENT REPORT	
38	←	MEASUREMENT CONTROL	UE shall release measurement context assigned in System Information (Step 33).

Specific Message Content

MEASUREMENT CONTROL (Step 1)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~1~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	~~Not Present~~
~~- Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~True~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~False~~
~~- Measurement validity~~	~~Not Present~~
~~- Report criteria~~	~~Periodical Reporting Criteria~~
~~- Reporting amount~~	~~8~~
~~- Reporting interval~~	~~8 Sec~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	**Value/remark**
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~1~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Traffic volume measured results list~~
~~- - Traffic volume measurement results~~	
~~- - RB identity~~	~~1~~
~~- - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - RB identity~~	~~2~~
~~- - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - RB identity~~	~~3~~
~~- - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - RB identity~~	~~4~~
~~- - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- - RB identity~~	~~20~~
~~- - RLC buffer payload~~	~~Check to see if this IE is present~~
~~- - RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- - RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~Measured results on RACH~~	~~Check to see if this IE is absent~~
~~Additional measured results~~	~~Check to see if this IE is absent~~
~~Event results~~	~~Check to see if this IE is absent~~

Information Element	**Value/remark**
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 3, 11, 19, 27, and 35)

Use the same message type found in Annex A with condition set to A4.

RADIO BEARER RECONFIGURATION (Step 6, 15, 23, and 31)

Use the same message type found in Annex A with condition set to A5.

MEASUREMENT CONTROL (Step 9)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~ ~~Measurement Command~~ ~~- CHOICE measurement type~~ ~~- - Measurement validity~~	~~2~~ ~~Setup~~ ~~Traffic Volume Measurement~~ ~~All But CELL_DCH~~

Information Element	Value/remark
Measurement Identity Measurement Command - CHOICE measurement type - Measurement validity	2 Setup Traffic Volume Measurement All But CELL_DCH

MEASUREMENT REPORT (Step 10)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	2

MEASUREMENT CONTROL (Step 14)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~ ~~Measurement Command~~ ~~Measurement reporting mode~~ ~~Additional measurement list~~ ~~DPCH compressed mode status~~	~~2~~ ~~Release~~ ~~Not Present~~ ~~Not Present~~ ~~Not Present~~

Information Element	Value/remark
Measurement Identity Measurement Command Measurement reporting mode Additional measurement list DPCH compressed mode status	2 Release Not Present Not Present Not Present

MEASUREMENT CONTROL (Step 17)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~ ~~Measurement Command~~ ~~- CHOICE measurement type~~ ~~- - Measurement validity~~	~~3~~ ~~Setup~~ ~~Traffic Volume Measurement~~ ~~CELL_DCH~~

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	CELL_DCH

MEASUREMENT REPORT (Step 21)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	3

MEASUREMENT CONTROL (Step 22)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	3

MEASUREMENT CONTROL (Step 25)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~4~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	
~~- UL transport channel identity~~	~~RACH~~
~~- UL transport channel identity~~	~~DCH :1~~
~~- UL transport channel identity~~	~~DCH : 5~~
~~- Measurement validity~~	~~All States~~

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Measurement validity	All States

MEASUREMENT REPORT (Step 26, and 29)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4

MEASUREMENT CONTROL (Step 30)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4

System Information Block type 11 (Step 33)

~~Information Element~~	~~Value/Remarks~~
~~SIB12 indicator~~	~~FALSE~~
~~FACH measurement occasion info~~	~~Not Present~~
~~Measurement control system information~~	
~~- Use of HCS~~	~~Not used~~
~~- Cell_selection_and_reselection_quality~~	~~CPICH RSCP~~
~~- 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~~	
~~- Traffic volume measurement ID~~	~~5~~
~~- Traffic volume measurement object list~~	~~Not Present~~
~~- Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~True~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~False~~
~~- Traffic volume measurement reporting criteria~~	~~Not Present~~
~~- Measurement validity~~	~~Not Present~~
~~- Measurement reporting mode~~	
~~- Measurement report transfer mode~~	~~Acknowledged Mode~~
~~- Periodical or event trigger~~	~~Periodical~~
~~- Report criteria system Information~~	~~Periodical reporting criteria~~
~~- Reporting amount~~	~~Infinity~~
~~- Reporting interval~~	~~8 seconds~~
~~- UE internal measurement system information~~	~~Not Present~~

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	CPICH RSCP
- 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	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	Not Present
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds
- UE internal measurement system information	Not Present

MEASUREMENT REPORT (Step 34, and 37)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	5

MEASUREMENT CONTROL (Step 38)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	5

8.4.1.18.5 Test Requirement

The UE shall send MEASUREMENT REPORT message in steps 21, 29 and 37. The UE shall not send MEASUREMENT REPORT message in steps 5, 8, and 13.

8.4.1.19 Measurement Control and Report: Traffic volume measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.19.1 Definition

8.4.1.19.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored in the UE; and
  - if the optional IE "measurement validity" for this measurement has not been included:
    - delete the associated measurement;
  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL_DCH":
    - stop measurement reporting;
    - save the associated measurement to be used after the next transition to CELL_DCH state;
  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - continue measurement reporting;
  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL_DCH":
    - resume this measurement and associated reporting;
- if no traffic volume type measurements applicable to CELL_FACH states are stored in the UE:
    - store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 or System Information Block type 11;
    - begin traffic volume measurement reporting according to the assigned information.

Reference

3GPP TS 25.331 clauses 8.4.1.6.6.

8.4.1.19.3 Test Purpose

The UE shall performs traffic volume measurements and the associated reporting when it enters CELL_FACH state from CELL_DCH state, and that such measurement contexts (and optionally, the reporting context) valid for CELL_FACH state have been previously stored.

The UE shall perform traffic volume measurement listed in the System Information Block type 11 or 12 messages, if no previously assigned measurements are present. The UE shall transmit MEASUREMENT REPORT messages if reporting conditions has been satisfied.

Reference

3GPP TS 25.331 clause 8.4.1.6.6

8.4.1.19.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to the UE to establish traffic volume measurement context with optional IE "measurement validity" is not present. The UE shall perform measurement and reporting as assigned in MEASUREMENT CONTROL message. RADIO BEARER RECONFIGURATION procedure is used to take the UE from CELL_DCH state to CELL_FACH state. While entering CELL_FACH state from CELL_DCH state, the UE shall delete traffic volume measurement contexts if optional IE

"measurement validity" is not present. So, in CELL_FACH state UE shall not perform traffic volume measurement and reporting. UE is taken to the CELL_DCH state from CELL_FACH state using RADIO BEARER RECONFIGURATION procedure. The UE shall not send MEASUREMENT REPORT message as measurement context is already deleted.

Similarly behavior of the UE when moved from CELL_DCH state to CELL_FACH state and assigned traffic volume measurement context is present with IE "measurement validity" is set to "All But CELL_DCH state" or "CELL_DCH state" or "All states" is tested.

When the UE is in CELL_DCH state, System Information is modified to assign traffic volume measurement and reporting to the UE. No previously assigned traffic volume measurement contexts are present in the UE. The UE is taken to CELL_FACH state from CELL_DCH state using RADIO BEARER RECONFIGURATION procedure. In CELL_FACH state the UE shall perform traffic volume measurement and reporting as assigned in System Information. Traffic volume measurement and reporting is released by sending MEASUREMENT CONTROL message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	Optional IE "measurement validity" is not included.
2	→		MEASUREMENT REPORT	
3	←		RADIO BEARER RECONFIGURATION	
4	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall delete measurement context setup by MEASUREMENT CONTROL message (Step 1).
5				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
6	←		RADIO BEARER RECONFIGURATION	
7	→		RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
8				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
9	←		MEASUREMENT CONTROL	IE "measurement validity" is set to "All But CELL_DCH".
10				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
11	←		RADIO BEARER RECONFIGURATION	
12	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall start traffic volume measurement setup by MEASUREMENT CONTROL message (Step 9).

13	→	MEASUREMENT REPORT	
14	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 9).
15	←	RADIO BEARER RECONFIGURATION	
16	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
17	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "CELL_DCH".
18	→	MEASUREMENT REPORT	
19	←	RADIO BEARER RECONFIGURATION	
20	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall stop traffic volume measurement setup by MEASUREMENT CONTROL message (Step 17).
21			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
22	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 17)
23	←	RADIO BEARER RECONFIGURATION	
24	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
25	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All states".
26	→	MEASUREMENT REPORT	
27	←	RADIO BEARER RECONFIGURATION	
28	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall continue traffic volume measurement setup by MEASUREMENT CONTROL message (Step 25).
29	→	MEASUREMENT REPORT	

30	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 25)
31	←	RADIO BEARER RECONFIGURATION	
32	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
33	←	SIB12 modified	Traffic volume measurements and reporting is assigned to UEs
34	←	RADIO BEARER RECONFIGURATION	
35	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 33).
36	→	MEASUREMENT REPORT	
37	←	MEASUREMENT CONTROL	UE shall release measurement context assigned in System Information (Step 33).

Specific Message Content

MEASUREMENT CONTROL (Step 1)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~1~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	~~Not Present~~
~~- Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~True~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~False~~
~~- Measurement validity~~	~~Not Present~~
~~- Report criteria~~	~~Periodical Reporting Criteria~~
~~- Reporting amount~~	~~8~~
~~- Reporting interval~~	~~8 Sec~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~1~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Traffic volume measured results list~~
~~- Traffic volume measurement results~~	
~~- RB identity~~	~~1~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~2~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~3~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~4~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~- RB identity~~	~~20~~
~~- RLC buffer payload~~	~~Check to see if this IE is present~~
~~- RLC buffer payload average~~	~~Check to see if this IE is absent~~
~~- RLC buffer payload variance~~	~~Check to see if this IE is absent~~
~~Measured results on RACH~~	~~Check to see if this IE is absent~~
~~Additional measured results~~	~~Check to see if this IE is absent~~
~~Event results~~	~~Check to see if this IE is absent~~

Information Element	Value/remark
Measurement identity Measured Results	1
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 3, 11, 19, 27, and 34)

Use the same message type found in Annex A with condition set to A5.

RADIO BEARER RECONFIGURATION (Step 6, 15, 23, and 31)

Use the same message type found in Annex A with condition set to A4.

MEASUREMENT CONTROL (Step 9)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~ ~~Measurement Command~~ ~~- CHOICE measurement type~~ ~~- Measurement validity~~	~~2~~ ~~Setup~~ ~~Traffic Volume Measurement~~ ~~All But CELL_DCH~~

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	All But CELL_DCH

MEASUREMENT REPORT (Step 13)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	2

MEASUREMENT CONTROL (Step 14)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~2~~
~~Measurement Command~~	~~Release~~
~~Measurement reporting mode~~	~~Not Present~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL (Step 17)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~3~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Measurement validity~~	~~CELL_DCH~~

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	CELL_DCH

MEASUREMENT REPORT (Step 18)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	3

MEASUREMENT CONTROL (Step 22)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	3

MEASUREMENT CONTROL (Step 25)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~4~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- Traffic volume measurement object list~~	
~~- UL transport channel identity~~	~~RACH~~
~~- UL transport channel identity~~	~~DCH :1~~
~~- UL transport channel identity~~	~~DCH : 5~~
~~- Measurement validity~~	~~All States~~

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Measurement validity	All States

MEASUREMENT REPORT (Step 26, and 29)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4

MEASUREMENT CONTROL (Step 30)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4

System Information Block type 12 (Step 33)

~~Information Element~~	~~Value/Remarks~~
~~FACH measurement occasion info~~	~~Not Present~~
~~Measurement control system information~~	
~~- Use of HCS~~	~~Not used~~
~~- Cell_selection_and_reselection_quality~~	~~CPICH RSCP~~
~~- 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~~	
~~- Traffic volume measurement ID~~	~~5~~
~~- Traffic volume measurement object list~~	~~Not Present~~
~~- Traffic volume measurement quantity~~	~~RLC Buffer Payload~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~True~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~False~~
~~- Traffic volume measurement reporting criteria~~	~~Not Present~~
~~- Measurement validity~~	~~Not Present~~
~~- Measurement reporting mode~~	
~~- Measurement report transfer mode~~	~~Acknowledged Mode~~
~~- Periodical or event trigger~~	~~Periodical~~
~~- Report criteria system Information~~	~~Periodical reporting criteria~~
~~- Reporting amount~~	~~Infinity~~
~~- Reporting interval~~	~~8 seconds~~
~~- UE internal measurement system information~~	~~Not Present~~

Information Element	**Value/remark**
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality	CPICH RSCP
- 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	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	Not Present
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds
- UE internal measurement system information	Not Present

MEASUREMENT REPORT (Step 36)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	5

MEASUREMENT CONTROL (Step 37)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	5

8.4.1.19.5 Test Requirement

The UE shall send MEASUREMENT REPORT message in steps 13, 29 and 36. The UE shall not send MEASUREMENT REPORT message in steps 5, 8, and 21.

8.4.1.20 Measurement Control and Report: Traffic volume measurement in CELL_PCH state

8.4.1.20.1 Definition

8.4.1.20.2 Conformance requirement

In CELL_PCH state, when the reporting criteria is fulfilled for any traffic volume measurement which is being performed in the UE, the UE shall first perform the cell update procedure with the cause "uplink data transmission", in order to transit to CELL_FACH state and then transmit a MEASUREMENT REPORT message on the uplink DCCH

8.4.1.20.3 Test Purpose

To confirm that in CELL_PCH state, UE performs assigned traffic volume measurement. When reporting criteria for ongoing traffic volume measurement is fulfilled, the UE shall first perform cell update procedure and then transmit MEASUREMENT REPORT message.

Reference

3GPP TS 25.331 clause 8.4.2.2

8.4.1.20.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. System Information block type 12 message is modified to assign traffic volume measurement and repotting. RADIO BEARER RECONFIGURATION procedure is used to take UE from CELL_DCH state to CELL_PCH state. While entering in CELL_PCH state from CELL_DCH state UE should start traffic volume measurement as assigned in System Information. When reporting criteria for traffic volume measurement is satisfied the UE shall change state to CELL_FACH and perform CELL UPDATE procedure. After successful completion of CELL UPDATE procedure, UE shall transmit MEASUREMENT REPORT message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		SIB12 modified	Traffic volume measurements and reporting is assigned to UEs
2	←		RADIO BEARER RECONFIGURATION	IE "RRC State Indicator" is set to "CELL_PCH"
3	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_PCH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 1).
4	→		CELL UPDATE	The UE shall move to CELL FACH state with the message set to "uplink data transmission" in IE "Cell update cause".
5	←		CELL UPDATE CONFIRM	
5a	→		UTRAN MOBILITY INFORMATION CONFIRM	
6	→		MEASUREMENT REPORT	

Specific Message Content

System Information Block type 12 (Step 1)

~~Information Element~~	~~Value/Remarks~~
~~FACH measurement occasion info~~	~~Not Present~~
~~Measurement control system information~~	
~~- Use of HCS~~	~~Not used~~
~~- Cell_selection_and_reselection_quality~~	~~CPICH RSCP~~
~~- 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~~	
~~- Traffic volume measurement ID~~	~~1~~
~~- Traffic volume measurement object list~~	
~~- UL transport channel identity~~	~~RACH~~
~~- UL transport channel identity~~	~~DCH : 5~~
~~- Traffic volume measurement quantity~~	~~Variance of RLC Buffer Payload~~
~~- Time Interval to take an average~~	~~200 msec~~
~~- Traffic volume reporting quantity~~	
~~- RB buffer payload~~	~~False~~
~~- RB buffer payload average~~	~~False~~
~~- RB buffer payload variance~~	~~True~~
~~- Traffic volume measurement reporting criteria~~	~~Not Present~~
~~- Measurement validity~~	~~All States~~
~~- Measurement reporting mode~~	
~~- Measurement report transfer mode~~	~~Acknowledged Mode~~
~~- Periodical or event trigger~~	~~Periodical~~
~~- Report criteria system Information~~	~~Periodical reporting criteria~~
~~- Reporting amount~~	~~Infinity~~
~~- Reporting interval~~	~~8 seconds~~
~~- UE internal measurement system information~~	~~Not Present~~

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality	CPICH RSCP
- 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	
- Traffic volume measurement ID	1
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH : 5
- Traffic volume measurement quantity	Variance of RLC Buffer Payload
- Time Interval to take an average	200 msec
- Traffic volume reporting quantity	
- RB buffer payload	False
- RB buffer payload average	False
- RB buffer payload variance	True
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All States
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds
- UE internal measurement system information	Not Present

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

CELL UPDATE (Step 4)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
Cell Update Cause	Check to see if set to "Uplink data transmission"

CELL UPDATE CONFIRM (Step 5)

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 5a)

Only the message type is checked.

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- - Traffic volume measurement results	
- - RB identity	1
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	2
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	3
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	4
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	20
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	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

Information Element	Value/remark
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	2
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	3
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	4
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	20
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	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

8.4.1.20.5 Test Requirement

The UE shall send CELL UPDATE message with cause "Uplink data transfer" in step 4, UTRAN MOBILITY INFORMATION CONFIRM message in step 5a and MEASUREMENT REPORT message in step 6.

8.4.1.21 Measurement Control and Report: Traffic volume measurement in URA_PCH state

8.4.1.21.1 Definition

8.4.1.21.2 Conformance requirement

In URA_PCH state, when the reporting criteria is fulfilled for any traffic volume measurement which is being performed in the UE, the UE shall first perform the cell update procedure with the cause "uplink data transmission", in order to transit to CELL_FACH state and then transmit a MEASUREMENT REPORT message on the uplink DCCH

8.4.1.21.3 Test Purpose

To confirm that in URA_PCH state, UE performs assigned traffic volume measurement. When reporting criteria for ongoing traffic volume measurement is fulfilled, the UE shall first perform cell update procedure and then transmit MEASUREMENT REPORT message.

Reference

3GPP TS 25.331 clause 8.4.2.2

8.4.1.21.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to UE to assign traffic volume measurement and reporting to be performed in all states except CELL_DCH. The UE is requested to perform periodic reporting of measurements with IE "Reporting amount" is set to 1. RADIO BEARER RECONFIGURATION procedure is used to take UE from CELL_DCH state to URA_PCH state. While entering in URA_PCH state from CELL_DCH state UE should start traffic volume measurement as assigned by MEASUREMENT CONTROL message. When reporting criteria for traffic volume measurement is satisfied the UE shall change state to CELL_FACH and perform CELL UPDATE procedure. After successful completion of CELL UPDATE procedure, UE shall transmit MEASUREMENT REPORT message. The UE shall not send second MEASUREMENT REPORT message after reporting interval, because IE "Reporting amount" in MEASUREMENT CONTROL message is set to 1.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	IE "Reporting amount" is set to 1.
2		←	RADIO BEARER RECONFIGURATION	IE "RRC State Indicator" is set to "URA_PCH"
3		→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in URA_PCH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 1).
4		→	CELL UPDATE	The UE shall move to CELL FACH state with the message set to "uplink data transmission" in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	
5a		→	UTRAN MOBILITY INFORMATION CONFIRM	
6		→	MEASUREMENT REPORT	
7				SS waits for 8 Sec to confirm that UE does not send second MEASUREMENT REPORT message

Specific Message Content

MEASUREMENT CONTROL (Step 1)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~15~~
~~Measurement Command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Traffic Volume Measurement~~
~~- - Traffic volume measurement object list~~	~~RACH~~
~~- - Traffic volume measurement quantity~~	~~Variance of RLC Buffer Payload~~
~~- - Time Interval to take an average~~	~~200 msec~~
~~- - Traffic volume reporting quantity~~	
~~- - RB buffer payload~~	~~False~~
~~- - RB buffer payload average~~	~~False~~
~~- - RB buffer payload variance~~	~~True~~
~~- Measurement validity~~	~~All but CELL_DCH State~~
~~- Report criteria~~	~~Periodical Reporting Criteria~~
~~- - Reporting amount~~	~~1~~
~~- - Reporting interval~~	~~8 Sec~~
~~- Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- - Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	RACH
- Traffic volume measurement quantity	Variance of RLC Buffer Payload
- Time Interval to take an average	200 msec
- Traffic volume reporting quantity	
- RB buffer payload	False
- RB buffer payload average	False
- RB buffer payload variance	True
- Measurement validity	All but CELL_DCH State
- Report criteria	Periodical Reporting Criteria
- Reporting amount	1
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

CELL UPDATE (Step 4)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
Cell Update Cause	Check to see if set to "Uplink data transmission"

CELL UPDATE CONFIRM (Step 5)

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 5a)

Only the message type is checked.

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity	15
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- - Traffic volume measurement results	
- - RB identity	1
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	2
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	3
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	4
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	Check to see if this IE is present
- - RB identity	20
- - RLC buffer payload	Check to see if this IE is absent
- - RLC buffer payload average	Check to see if this IE is absent
- - RLC buffer payload variance	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

Information Element	Value/remark
Measurement identity	15
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	2
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	3
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	4
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is present
- RB identity	20
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	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

8.4.1.21.5 Test Requirement

The UE shall send CELL UPDATE message with cause "Uplink data transfer" in step 4, UTRAN MOBILITY INFORMATION CONFIRM message in step 5a and MEASUREMENT REPORT message in step 6. The UE shall not send MEASUREMENT REPORT message in step 7.

8.4.1.22 Measurement Control and Report: Quality measurements

8.4.1.22.1 Definition

8.4.1.22.2 Conformance requirement

In CELL_DCH state, the UE shall send MEASUREMENT REPORT message when reporting criteria is fulfilled for any ongoing quality measurements.

Reference

3GPP TS 25.331 clause 8.4

8.4.1.22.3 Test Purpose

To confirm that the UE performs quality measurement as specified in MEASUREMENT CONTROL message received. In CELL_DCH state, the UE shall send MEASUREMENT REPORT message when the reporting criteria is fulfilled for any ongoing quality measurement.

8.4.1.22.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH state (state 6-1 or state 6-3) as specified in clause 7.4 of TS 34.108 , depending on the CN domain(s) supported by the UE

Test Procedure

The UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to UE to assign quality measurement and reporting. As assigned in MEASUREMENT CONTROL message, the UE shall periodically send MEASUREMENT REPORT message reporting BLER of downlink transport channel(s).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	The UE is requested to perform "Quality measurements"
2		→	MEASUREMENT REPORT	
3		→	MEASUREMENT REPORT	UE shall send second MEASUREMENT REPORT message after 64 seconds.

Specific Message Content

MEASUREMENT CONTROL (Step 1)

~~Information Element~~	~~Value/Remark~~
~~Measurement identity~~	~~16~~
~~Measurement command~~	~~Setup~~
~~- CHOICE measurement type~~	~~Quality measurement~~
~~- Quality reporting quantity~~	
~~- - DL transport channel BLER~~	~~True~~
~~- - Transport channel ID list~~	~~Not present~~
~~- - Mode specific Info~~	~~fdd : Null~~
~~- Reporting criteria~~	~~Periodical reporting criteria~~
~~- - Reporting amount~~	~~Infinity~~
~~- - Reporting interval~~	~~64 sec~~
~~Measurement reporting mode~~	
~~- Transfer Mode~~	~~Acknowledged mode~~
~~- Periodical or event trigger~~	~~Periodic~~
~~Additional measurement list~~	~~Not Present~~
~~DPCH compressed mode status~~	~~Not Present~~

Information Element	**Value/remark**
Measurement identity	16
Measurement command	Setup
- CHOICE measurement type	Quality measurement
- Quality reporting quantity	
- DL transport channel BLER	True
- Transport channel ID list	Not present
- Mode specific Info	fdd : Null
- Reporting criteria	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	64 sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2,3)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~16~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Quality measurement~~
~~- BLER measurement results list~~	
~~- - Transport channel identity~~	~~10~~
~~- - DL transport channel BLER~~	~~Check to see if this IE is present~~
~~- Mode specific info~~	~~fdd: Null~~
~~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~~

Information Element	Value/remark
Measurement identity	16
Measured Results	
- CHOICE measurement	Quality measurement
- BLER measurement results list	
- Transport channel identity	10
- DL transport channel BLER	Check to see if this IE is present
- Mode specific info	fdd: Null
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

8.4.1.22.5 Test Requirement

In step 2 and 3, the UE shall send MEASUREMENT REPORT message to report BLER for downlink DCH transport channel.

8.4.1.23 Measurement Control and Report: Intra-frequency measurement for events 1C and 1D

8.4.1.23.1 Definition

8.4.1.23.2 Conformance requirement

1. When event 1C is configured in the UE, the UE shall:

   - if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH:

     - if the equations have been fulfilled during the time "Time to trigger", and if the primary CPICH that is better is not included in the active set but the other primary CPICH is any of the primary CPICHs included in the active set, and if that primary CPICH is not included in the "cells triggered" in the variable TRIGGERED_1C_EVENTS:

       - include that primary CPICH in the "cells triggered" in the variable TRIGGERED_1C_EVENTS;

       - if the value of "Replacement activation threshold" for this event is lower than the current number of cells in the active set or equal to 0:

         - if "Reporting interval" for this event is not equal to 0:

           - start a timer for that primary CPICH with the value of "Reporting interval" for this event;

           - set "sent reports" for that primary CPICH in the variable TRIGGERED_1C_EVENTS;

           - send a measurement report with IEs set as below:

             - in "intra-frequency event results": "Intrafrequency event identity" to "1c" and the first entry in "cell measurement event results" to the CPICH info of the primary CPICH not in the active set that triggered the report; and

             - the second entry in "cell measurement event results" to the CPICH info of the primary CPICH in the active set that now is worse than the new primary CPICH and has the best measured value (lowest measured result for pathloss and highest measured result for other measurements); and

             - the rest of the entries to other primary CPICHs that are now worse than this new primary CPICH in the order of their measured value;

- "measured results" and possible "additional measured results" according to TS 25.331 clause 8.4.2;

2. When event 1D is configured in the UE, the UE shall:

- if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT:

  - if the equations have been fulfilled during the time "Time to trigger":

    - set "best cell" in the variable BEST_CELL_1D_EVENT to that primary CPICH that triggered the event;

    - send a measurement report with IEs set as below:

      - in "intra-frequency event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH that triggered the report.

      - "measured results" and possible "additional measured results" according to TS 25.331 clause 8.4.2;

Reference

3GPP TS 25.331 clause 14.1.2.3, 14.1.2.4.

8.4.1.23.3 Test Purpose

1.A To confirm that the UE sends MEASUREMENT REPORT message if event 1C is configured, and number of cells in active set is greater than or equal to 'Replacement activation threshold' parameter, and if monitored or detected primary CPICH on same frequency becomes better than a primary CPICH in active set.

1.B To confirm that the UE does not send MEASUREMENT REPORT message indicating event 1C if number of cells in active set is less than 'Replacement activation threshold' parameter, and if monitored or detected primary CPICH on same frequency becomes better than a primary CPICH in active set.

1.C To confirm that the UE stops periodic reporting of event 1C if the cell that triggered event 1C is added into active set.

2. To confirm that the UE sends MEASUREMENT REPORT message if event 1D is configured and intra-frequency measurement indicates change in best cell.

8.4.1.23.4 Method of test

Initial Condition

System Simulator: 3 cells – The initial configurations of the 3 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.23-1. The table is found in "Test Procedure" clause.

UE: CS-DCCH_DCH_Initial (State 6-1) or PS-DCCH_DCH_ Initial (State 6-3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.23-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.23-1

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	-60	-60	-66	-70	-70	Switched off	Switched off	-70	-60

The UE is initially in CELL_DCH state of cell 1. SS then performs a soft handover procedure by sending ACTIVE SET UPDATE message on the downlink DCCH. The UE shall reply with an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH, and include cell 2 to the active set when the activation time specified has elapsed.

SS then ask the UE to perform Intra-frequency measurement and report event 1C and event 1D. In MEASUREMENT CONTROL message, IE 'Replacement activation threshold' is set to 3 and IE 'Cell individual offset' is set to +6 dBm for Cell 3. SS configures itself according to the values in columns "T1" shown above. Cell 3 becomes better than Cell 2 that is in active set of the UE, due to parameter 'Cell Individual offset' for Cell 3. However the UE shall not send MEASUREMENT REPORT message indicating event 1C because number of cells in active set is less than parameter 'Replacement Activation Threshold'.

SS then sends MEASUREMENT CONTROL message to the UE to modify earlier configured intra-frequency measurement. Now, IE 'Replacement activation threshold' is set to 1. MEASUREMENT CONTROL message contains only those IEs that are modified and the UE shall continue to use current values of parameters that are not modified. The UE sends MEASUREMENT REPORT message reporting event 1C, monitored Cell 3 is better than Cell 2 that is in active set. The UE sends second MEASUREMENT REPORT message reporting event 1C after 4 seconds, equals to parameter 'Reporting interval'.

SS then performs soft handover procedure by sending ACTIVE SET UPDATE message on the downlink DCCH. In this message SS commands UE to add Cell 3 and remove Cell 2 from active set. The UE shall reply with an ACTIVE SET UPDATE COMPLETE message. The UE shall also stop periodic reporting of event 1C because the Cell that triggered it is added into active set. SS then configures itself according to the values in columns "T2" shown above. This triggers event 1D and the UE sends MEASUREMENT REPORT message indicating Cell 3 as a best cell.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		ACTIVE SET UPDATE	SS command the UE to add Cell 2 in active set.
2	→		ACTIVE SET UPDATE COMPLETE	
3	←		MEASUREMENT CONTROL	Event 1C and 1D are configured. IE "Replacement activation threshold" is set to 3.
4				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.23-1.
5				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message.
6	←		MEASUREMENT CONTROL	Measurement configured in step 3 is modified to set parameter 'replacement activation threshold' to 1.
7	→		MEASUREMENT REPORT	Event 1C is triggered. The UE shall report that Cell 3 is better than Cell 2.
8	→		MEASUREMENT REPORT	The UE shall send second report after 4 seconds (Reporting interval)
9	←		ACTIVE SET UPDATE	SS command the UE to replace Cell 2 in active set by Cell 3.
10	→		ACTIVE SET UPDATE COMPLETE	
11				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message.
12				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.23-1.
13	→		MEASUREMENT REPORT	The UE shall report event 1D change of best cell

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

ACTIVE SET UPDATE (Step 1)

Information Element	Value/Remark
Radio link addition information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH may be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Code number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not present
- TPC combination index	0
- SSDT cell identity	Not present
- Close loop timing adjustment mode	Not present
- TFCI combining indicator	Not present
- SCCPCH information for FACH	Not present
Radio link removal information	Not present

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH may be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Code number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not present
- TPC combination index	0
- SSDT cell identity	Not present
- Close loop timing adjustment mode	Not present
- TFCI combining indicator	Not present
- SCCPCH information for FACH	Not present
Radio link removal information	Not present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement identity	1
Measurement command	Setup
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Intra-frequency cell removal	Not present
- New intra-frequency info list	
- Intra-frequency cell id	Id of Cell 3
- Cell info	
- Cell individual offset	6 dBm
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 3
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	
- Intra-frequency cell id list	Set to id of cell 1, 2 and 3.
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	Same as in default message content
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1C
- Replacement activation threshold	3
- Reporting amount	16
- Reporting interval	4 seconds
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
- Intra-frequency event identity	1D
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

Information Element	Value/remark
Measurement identity Measurement command	1 Setup
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Intra-frequency cell removal	Not present
- New intra-frequency info list	
- Intra-frequency cell id	Id of Cell 3
- Cell info	
- Cell individual offset	6 dBm
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 3
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	
- Intra-frequency cell id list	Set to id of cell 1, 2 and 3.
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	Same as in default message content
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1C
- Replacement activation threshold	3
- Reporting amount	16
- Reporting interval	4 seconds
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
- Intra-frequency event identity	1D
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT CONTROL (Step 6)

~~Information Element~~	~~Value/Remark~~
~~Measurement identity~~	~~1~~
~~Measurement command~~	~~Modify~~
~~- CHOICE measurement type~~	~~Intra-frequency measurement~~
~~- Intra-frequency cell info list~~	~~Not present~~
~~- Intra-frequency measurement quantity~~	~~Not present~~
~~- Intra-frequency reporting quantity~~	~~Not present~~
~~- Measurement validity~~	~~Not present~~
~~- CHOICE report criteria~~	~~Intra-frequency measurement reporting criteria~~
~~- Parameters required for each events~~	
~~- Intra-frequency event identity~~	~~1C~~
~~- Replacement activation threshold~~	~~1~~
~~- Reporting amount~~	~~16~~
~~- Reporting interval~~	~~4 seconds~~
~~- Hysteresis~~	~~4~~
~~- Time to trigger~~	~~10 mSec~~
~~- Reporting cell status~~	~~Not present~~
~~- Intra-frequency event identity~~	~~1D~~
~~- Hysteresis~~	~~4~~
~~- Time to trigger~~	~~10 mSec~~
~~- Reporting cell status~~	~~Not present~~
~~Measurement reporting mode~~	~~Not present~~
~~Additional measurement list~~	~~Not present~~
~~DPCH compressed mode status info~~	~~Not present~~

Information Element	**Value/remark**
Measurement identity	1
Measurement command	Modify
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1C
- Replacement activation threshold	1
- Reporting amount	16
- Reporting interval	4 seconds
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
- Intra-frequency event identity	1D
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 7 and 8)

Information Element	Value/Remarks
Measurement identity	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	Intra Frequency Event results
- Event ID	1C
- Cell measurement event results	
- Primary scrambling code	Primary scrambling code of Cell 3
- Primary scrambling code	Primary scrambling code of Cell 2

Information Element	Value/remark
Measurement identity	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	Intra Frequency Event results
- Event ID	1C
- Cell measurement event results	
- Primary scrambling code	Primary scrambling code of Cell 3
- Primary scrambling code	Primary scrambling code of Cell 2

ACTIVE SET UPDATE (Step 9)

Information Element	Value/Remark
Radio link addition information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 3
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH may be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not present
- TPC Combination Index	0
- SSDT Cell Identity	Not present
- Close loop timing adjustment mode	Not present
- TFCI Combining Indicator	Not present
- SCCPCH information for FACH	Not present
Radio link removal information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 2

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 3
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH may be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not present
- TPC Combination Index	0
- SSDT Cell Identity	Not present
- Close loop timing adjustment mode	Not present
- TFCI Combining Indicator	Not present
- SCCPCH information for FACH	Not present
Radio link removal information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 2

MEASUREMENT REPORT (Step 13)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~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~~	~~Intra-frequency event results~~
~~- Event ID~~	~~1D~~
~~- Cell measurement event results~~	
~~- Primary scrambling code~~	~~Primary scrambling code of Cell 3~~

Information Element	Value/remark
Measurement identity	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	Intra-frequency event results
- Event ID	1D
- Cell measurement event results	
- Primary scrambling code	Primary scrambling code of Cell 3

8.4.1.23.5 Test Requirement

1.A In steps 7 and 8 the UE shall send MEASUREMENT REPORT message indicating event 1C. IE 'Cell measurement event results' in MEASUREMENT REPORT message shall contain primary scrambling code of Cell 3 and Cell 2 in that order.

1.B In step 5 the UE shall not send MEASUREMENT REPORT message.

1.C In step 11 the UE shall not send MEASUREMENT REPORT message.

2. In step 13 the UE shall send MEASUREMENT REPORT message indicating event 1D. IE 'Cell measurement event results' in MEASUREMENT REPORT message shall contain primary scrambling code of Cell 3.

8.4.1.24 Measurement Control and Report: Inter-frequency measurement for event 2A

8.4.1.24.1 Definition

8.4.1.24.2 Conformance requirement

1. If any of the non- used frequencies quality estimate becomes better than the currently used frequency quality estimate, and event 2A has been ordered by UTRAN then this event shall trigger a report to be sent from the UE when the hysteresis and time to trigger conditions is fulfilled. The corresponding report contains (at least) the best primary CPICH on the non-used frequency that triggered the event.

Reference

3GPP TS 25.331 clause 14.2.1.1

8.4.1.24.3 Test Purpose

1.A To confirm that the UE sends MEASUREMENT REPORT message if event 2A is configured, and if any of the non- used frequencies quality estimate becomes better than the currently used frequency quality estimate.

1.B To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if hysteresis condition is not fulfilled.

1.C To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if time to trigger condition is not fulfilled.

8.4.1.24.4 Method of test

Initial Condition

System Simulator: 2 cells – The initial configurations of the 2 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.24-1. The table is found in "Test Procedure" clause.

UE: CS-DCCH_DCH_Initial (State 6-1) or PS-DCCH_DCH_ Initial (State 6-3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.24-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1", "T2", "T3", "T4" and "T5" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.24-1

Parameter	Unit	Cell 1						Cell 4					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
UTRA RF Channel Number		Ch. 1						Ch. 2					
CPICH Ec	dBm	-66	-66	-66	-66	-66	-66	-75	-60	-75	-60	-75	-60

The UE is initially in CELL_DCH state of cell 1. SS commands the UE to perform measurements of transmitted power using MEASUREMENT CONTROL message. This measurement is setup to confirm that while sending MEASUREMENT REPORT message, the UE sets IE "Additional measured results" correctly. SS then performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS then commands the UE to perform Inter-frequency measurements and report event 2A by sending MEASUREMENT CONTROL message. In MEASUREMENT CONTROL message, IE "Hysteresis" is set to 10 dB and IE "Additional measurement list" is set to id of "UE Internal measurements" configured earlier. SS then configures itself according to the values in columns "T1"

shown above. Even though quality estimate for Cell 4 has become better than that of Cell 1, event 2A will not be triggered since hysteresis condition is not fulfilled. SS then configures itself according to the values in columns "T2" shown above.

SS sends MEASUREMENT CONTROL message to modify parameter "Hysteresis" of Inter-frequency measurements to 1 dB. SS then raises power level of Cell 4 according to columns "T3" for short duration (less than 5 seconds), and again configures itself according to columns "T4" shown above. The UE will not send MEASUREMENT REPORT message because time to trigger condition is not fulfilled. SS then configures itself according to the values in columns "T5" shown above. The UE sends MEASUREMENT REPORT message reporting even 2A as well as measurement of transmitted power.

Important Note: Duration between time instant "T3" and "T4" (between steps 9 and 10 of expected sequence) must be less than 5 seconds.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	To setup UE Internal measurement.
2	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2A.
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.24-1.
6				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as hysteresis condition is not fulfilled.
7				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.24-1.
8	←		MEASUREMENT CONTROL	Modify hysteresis parameter for event 2A.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.24-1.
10				SS re-adjusts the downlink transmission power settings according to columns "T4" in table 8.4.1.24-1. This step should be completed within 5 seconds after completing step 9.
11				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as time to trigger condition is not fulfilled.
12				SS re-adjusts the downlink transmission power settings according to columns "T5" in table 8.4.1.24-1.
13	→		MEASUREMENT REPORT	This message should come at least 5 seconds later after changing power setting of Cell 4.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

MEASUREMENT CONTROL (Step 1)

~~Information Element~~	~~Value/Remark~~
~~Measurement identity~~	~~1~~
~~Measurement command~~	~~Setup~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement quantity~~	
~~- Measurement quantity~~	~~UE transmitted power~~
~~- Filter Coefficient~~	~~4~~
~~- UE internal reporting quantity~~	
~~- UE Transmitted Power~~	~~TRUE~~
~~- CHOICE mode~~	~~FDD~~
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~- CHOICE report criteria~~	~~No reporting~~
~~Measurement reporting mode~~	~~Not present~~
~~Additional measurements list~~	~~Not present~~
~~DPCH compressed mode status~~	~~Not present~~

Information Element	**Value/remark**
Measurement identity	1
Measurement command	Setup
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE transmitted power
- Filter Coefficient	4
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE mode	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE report criteria	No reporting
Measurement reporting mode	Not present
Additional measurements list	Not present
DPCH compressed mode status	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH 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	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (Single)
- CHOICE Mode	FDD
- Power offset PPilot-DPDCH	TBD
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS status flag	Active
- TGCFN	(Current CFN+(256 - TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- CHOICE UL/DL mode	DL
- Downlink compressed mode method	SF/2
- Downlink frame type	A
- 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	0

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 PPilot-DPDCH	TBD
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS status flag	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- CHOICE UL/DL mode	DL
- Downlink compressed mode method	SF/2
- Downlink frame type	A
- 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	0

MEASUREMENT CONTROL (Step 4)

Information Element	Value/Remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	
- Inter-frequency cell id	Id of Cell 4
- Frequency Information	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 4
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	0
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Used frequency threshold	-72 dBm
- Used frequency W	0
- Hysteresis Inter-frequency	10 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non-used frequency parameter list	
- Non-used frequency threshold	-72 dBm
- Non-used frequency W	0
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	
- Measurement identity	1
DPCH compressed mode status info	Not present

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	
- Inter-frequency cell id	Id of Cell 4
- Frequency Information	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 4
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	0
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Used frequency threshold	-72 dBm
- Used frequency W	0
- Hysteresis Inter-frequency	10 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non-used frequency parameter list	
- Non-used frequency threshold	-72 dBm
- Non-used frequency W	0
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	
- Measurement identity	1
DPCH compressed mode status info	Not present

MEASUREMENT CONTROL (Step 8)

~~Information Element~~	~~Value/Remark~~
~~Measurement identity~~	~~2~~
~~Measurement command~~	~~Modify~~
~~- CHOICE measurement type~~	~~Inter-frequency measurement~~
~~- Inter-frequency cell info list~~	
~~- Inter-frequency cell removal~~	~~Not present~~
~~- New inter-frequency info list~~	~~Not present~~
~~- Cell for measurement~~	~~Not present~~
~~- Intra-frequency measurement quantity~~	~~Not present~~
~~- Inter-frequency reporting quantity~~	~~Not present~~
~~- Measurement validity~~	~~Not present~~
~~- UE autonomous update mode~~	~~Not present~~
~~- CHOICE report criteria~~	~~Inter-frequency measurement reporting criteria~~
~~- Parameters required for each events~~	
~~- Inter-frequency event identity~~	~~2A~~
~~- Used frequency threshold~~	~~-72 dBm~~
~~- Used frequency W~~	~~0~~
~~- Hysteresis Inter Frequency~~	~~1 dB~~
~~- Time to trigger~~	~~5000 mSec~~
~~- Reporting cell status~~	~~Not present~~
~~- Non-used frequency parameter list~~	
~~- Non-used frequency threshold~~	~~-72 dBm~~
~~- Non-used frequency W~~	~~0~~
~~Measurement reporting mode~~	~~Not present~~
~~Additional measurement list~~	~~Not present~~
~~DPCH compressed mode status info~~	~~Not present~~

Information Element	**Value/remark**
Measurement identity	2
Measurement command	Modify
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	Not present
- Cell for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Inter-frequency reporting quantity	Not present
- Measurement validity	Not present
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Used frequency threshold	-72 dBm
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non-used frequency parameter list	
- Non-used frequency threshold	-72 dBm
- Non-used frequency W	0
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 13)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 2~~
~~Measured results~~	~~Check to see if it is absent~~
~~Measured results on RACH~~	~~Check to see if it is absent~~
~~Additional measured results~~	
~~- Measured results~~	~~UE internal measured results~~
~~- UE transmitted power~~	~~Check to see if it is present~~
~~- UE RX TX report entry list~~	~~Check to see if it is absent~~
~~Event results~~	~~Inter frequency event results,~~
~~- Event ID~~	~~2A~~
~~- Cell measurement event results~~	
~~- Frequency info~~	~~Frequency of Cell 4~~
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~Primary scrambling code of Cell 4~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present
- UE RX TX report entry list	Check to see if it is absent
Event results	Inter frequency event results,
- Event ID	2A
- Cell measurement event results	
- Frequency info	Frequency of Cell 4
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of Cell 4

8.4.1.24.5 Test Requirement

1.A In step 13 the UE shall send MEASUREMENT REPORT message indicating event 2A. IE 'Cell measurement event results' in MEASUREMENT REPORT message shall contain frequency information and primary scrambling code of Cell 4.

1.B In step 6, the UE shall not send MEASUREMENT REPORT message.

1.C In step 11, the UE shall not send MEASUREMENT REPORT message.

8.4.1.25 Measurement Control and Report: Inter-frequency measurement for events 2B and 2E

8.4.1.25.1 Definition

8.4.1.25.2 Conformance requirement

1. When event 2E is ordered by UTRAN in a MEASUREMENT CONTROL message the UE shall send a report when the estimated quality of a non-used frequency is below the value of the IE "Threshold non-used frequency" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains at least the best primary CPICH on the non-used frequency.

2. When event 2B is ordered by UTRAN in a MEASUREMENT CONTROL message the UE shall send a report when the estimated quality of the currently used frequency is below the value of the IE "Threshold used frequency" and the estimated quality of a non-used frequency is above the value of the IE "Threshold non-used frequency" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains at least the best primary CPICH on the non-used frequency that triggered the event.

Reference

3GPP TS 25.331 clause 14.2.1.2, 14.2.1.5.

8.4.1.25.3 Test Purpose

1. To confirm that the UE sends MEASUREMENT REPORT message when event 2E is configured and the estimated quality of a non-used frequency is below the value of the IE "Threshold non-used frequency". This MEASUREMENT REPORT message shall contain at least the best primary CPICH on the non-used frequency that triggered the event.

2. To confirm that the UE sends MEASUREMENT REPORT message when event 2B is configured and estimated quality of the currently used frequency is below the value of the IE "Threshold used frequency" and the estimated quality of a non-used frequency is above the value of the IE "Threshold non-used frequency". This MEASUREMENT REPORT message shall contain at least the best primary CPICH on the non-used frequency that triggered the event.

8.4.1.25.4 Method of test

Initial Condition

System Simulator: 2 cells – The initial configurations of the 2 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.24-1. The table is found in "Test Procedure" clause.

UE: CS-DCCH_DCH_Initial (State 6-1) or PS-DCCH_DCH_ Initial (State 6-3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.25-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.25-1

Parameter	Unit	Cell 1			Cell 4		
		T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 2		
CPICH Ec	dBm	-60	-63	-74	-74	-60	-60

The UE is initially in CELL_DCH state of cell 1. SS commands the UE to perform Inter-frequency measurements and report event 2B and event 2E by sending MEASUREMENT CONTROL message. SS then performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. Since quality estimate of non-used frequency is below threshold, the UE sends MEASUREMENT REPORT message indicating event 2E. SS then configures itself according to the values in columns "T1" shown above. Now quality estimate of used and non-used frequency is above threshold and hence neither event 2B nor event 2E will be triggered. SS then configures itself according to the values in columns "T2" shown above. Quality estimate for used frequency is now below threshold, while that of non-used frequency is above threshold, the UE sends MEASUREMENT REPORT message to report event 2B.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2B and 2E.
2	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	→		MEASUREMENT REPORT	The UE shall report event 2E. Time duration between activation of compressed mode and reception of this message should be at least 5 seconds.
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.25-1.
6				Check for 10 seconds the UE shall not send measurement report message.
7				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.25-1.
8	→		MEASUREMENT REPORT	The UE shall report event 2B. Time duration between changing power levels according to columns "T2" and reception of this message should be at least 5 seconds.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

MEASUREMENT CONTROL (Step 1)

Information Element	Value/Remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	
- Inter-frequency cell id	Id of Cell 4
- Frequency Information	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 4
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non used frequency parameter list	
- Non used frequency threshold	-15 dBm
- Non used frequency W	0
- Inter-frequency event identity	2B
- Used frequency threshold	-16 dBm
- Used frequency W	4
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within monitored set non used frequency
- Maximum number of reporting cells	1
- Non used frequency parameter list	
- Non used frequency threshold	-15 dBm
- Non used frequency W	0
Measurement reporting mode	
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	
- Inter-frequency cell id	Id of Cell 4
- Frequency Information	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 4
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH Ec/No
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non used frequency parameter list	
- Non used frequency threshold	-15 dBm
- Non used frequency W	0
- Inter-frequency event identity	2B
- Used frequency threshold	-16 dBm
- Used frequency W	4
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within monitored set non used frequency
- Maximum number of reporting cells	1
- Non used frequency parameter list	
- Non used frequency threshold	-15 dBm
- Non used frequency W	0
Measurement reporting mode	
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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/Remarks
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 PPilot-DPDCH	TBD
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS status flag	Active
- TGCFN	(Current CFN+(256 - TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- CHOICE UL/DL mode	DL
- Downlink compressed mode method	SF/2
- Downlink frame type	A
- 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	0

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 PPilot-DPDCH	TBD
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS status flag	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- CHOICE UL/DL mode	DL
- Downlink compressed mode method	SF/2
- Downlink frame type	A
- 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	0

MEASUREMENT REPORT (Step 4)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 4~~
~~Measured 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~~	~~Inter frequency event results,~~
~~- Event ID~~	~~2E~~
~~- Cell measurement event results~~	
~~- Frequency info~~	~~Frequency of Cell 4~~
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~Primary scrambling code of Cell 4~~

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured 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	Inter frequency event results,
- Event ID	2E
- Cell measurement event results	
- Frequency info	Frequency of Cell 4
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of Cell 4

MEASUREMENT REPORT (Step 8)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~4~~
~~Measured results~~	~~Inter-frequency measured results~~
~~- Frequency information~~	~~Frequency of Cell 4~~
~~- UTRA carrier RSSI~~	~~Check to see if it is absent~~
~~- Inter-frequency cell measured results~~	
~~- Cell Identity~~	~~Check to see if it is absent~~
~~- SFN-SFN Observed Time Difference~~	~~Check to see if this IE is absent~~
~~- Cell synchronisation information~~	~~Check to see if this IE is absent~~
~~- Mode Specific Info~~	~~FDD~~
~~- Primary CPICH Info~~	
~~- Primary scrambling code~~	~~Primary scrambling code for cell 4~~
~~- CPICH Ec/No~~	~~Check to see if it is present~~
~~- CPICH RSCP~~	~~Check to see if it is absent~~
~~- Pathloss~~	~~Check to see if it is absent~~
~~Measured results on RACH~~	~~Check to see if it is absent~~
~~Additional measured results~~	~~Check to see if it is absent~~
~~Event results~~	~~Inter frequency event results,~~
~~- Event ID~~	~~2B~~
~~- Cell measurement event results~~	
~~- Frequency info~~	~~Frequency of Cell 4~~
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~Primary scrambling code of Cell 4~~

Information Element	Value/remark
Measurement identity	4
Measured results	Inter-frequency measured results
- Frequency information	Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN Observed Time Difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Mode Specific Info	FDD
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code for cell 4
- CPICH Ec/No	Check to see if it is present
- CPICH RSCP	Check to see if it is absent
- Pathloss	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter frequency event results,
- Event ID	2B
- Cell measurement event results	
- Frequency info	Frequency of Cell 4
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of Cell 4

8.4.1.25.5 Test Requirement

1. In step 4 the UE shall send MEASUREMENT REPORT message indicating event 2E. IE "Cell measurement event results" in this message shall contain frequency information and primary scrambling code of Cell 4.

2. In step 8 the UE shall send MEASUREMENT REPORT message indicating event 2B. IE "Cell measurement event results" in this message shall contain frequency information and primary scrambling code of Cell 4.

8.4.1.26 Measurement Control and Report: Inter-frequency measurement for events 2D and 2F

8.4.1.26.1 Definition

8.4.1.26.2 Conformance requirement

1. When event 2F is ordered by UTRAN in a MEASUREMENT CONTROL message the UE shall send a report when the estimated quality of the currently used frequency is above the value of the IE "Threshold used frequency" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains at least the best primary CPICH on the used frequency.

2. When event 2D is ordered by UTRAN in a MEASUREMENT CONTROL message the UE shall send a report when the estimated quality of the currently used frequency is below the value of the IE "Threshold used frequency" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains at least the best primary CPICH on the used frequency.

Reference

3GPP TS 25.331 clause 14.2.1.4, 14.2.1.6

8.4.1.26.3 Test Purpose

1. To confirm that the UE sends MEASUREMENT REPORT message when event 2F is configured and estimated quality of the currently used frequency is above the value of the IE "Threshold used frequency". This MEASUREMENT REPORT message shall contain at least the best primary CPICH on the used frequency.

2. To confirm that the UE sends MEASUREMENT REPORT message when event 2D is configured and estimated quality of the currently used frequency is below the value of the IE "Threshold used frequency". This MEASUREMENT REPORT message shall contain at least the best primary CPICH on the used frequency.

8.4.1.26.4 Method of test

Initial Condition

System Simulator: 1 cells – The initial configurations of the cell in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.26-1. The table is found in "Test Procedure" clause.

UE: CS-DCCH_DCH_Initial (State 6-1) or PS-DCCH_DCH_ Initial (State 6-3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 8.4.1.26-1 illustrates the downlink power to be applied for the cell at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" is to be applied subsequently. The exact instant on which these values shall be applied is described in the text in this clause.

Table 8.4.1.26-1

Parameter	Unit	Cell 1	
		T0	T1
UTRA RF Channel Number		Ch. 1	
CPICH Ec	dBm	-60	-72

The UE is initially in CELL_DCH state of cell 1. SS performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS commands the UE to perform Inter-frequency measurements and report event 2D and/or event 2F by sending MEASUREMENT CONTROL message. Since quality estimate of used frequency is above threshold, the UE sends MEASUREMENT REPORT message indicating event 2F. SS then configures itself according to the values in columns "T1" shown above. Quality estimate for used frequency is now below threshold, the UE sends MEASUREMENT REPORT message to report it.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
3	←		MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2D and 2F.
4	→		MEASUREMENT REPORT	The UE shall report event 2F
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.26-1.
6	→		MEASUREMENT REPORT	The UE shall report event 2D.

Specific Message Contents

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

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/Remarks
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 PPilot-DPDCH	TBD
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS status flag	Active
- TGCFN	(Current CFN+(256 - TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- CHOICE UL/DL mode	DL
- Downlink compressed mode method	SF/2
- Downlink frame type	A
- 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	0

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 PPilot-DPDCH	TBD
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS status flag	Active
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- CHOICE UL/DL mode	DL
- Downlink compressed mode method	SF/2
- Downlink frame type	A
- 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	0

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement identity	10
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	
- Inter-frequency cell id	Any valid identity other than that of Cell 1
- Frequency Information	Any valid frequency other than that of Cell 1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Any value of Primary scrambling code
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2D
- Used frequency threshold	-66 dBm
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Inter-frequency event identity	2F
- Used frequency threshold	-66 dBm
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
Measurement reporting mode	
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

Information Element	Value/remark
Measurement identity	10
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- Inter-frequency cell removal	Not present
- New inter-frequency info list	
- Inter-frequency cell id	Any valid identity other than that of Cell 1
- Frequency Information	Any valid frequency other than that of Cell 1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- CHOICE mode	FDD
- Read SFN Indicator	FALSE
- Primary CPICH Info	
- Primary scrambling code	Any value of Primary scrambling code
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- Filter Coefficient	4
- Frequency quality estimate quantity	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- UE autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2D
- Used frequency threshold	-66 dBm
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Inter-frequency event identity	2F
- Used frequency threshold	-66 dBm
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
Measurement reporting mode	
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 4)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 10~~
~~Measured 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~~	~~Inter frequency event results,~~
~~- Event ID~~	~~2F~~
~~- Cell measurement event results~~	
~~- Frequency info~~	~~Frequency of Cell 1~~
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~Primary scrambling code of Cell 1~~

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured 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	Inter frequency event results,
- Event ID	2F
- Cell measurement event results	
- Frequency info	Frequency of Cell 1
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of Cell 1

MEASUREMENT REPORT (Step 6)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 10~~
~~Measured 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~~	~~Inter frequency event results,~~
~~- Event ID~~	~~2D~~
~~- Cell measurement event results~~	
~~- Frequency info~~	~~Frequency of Cell 1~~
~~- Primary CPICH info~~	
~~- Primary scrambling code~~	~~Primary scrambling code of Cell 1~~

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured 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	Inter frequency event results,
- Event ID	2D
- Cell measurement event results	
- Frequency info	Frequency of Cell 1
- Primary CPICH info	
- Primary scrambling code	Primary scrambling code of Cell 1

8.4.1.26.5 Test Requirement

1. In step 4 the UE shall send MEASUREMENT REPORT message indicating event 2F. IE 'Cell measurement event results' in this message shall contain frequency information and primary scrambling code of Cell 1.

2. In step 6 the UE shall send MEASUREMENT REPORT message indicating event 2D. IE 'Cell measurement event results' in this message shall contain frequency information and primary scrambling code of Cell 1.

8.4.1.27 Measurement Control and Report: UE internal measurement for events 6A and 6B

8.4.1.27.1 Definition

8.4.1.27.2 Conformance requirement

When in CELL_DCH state, the UE shall start to use the new measurement and reporting parameters for UE internal measurement received in the MEASUREMENT CONTROL message. It shall transmit MEASUREMENT REPORT message, which include the measured quantity and event identity, when the reporting criteria is met.

Reference

3GPP TS 25.331, clauses 14.6.2.1 and 14.6.2.2.

8.4.1.27.3 Test Purpose

To confirm that the UE performs UE internal measurements and reporting for events 6A and 6B, when requested by the UTRAN to do so in the MEASUREMENT CONTROL message.

8.4.1.27.4 Method of test

Initial Condition

System Simulator: 1 cell, cell 1.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

The UE is in CELL_DCH state in cell 1, after successfully executing procedures P11 or P13 as specified in clause 7.4 of TS 34.108. Next, SS transmits MEASUREMENT CONTROL message to request the UE to perform UE internal measurements and reporting for events 6A and 6B.

SS increases the UE Tx power above the threshold set to event 6A. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6A, to SS.

SS decreases the UE Tx power below the threshold set to event 6B. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6B, to SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state in cell 1.
2	←		MEASUREMENT CONTROL	SS requests for measurement and reporting of events 6A and 6B.
3				SS sets the UE transmission power above 18 dBm.
4	→		MEASUREMENT REPORT	UE shall send 6A event measurement report.
5				SS sets the UE transmission power below 15 dBm.
6	→		MEASUREMENT REPORT	UE shall send 6B event measurement report.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~5~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Event Trigger Reporting~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement~~	
~~- UE internal measurement quantity~~	~~Present~~
~~-CHOICE *mode*~~	~~FDD~~
~~-UE internal measurement quantity~~	~~UE Transmitted Power~~
~~-Filter coefficient~~	~~0~~
~~- UE internal reporting quantity~~	~~Present~~
~~- UE Transmitted Power~~	~~TRUE~~
~~- CHOICE *mode*~~	~~FDD~~
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~- CHOICE *report criteria*~~	~~UE internal measurement reporting criteria~~
~~- Parameters sent for each UE internal measurement event~~	
~~-UE internal event identity~~	~~6A~~
~~-Time-to-trigger~~	~~100 milliseconds~~
~~-UE Transmitted Power Tx power threshold~~	~~18 dBm~~
~~-UE internal event identity~~	~~6B~~
~~-Time-to-trigger~~	~~100 milliseconds~~
~~-UE Transmitted Power Tx power threshold~~	~~15 dBm~~
~~DPCH compressed mode status info~~	~~Not Present~~

Information Element	**Value/remark**
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement	
- UE internal measurement quantity	Present
-CHOICE *mode*	FDD
-UE internal measurement quantity	UE Transmitted Power
-Filter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	TRUE
- CHOICE *mode*	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6A
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	18 dBm
-UE internal event identity	6B
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	15 dBm
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 4)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6A"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6A"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6B"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6B"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

8.4.1.27.5 Test Requirement

After step 3, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6A.

After step 5, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6B.

8.4.1.28 Measurement Control and Report: UE internal measurement for events 6F and 6G

8.4.1.28.1 Definition

8.4.1.28.2 Conformance requirement

When in CELL_DCH state, the UE shall start to use the new measurement and reporting parameters for UE internal measurement received in the MEASUREMENT CONTROL message. It shall transmit MEASUREMENT REPORT message, which include the measured quantity and event identity, when the reporting criteria is met.

Reference

3GPP TS 25.331, clauses 14.6.2.6 and 14.6.2.7.

8.4.1.28.3 Test Purpose

To confirm that the UE performs UE internal measurements and reporting for events 6F and 6G, when requested by the UTRAN to do so in the MEASUREMENT CONTROL message.

8.4.1.28.4 Method of test

Initial Condition

System Simulator: 1 cell – The initial configuration of the cell 1 in the SS shall follow the values indicated in table 6.1.2 of TS 34.108.

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

Test Procedure

Table 6.1.2 of TS 34.108 specifies the radio conditions to be applied for the cells in this test.

The UE is in CELL_DCH state in cell 1, after successfully executing procedures P11 or P13 as specified in clause 7.4 of TS 34.108.

SS then performs an active set update procedure by sending ACTIVE SET UPDATE REQUEST message on the downlink DCCH. Cell 2 is to be added to the active set, according to the content of this downlink message. The UE shall reply with an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH, and include cell 2 to the active set when the activation time specified has elapsed.

Next, SS transmits MEASUREMENT CONTROL message to request the UE to perform UE internal measurements and reporting for events 6F and 6G.

SS adjusts the Tx timing of cell 2 above the threshold set to event 6F. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6F, to SS.

SS adjusts the Tx timing of cell 2 below the threshold set to event 6G. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6G, to SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is initially in CELL_DCH state in cell 1.
2	←		ACTIVE SET UPDATE	SS asks UE to add cell 2 into the active set.
3	→		ACTIVE SET UPDATE COMPLETE	
4	←		MEASUREMENT CONTROL	SS requests for measurement and reporting of events 6F and 6G.
5				SS switches Tx timing of cell 2 to a delay of -192 chips with respect to cell 1.
6	→		MEASUREMENT REPORT	UE shall send 6F event measurement report.
7				SS switches Tx timing of cell 2 to a delay of 192 chips with respect to cell 1.
8	→		MEASUREMENT REPORT	UE shall send 6G event measurement report.

Specific Message Content

ACTIVE SET UPDATE (Step 2)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Annex A with the following exceptions:

~~Information Element~~	~~Value/remark~~
~~RRC transaction identifier~~	~~0~~
~~Radio link addition information~~	
~~- Primary CPICH Info~~	
~~- Primary Scrambling Code~~	~~Set to same code as assigned for cell 2~~
~~- Downlink DPCH info for each RL~~	
~~- CHOICE mode~~	~~FDD~~
~~- Primary CPICH usage for channel estimation~~	~~P-CPICH can be used.~~
~~- DPCH frame offset~~	~~0 chips~~
~~- Secondary CPICH info~~	~~Not Present~~
~~- DL channelisation code~~	~~This IE is repeated for all existing downlink DPCHs allocated to the UE~~
~~- Secondary scrambling code~~	~~Not Present~~
~~- Spreading factor~~	~~Reference to TS34.108 clause 6.10 Parameter Set~~
~~- Code Number~~	~~For each DPCH, assign the same code number in the current code given in cell 1.~~
~~- Scrambling code change~~	~~Not Present~~
~~- TPC Combination Index~~	~~0~~
~~- SSDT Cell Identity~~	~~Not Present~~
~~- Close loop timing adjustment mode~~	~~Not Present~~
~~- TFCI Combining Indicator~~	~~Not Present~~
~~- SCCPCH information for FACH~~	~~Not Present~~
~~Radio link removal information~~	~~Not Present~~

Information Element	**Value/remark**
RRC transaction identifier	0
Radio link addition information	
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as assigned for cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0 chips
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	Not Present

ACTIVE SET UPDATE COMPLETE (Step 3)

Information Element	Value/remark
RRC transaction identifier	Check to see if it is set to 0

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~5~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Event Trigger Reporting~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	~~UE internal measurement~~
~~- UE internal measurement~~	
~~-UE Internal measurement quantity~~	~~Present~~
~~- CHOICE *mode*~~	~~FDD~~
~~- Measurement quantity~~	~~UE Rx-Tx time difference~~
~~- Filter coefficient~~	~~0~~
~~- UE internal reporting quantity~~	~~Present~~
~~- UE Transmitted Power~~	~~FALSE~~
~~- CHOICE *mode*~~	~~FDD~~
~~- UE Rx-Tx time difference~~	~~TRUE~~
~~- CHOICE *report criteria*~~	~~UE internal measurement reporting criteria~~
~~- Parameters sent for each UE internal measurement event~~	
~~-UE internal event identity~~	~~6F~~
~~-Time-to-trigger~~	~~0 milliseconds~~
~~-UE Rx-Tx time difference threshold~~	~~1174~~
~~-UE internal event identity~~	~~6G~~
~~-Time-to-trigger~~	~~0 milliseconds~~
~~-UE Rx-Tx time difference threshold~~	~~874~~
~~DPCH compressed mode status info~~	~~Not Present~~

Information Element	**Value/remark**
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement	
-UE Internal measurement quantity	Present
- CHOICE *mode*	FDD
- Measurement quantity	UE Rx-Tx time difference
- Filter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	FALSE
- CHOICE *mode*	FDD
- UE Rx-Tx time difference	TRUE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6F
-Time-to-trigger	0 milliseconds
-UE Rx-Tx time difference threshold	1174
-UE internal event identity	6G
-Time-to-trigger	0 milliseconds
-UE Rx-Tx time difference threshold	874
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Rx-Tx report entries	
- Primary CPICH info	
-Primary scrambling code	Check to see if set to codes assigned for cell 1 & cell 2.
-UE Rx-Tx time difference type 1	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6F"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	
-Primary scrambling code	Check to see if set to code assigned for cell 2.

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Rx-Tx report entries	
- Primary CPICH info	
-Primary scrambling code	Check to see if set to codes assigned for cell 1 & cell 2.
-UE Rx-Tx time difference type 1	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6F"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	
-Primary scrambling code	Check to see if set to code assigned for cell 2.

MEASUREMENT REPORT (Step 8)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 5~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "UE Internal measured results"~~
~~- UE internal measured results~~	
~~-CHOICE *mode*~~	~~Check to see if set to "FDD"~~
~~UE Rx-Tx report entries~~	
~~- Primary CPICH info~~	
~~-Primary scrambling code~~	~~Check to see if set to codes assigned for cell 1 & cell 2.~~
~~-UE Rx-Tx time difference type 1~~	~~Check to see if present and value is reasonable~~
~~Measured Results on RACH~~	~~Check to see if this IE is absent~~
~~Event results~~	
~~-CHOICE *event result*~~	~~Check to see if set to "UE internal measurement event results"~~
~~-UE internal event identity~~	~~Check to see if set to "6G"~~
~~-CHOICE *mode*~~	~~Check to see if set to "FDD"~~
~~-Primary CPICH info~~	
~~-Primary scrambling code~~	~~Check to see if set to code assigned for cell 2.~~

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Rx-Tx report entries	
- Primary CPICH info	
-Primary scrambling code	Check to see if set to codes assigned for cell 1 & cell 2.
-UE Rx-Tx time difference type 1	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6G"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	
-Primary scrambling code	Check to see if set to code assigned for cell 2

8.4.1.28.5 Test Requirement

After step 5, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE Rx-Tx time difference. The 'Event results' IE contains event identity 6F.

After step 7, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE Rx-Tx time difference. The 'Event results' IE contains event identity 6G.

8.4.1.29 Measurement Control and Report: Event based Traffic Volume measurement in CELL_FACH state.

8.4.1.29.1 Definition

8.4.1.29.2 Conformance requirement

Event based transport channel traffic volume measurement compares sum of buffer occupancies of RBs multiplexed onto a transport channel to the threshold, which UE receives from the network. When transport channel traffic volume

exceeds threshold UE sends RRC: Measurement Report towards network. Message includes at least indication of measurement identity. In CELL_FACH state UE has only RACH transport channel.

Reference

3GPP TS 25.331, clause 14.4.

8.4.1.29.3 Test Purpose

To verify that in CELL_FACH state when event 4a triggers UE sends RRC: Measurement Report with correct measurement identity and indication of UL transport channel type, radio bearer identities and corresponding RLC buffer payloads in number of bytes.

8.4.1.29.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_FACH state, state 6-11 as specified in clause 7.4 of TS 34.108.

System Information Block type 11 nor 12 does not include Traffic Volume measurement system information.

Test Procedure

The UE is brought to the CELL_FACH state after a successful incoming call attempt. The SS follows the procedure in TS 34.108 clause 7.1.3 (Mobile Terminated), to set up a user RAB, but with the default RAB replaced by the one described in 34.108, clause 6.10.2.4.3.2: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH for DL and 6.10.2.4.4.1: Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH for UL. The radio bearer is placed into UE test loop mode 1 described in 34.109 clause 5.3. SS sends to UE RRC: MEASUREMENT CONTROL message, which includes traffic volume measurement control parameters eg. uplink transport channel type and reporting threshold. Transport channel traffic volume exceeds threshold and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_FACH state in the cell 1.
2	←		MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias to UE.
3	→		MEASUREMENT REPORT	UE reports that Traffic Volume measurement event 4A is triggered.
4	→		MEASUREMENT REPORT	UE repeats message after 1000 ms.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~15~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Event Trigger~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	
~~- Traffic volume measurement object~~	
~~- Uplink transport channel type~~	~~RACH~~
~~- Traffic volume measurement quantity~~	
~~- Measurement quantity~~	~~RLC buffer payload~~
~~- Traffic volume reporting quantity~~	
~~- RLC Buffer Payload for each RB~~	~~TRUE~~
~~- Measurement validity~~	
~~- UE state~~	~~All states~~
~~- Traffic volume measurement reporting criteria~~	
~~- Traffic volume event identity~~	~~4a~~
~~- Reporting threshold~~	~~8~~
~~- Time to trigger~~	~~100~~
~~- Pending time after trigger~~	~~1000~~
~~- Tx interruption after trigger~~	~~250~~

Information Element	**Value/remark**
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	
- Traffic volume measurement object	
- Uplink transport channel type	RACH
- Traffic volume measurement quantity	
- Measurement quantity	RLC buffer payload
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	TRUE
- Measurement validity	
- UE state	All states
- Traffic volume measurement reporting criteria	
- Traffic volume event identity	4a
- Reporting threshold	8
- Time to trigger	100
- Pending time after trigger	1000
- Tx interruption after trigger	250

MEASUREMENT REPORT (Step 3 and step 4)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 15~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Traffic volume measured results list"~~
~~- Traffic volume measurement results~~	
~~- RB identity~~	~~Check that value is correct~~
~~- RLC buffers payload~~	~~Check that value is reasonable~~
~~Measured Results on RACH~~	~~Not checked~~
~~Additional Measured results~~	~~Not checked~~
~~Event Results~~	
~~- Uplink transport channel type causing the event~~	~~Check to see if set to "RACH"~~
~~- UL transport channel identity~~	~~Check to see that is not set~~
~~- Traffic volume event identity~~	~~Check to see if set to "4a"~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	Check that value is correct
- RLC buffers payload	Check that value is reasonable
Measured Results on RACH	Not checked
Additional Measured results	Not checked
Event Results	
- Uplink transport channel type causing the event	Check to see if set to "RACH"
- UL transport channel identity	Check to see that is not set
- Traffic volume event identity	Check to see if set to "4a"

8.4.1.29.5 Test Requirement

In step 3 UE sends RRC: MEASUREMENT REPORT with correct measurement identity indication. RB identity and RLC buffers payload has reasonable values.

In step 4 UE repeats message sent in step 3.

After step 3 UE is not allowed to send user data during the 'Tx interruption after trigger' timer is running.

8.4.1.30 Measurement Control and Report: Event based Traffic Volume measurement in CELL_DCH state.

8.4.1.30.1 Definition

8.4.1.30.2 Conformance requirement

Event based transport channel traffic volume measurement compares sum of buffer occupancies of RBs multiplexed onto a transport channel to the threshold, which UE receives from the network. When transport channel traffic volume exceeds threshold UE sends RRC: Measurement Report towards network. Message includes at least indication of measurement identity. In CELL_DCH state each DCH may have own measurement activated with own threshold.

Reference

3GPP TS 25.331, clause 14.4.

8.4.1.30.3 Test Purpose

To verify that in CELL_DCH state when event 4a or 4b triggers UE sends RRC: Measurement Report with correct measurement identity and indication of uplink transport channel type and identity, radio bearer identities and corresponding RLC buffer payloads in number of bytes.

8.4.1.30.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CELL_DCH state, state 6-10 as specified in clause 7.4 of TS 34.108.

System Information Block type 11 nor 12 does not include Traffic Volume measurement system information.

Test Procedure

The UE is brought to the CELL_DCH state after a successful incoming call attempt. The SS follows the procedure in TS 34.108 clause 7.1.3 (Mobile Terminated), to set up a user RAB, but with the default RAB replaced by the one described in 34.108, clause 6.10.2.4.1.26: Interactive or background / UL: 64 DL: 64 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH. The radio bearer is placed into UE test loop mode 1 described in 34.109 clause 5.3. SS sends to UE RRC: MEASUREMENT CONTROL messages, which includes in addition to measurement identity traffic volume measurement control parameters eg. uplink transport channel type and identity and reporting threshold for both events 4a and 4b. Transport channel traffic volume exceeds threshold and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT. UE's transport channel load decreases to zero, event 4b triggers and previous signaling procedure repeats.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias (event 4a) to UE.
3	←		MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias (event 4b) to UE.
4	→		MEASUREMENT REPORT	UE's transport channel is loaded. UE reports that Traffic Volume measurement event 4A is triggered.
5	→		MEASUREMENT REPORT	UE repeats message after 2000 ms.
6	→		MEASUREMENT REPORT	UE's transport channel traffic volume decreases to zero. UE reports that Traffic Volume measurement event 4B is triggered.
7	→		MEASUREMENT REPORT	UE repeats message after 2000 ms.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~15~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Event Trigger~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	
~~- Traffic volume measurement objects~~	
~~- Uplink transport channel type~~	~~DCH~~
~~- UL target transport channel ID~~	~~1~~
~~- Traffic volume measurement quantity~~	
~~- Measurement quantity~~	~~RLC buffer payload~~
~~- Traffic volume reporting quantity~~	
~~- RLC Buffer Payload for each RB~~	~~TRUE~~
~~- Measurement validity~~	
~~- UE state~~	~~CELL_DCH~~
~~- Traffic volume measurement reporting criteria~~	
~~- Traffic volume event identity~~	~~4a~~
~~- Reporting threshold~~	~~256~~
~~- Time to trigger~~	~~100~~
~~- Pending time after trigger~~	~~2000~~
~~- Tx interruption after trigger~~	~~Not present~~

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	
- Traffic volume measurement objects	
- Uplink transport channel type	DCH
- UL target transport channel ID	1
- Traffic volume measurement quantity	
- Measurement quantity	RLC buffer payload
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	TRUE
- Measurement validity	
- UE state	CELL_DCH
- Traffic volume measurement reporting criteria	
- Traffic volume event identity	4a
- Reporting threshold	256
- Time to trigger	100
- Pending time after trigger	2000
- Tx interruption after trigger	Not present

MEASUREMENT CONTROL (Step 3)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~14~~
~~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~~	
~~- Traffic volume measurement objects~~	
~~- Uplink transport channel type~~	~~DCH~~
~~- UL target transport channel ID~~	~~1~~
~~- Traffic volume measurement quantity~~	
~~- Measurement quantity~~	~~RLC buffer payload~~
~~- Traffic volume reporting quantity~~	
~~- RLC Buffer Payload for each RB~~	~~TRUE~~
~~- Measurement validity~~	
~~- UE state~~	~~CELL_DCH~~
~~- Traffic volume measurement reporting criteria~~	
~~- Traffic volume event identity~~	~~4b~~
~~- Reporting threshold~~	~~32~~
~~- Time to trigger~~	~~100~~
~~- Pending time after trigger~~	~~2000~~
~~- Tx interruption after trigger~~	~~Not present~~

Information Element	**Value/remark**
Measurement Identity	14
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	
- Traffic volume measurement objects	
- Uplink transport channel type	DCH
- UL target transport channel ID	1
- Traffic volume measurement quantity	
- Measurement quantity	RLC buffer payload
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	TRUE
- Measurement validity	
- UE state	CELL_DCH
- Traffic volume measurement reporting criteria	
- Traffic volume event identity	4b
- Reporting threshold	32
- Time to trigger	100
- Pending time after trigger	2000
- Tx interruption after trigger	Not present

MEASUREMENT REPORT (Step 4 and step 5)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 15~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Traffic volume measured results list"~~
~~- Traffic volume measurement results~~	
~~- RB identity~~	~~Check that value is correct~~
~~- RLC buffers payload~~	~~Check that value is reasonable~~
~~Measured Results on RACH~~	~~Not checked~~
~~Additional Measured results~~	~~Not checked~~
~~Event Results~~	
~~- Uplink transport channel type causing the event~~	~~Check to see if set to "DCH"~~
~~- UL transport channel identity~~	~~Check to see if set to "1"~~
~~- Traffic volume event identity~~	~~Check to see if set to "4a"~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	Check that value is correct
- RLC buffers payload	Check that value is reasonable
Measured Results on RACH	Not checked
Additional Measured results	Not checked
Event Results	
- Uplink transport channel type causing the event	Check to see if set to "DCH"
- UL transport channel identity	Check to see if set to "1"
- Traffic volume event identity	Check to see if set to "4a"

MEASUREMENT REPORT (Step 6 and step 7)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 14~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Traffic volume measured results list"~~
~~- Traffic volume measurement results~~	
~~- RB identity~~	~~Check that value is correct~~
~~- RLC buffers payload~~	~~Check that value is reasonable~~
~~Measured Results on RACH~~	~~Not checked~~
~~Additional Measured results~~	~~Not checked~~
~~Event Results~~	
~~- Uplink transport channel type causing the event~~	~~Check to see if set to "DCH"~~
~~- UL transport channel identity~~	~~Check to see if set to "1"~~
~~- Traffic volume event identity~~	~~Check to see if set to "4b"~~

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	Check that value is correct
- RLC buffers payload	Check that value is reasonable
Measured Results on RACH	Not checked
Additional Measured results	Not checked
Event Results	
- Uplink transport channel type causing the event	Check to see if set to "DCH"
- UL transport channel identity	Check to see if set to "1"
- Traffic volume event identity	Check to see if set to "4b"

8.4.1.30.5 Test Requirement

In steps 4, 5, 6 and 7 UE sends RRC: MEASUREMENT REPORT with correct measurement identity indication. RB identity and RLC buffers payload has correct values. Measurement identity, transport channel type, transport channel identity and event identity has to match with set values.

8.4.1.31 Measurement Control and Report: Inter-RAT measurement in CELL_DCH state.

8.4.1.31.1 Definition

8.4.1.31.2 Conformance requirement

The UE shall perform GSM RSSI measurements in the gaps of compressed mode pattern sequence specified for GSM RSSI measurement purpose.

The UE shall perform GSM Initial BSIC identification in compressed mode pattern sequence specified for Initial BSIC identification measurement purpose.

Reference

3GPP TS 25.331, clause 14.3.2.

8.4.1.31.3 Test Purpose

Purpose of this test is to verify that UE is capable to perform GSM RSSI and GSM Initial BSIC identification measurements in compressed mode.

8.4.1.31.4 Method of test

Initial Condition

System Simulator: 1 UTRAN FDD cell and 2 GSM cells.

Parameter	Unit	Cell 1 (GSM)	Cell 2 (GSM)
Test Channel	#	1	2
RF Signal Level	dBm	-80	-85
BCCH ARFCN	#	1	7
CELL identity	#	0	1
BSIC	#	BSIC1	BSIC2

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

System Information Block type 11 nor 12 does not include Inter-RAT measurement system information.

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. SS provides compressed mode pattern sequence parameters to UE by using physical channel reconfiguration procedure. Depending on UE's measurement capability uplink and/or downlink compressed mode is requested. Compressed mode method is SF/2 with 7 slot gap in single frame. Two normal frames is between gapped frames. First RRC: MEASUREMENT CONTROL message is used to provide measurement control parameters (GSM RSSI) to UE and to start compressed mode for measurement. UE replies according to request by sending RRC: MEASUREMENT REPORT messages periodically to SS. Reporting period is 1000 ms. After two RRC: MEASUREMENT REPORT messages, SS sends second RRC: MEASUREMENT CONTROL message to start GSM Initial BSIC identification measurement. UE replies similarly as in GSM RSSI measurement case.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS provides GSM RSSI measurement control parameters to UE. Compressed mode for GSM RSSI measurement is started.
5	→		MEASUREMENT REPORT	UE reports measurement results of GSM RSSI measurement to SS.
6	→		MEASUREMENT REPORT	Next periodical measurement report.
7	←		MEASUREMENT CONTROL	SS provides GSM Initial BSIC identification measurement control parameters to UE. Compressed mode for GSM Intial BSIC identification measurement is started.
8	→		MEASUREMENT REPORT	UE reports measurement results of GSM Initial BSIC identification measurement to SS.
9	→		MEASUREMENT REPORT	Next periodical measurement report.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	3
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 1
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Initial BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	3
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 1
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	128
- T Reconfirm abort	Not Present

Information Element	Value/remark
Downlink information common for all radio links - DPCH compressed mode info	

- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	3
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 1
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Initial BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	3
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 1
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	128
- T Reconfirm abort	Not Present

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	0
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

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-RAT measurement	
- inter-RAT measurement object list	
CHOISE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	0
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOISE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	inactive
- TGCFN	Not present

MEASUREMENT REPORT (Step 5 and step 6)

~~Information Element~~	~~Value/Remarks~~

~~Measurement identity~~	~~Check to see if set to 15~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Inter-RAT measured results list"~~
~~- Inter-RAT measured result list~~	
~~- CHOISE system~~	~~GSM~~
~~- Measured GSM cells~~	
~~- GSM carrier RSSI~~	~~Check to see if present~~
~~CHOISE BSIC~~	~~Non verified BSIC~~
~~- BCCH ARFCN~~	~~Check that is set to "0"~~
~~- Observed time difference to GSM cell~~	~~Check that not present~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOISE BSIC~~	~~Non verified BSIC~~
~~- BCCH ARFCN~~	~~Check that is set to "7"~~
~~- Observed time difference to GSM cell~~	~~Check that not present~~
~~Measured results on RACH~~	~~Check that not present~~
~~Additional Measured results~~	~~Check that not present~~
~~Event results~~	~~Check that not present~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOISE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOISE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to "0"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOISE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to "7"
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT CONTROL (Step 7)

Information Element	Value/Remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	inactive
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOISE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOISE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOISE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOISE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	inactive
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 8 and step 9)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 15~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Inter-RAT measured results list"~~
~~- Inter-RAT measured result list~~	
~~- CHOISE system~~	~~GSM~~
~~- Measured GSM cells~~	
~~- GSM carrier RSSI~~	~~Check to see if present~~
~~CHOISE BSIC~~	~~Verified BSIC~~
~~- Inter-RAT cell id~~	~~Check that is set to "0"~~
~~- Observed time difference to GSM cell~~	~~Check that not present~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOISE BSIC~~	~~Verified BSIC~~
~~- Inter-RAT cell id~~	~~Check that is set to "1"~~
~~- Observed time difference to GSM cell~~	~~Check that not present~~
~~Measured results on RACH~~	~~Check that not present~~
~~Additional Measured results~~	~~Check that not present~~
~~Event results~~	~~Check that not present~~

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOISE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOISE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOISE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "1"
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

8.4.1.31.5 Test Requirement

In step 5 and step 6 UE reports correctly GSM RSSI values.

In step 8 and step 9 UE reports correctly BSIC values.

Reporting period is the requested one.

8.4.1.32 Void

8.4.1.33 Measurement Control and Report: Inter-RAT measurement, event 3a

8.4.1.33.1 Definition

8.4.1.33.2 Conformance requirement

1. When this event is ordered by UTRAN in a MEASUREMENT CONTROL message the UE shall send a report when the estimated quality of the currently used frequency is below the value of the IE "Threshold own system" and the hysteresis and time to trigger conditions are fulfilled and the estimated quality of the other system is above the value of the IE "Threshold other system" and the hysteresis and time to trigger conditions are fulfilled.
2. If the IE "DPCH Compressed Mode Status Info" is present, [in the MEASUREMENT CONTROL message]:
   - after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
     - activate the pattern sequence stored in the variable TGPS_IDENTITY corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "active" at the time indicated by IE "TGCFN"; and
     - begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
     - if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:
       - start the concerned pattern sequence immediately at that CFN;
   - not alter pattern sequences stored in variable TGPS_IDENTITY, but not identitifed in IE "TGPSI"
3. The UE shall perform GSM RSSI measurements in the gaps of compressed mode pattern sequence specified for GSM RSSI measurement purpose. The UE shall perform Initial BSIC identification in compressed mode pattern sequence specified for Initial BSIC identification measurement purpose. The UE shall be able to measure the "Observed time difference to GSM cell" during a compressed mode pattern sequence configured for this

purpose. The UE shall perform BSIC re-confirmation in compressed mode pattern sequence specified for BSIC re-confirmation measurement purpose.

4. If the IE "Inter-RAT measurement quantity" is received in a MEASUREMENT CONTROL message and CHOICE system is GSM, the UE shall:

   - if IE "BSIC verification required" is set to "required", for cells that match any of the BCCH ARFCN and BSIC combinations in the list of inter-RAT cells that the UE has received in IE "Inter-RAT cell info list", and that has a "verified" BSIC:

     - report measurement quantities according to IE "inter-RAT reporting quantity" taking into account the restrictions defined in TS 25.331 clause 8.6.7.6;

     - trigger inter-RAT events according to IE "inter-RAT measurement reporting criteria"; and

   - perform event evaluation for event-triggered reporting after BSIC has been verified for a GSM cell

   - indicate non-verified BSIC for a GSM cell in the "Inter-RAT measured results list" IE

5. The UE shall include measured results in MEASUREMENT REPORT as specified in the IE "Inter-RAT reporting quantity".

6. If IE "Observed time difference to GSM cell" is set to "TRUE" [, the UE shall]:

   include optional IE "Observed time difference to GSM cell" with the value set to the time difference to that GSM cell for the GSM cells that have a BSIC that is "verified", and that match any of the BCCH ARFCN and BSIC combinations in the list of inter-RAT cells that the UE has received in IE "Inter-RAT cell info list".

   - if IE "GSM Carrier RSSI" is set to "TRUE"[, the UE shall]:

     - include optional IE "GSM Carrier RSSI" with a value set to the measured RXLEV to that GSM cell in IE "Inter-RAT measured results list".

   - if the BSIC of reported GSM cell is "verified"[, the UE shall]:

     - set the CHOICE BSIC to "Verified BSIC" and IE "inter-RAT cell id" to the value that GSM cell had in the IE "Inter-RAT cell info list";

7. If the IE "Reporting Cell Status" is received, the UE shall set the IE "Measured Results" in MEASUREMENT REPORT as follows.

   - the maximum number of the IE "Cell Measured Results" to be included in the IE "Measured Results" is the number specified in "Reporting Cell Status".

Reference

3GPP TS 25.331 clauses 8.4.1.3, 8.6.7.5, 8.6.7.6, 8.6.7.9, 14.3.1.1, 14.3.2.1, 14.3.2.2, 14.3.2.3.

8.4.1.33.3 Test Purpose

1. To confirm that the UE starts compressed mode and inter-RAT measurements when so required by the network in a MEASUREMEN CONTROL message.

2. To confirm that the UE sends MEASUREMENT REPORT message if event 3a is configured, if the quality of the currently used UTRAN frequency is below a given threshold and the estimated quality of the other system is above a certain threshold.

3. To confirm that the hysteresis and time to trigger behaviours for event 3a are correctly implemented.

4. To confirm that the UE verifies the BSIC of the cell triggering the event if so required by UTRAN and if the proper compressed mode patterns have been configured in the UE by UTRAN.

5. To confirm that the content of the MEASUREMENT REPORT sent by the UE is according to what was required by UTRAN.

NOTE: Test purpose 1 verifies conformance requirement 1 and 2.

NOTE: Test purpose 2 and 3 verifies conformance requirement 1.

NOTE: Test purpose 4 verifies conformance requirement 2, 3 and 4.

NOTE: Test purpose 5 verifies conformance requirement 4, 5, 6 and 7.

8.4.1.33.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell and 3 GSM cells. The initial configurations of the 3 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

Table 8.4.1.33.4-1

Parameter	Unit	Cell 1 (GSM)					Cell 2 (GSM)					Cell 3 (GSM)				
		T0	T1	T2	T3	T4	T0	T1	T2	T3	T4	T0	T1	T2	T3	T4
Test Channel	#	GSM Ch.1					GSM Ch.2					GSM Ch.3				
BCCH ARFCN	#	1					7					2				
CELL identity	#	0					1					2				
BSIC	#	BSIC 1					BSIC 2					BSIC 3				
RF Signal Level	dBm	-85	-85	-70	-82	-70	-85	-85	-85	-77	-77	-90	-90	-90	-90	-90

Table 8.4.1.33.4-2

Parameter	Unit	Cell 1 (UTRA)			
		T0	T1	T2	T3
UTRA RF Channel Number		Ch.1			
CPICH Ec/No	dB	-5	-20	-20	-20

The two tables above illustrate the downlink power to be applied for the two cells at various instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1", "T2" and "T3" indicate the values to be applied subsequently.

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements. Event 3a is set up in this message, and compressed mode is activated.

At instant T1, the CPICH Ec/No drops as described in table 8.4.1.33.4-2.

At instant T2, the RF signal for GSM cell 1 increases, and crosses the threshold for the other system defined for event 3a.

After reception of the MEASUREMENT REPORT message, at instant T3, the RF signal strength for GSM cell 2 increases above the threshold for the other system for event 3a. During that time, the RF signal strength for GSM cell 1 has dropped above the threshold for the other system for event 3a, but remains above threshold-hysteresis for event 3a.

At intant T4, the RF signal strength for GSM cell 1 increases above the threshold for the other system for event 3a+hysteresis.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3a in the UE. Compressed mode is started.
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in tables 8.4.1.33.4-1 and 8.4.1.33.4-2.
6				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
7				SS re-adjusts the downlink transmission power settings according to columns "T2" in tables 8.4.1.33.4-1 and 8.4.1.33.4-2.
8	→		MEASUREMENT REPORT	After about 640 ms, the UE sends a MEASUREMENT REPORT to SS triggered by event 3a.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in tables 8.4.1.33.4-1 and 8.4.1.33.4-2.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11				SS re-adjusts the downlink transmission power settings according to columns "T4" in tables 8.4.1.33.4-1 and 8.4.1.33.4-2.
12				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
-T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
-T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence	

~~configuration parameters~~	
~~- TGMP~~	~~GSM BSIC re-confirmation~~
~~- TGPRC~~	~~Infinity~~
~~- TGSN~~	~~4~~
~~- TGL1~~	~~7~~
~~- TGL2~~	~~Not present~~
~~- TGD~~	~~0~~
~~- TGPL1~~	~~8~~
~~- TGPL2~~	~~Not present~~
~~- RPP~~	~~Mode 1~~
~~- ITP~~	~~Mode 0~~
~~CHOICE UL/DL Mode~~	~~UL and DL~~
~~- Downlink compressed mode method~~	~~SF/2~~
~~- Uplink compressed mode method~~	~~SF/2~~
~~- Downlink frame type~~	~~A~~
~~- DeltaSIR1~~	~~1.0~~
~~- DeltaSIRAfter1~~	~~0.5~~
~~- DeltaSIR2~~	~~Not Present~~
~~- DeltaSIR2After2~~	~~Not Present~~
~~- N identify abort~~	~~Not Present~~
~~- T Reconfirm abort~~	~~5 s~~

Information Element	**Value/remark**
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)

- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	5 s

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=3
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	2
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	2
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	
- Intra-frequency measurement quantity	
- Filter coefficient	0
- CHOICE mode	FDD
- Measurement quantity	Ec/No
- CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
- CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	TRUE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3a
- Threshold own system	-12
- W	0
- Threshold other system	-80
- Hysteresis	5
- Time to Trigger	640 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 - TTI/10msec))mod 256
- TGPSI	2

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=3
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	2
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	2
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	
- Intra-frequency measurement quantity	
- Filter coefficient	0
- CHOICE mode	FDD
- Measurement quantity	Ec/No
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	TRUE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3a
- Threshold own system	-12
- W	0
- Threshold other system	-80
- Hysteresis	5
- Time to Trigger	640 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1

- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 8)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 3~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Inter-RAT measured results list"~~
~~- Inter-RAT measured result list~~	
~~- CHOICE system~~	~~GSM~~
~~- Measured GSM cells~~	~~Check that measurement results for two GSM cells are included~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOICE BSIC~~	~~Check it is set to verified BSIC~~
~~- inter-RAT cell id~~	~~Check that it is set to either 0 or 1.~~
~~- Observed time difference to GSM cell~~	~~Check that the IE is present and that the reported value is reasonable~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOICE BSIC~~	~~Verified BSIC~~
~~- inter-RAT cell id~~	~~Check that is set to 1 or 0 depending on the value of the previous inter-RAT cell id. (The value here shall be the one not chosen for the previous inter-RAT cell id).~~
~~- Observed time difference to GSM cell~~	~~Check that the IE is present and that the reported value is reasonable~~
~~Measured results on RACH~~	~~Check that not present~~
~~Additional Measured results~~	~~Check that not present~~
~~Event results~~	~~Check that the IE is included~~
~~-CHOICE event result~~	~~Check that this is set to inter-RAT measurement event results~~
~~-Inter-RAT event identity~~	~~Check that this is set to 3a~~
~~-Cells to report (1 to <maxCellMeas>)~~	~~Check that <maxCellMeas> is set to 1~~
~~-CHOICE BSIC~~	~~Check that this is set to verified BSIC~~
~~- Inter-RAT cell id~~	~~Check that this is set to 0.~~

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1.
- Observed time difference to GSM cell	Check that the IE is present and that the reported value is reasonable
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 or 0 depending on the value of the previous inter-RAT cell id. (The value here shall be the one not chosen for the previous inter-RAT cell id).
- Observed time difference to GSM cell	Check that the IE is present and that the reported value is reasonable
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3a
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.33.5 Test requirement

The UE shall not send any measurement report between instants T1 and T2.

Event 3a shall be triggered in the UE (i.e.the transmission of the MEASUREMENT REPORT) about 0.64 s after instant T2.

Between instants T2 and T3, no MEASUREMENT REPORT message shall be received from the UE (since the hysteresis condition for triggering event 3a is not fulfilled).

No MEASUREMENT REPORT message shall be received from the UE after instant T4 (since the signal strength for cell 1 has not dropped under Threshold for event 3a-hysteresis).

8.4.1.34 Measurement Control and Report: Inter-RAT measurement, event 3b

8.4.1.34.1 Definition

8.4.1.34.2 Conformance requirement

1. When this event is ordered by UTRAN in a measurement control message the UE shall send a report when the estimated quality of the other system is below the value of the IE "Threshold other system" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains information specific for the other system.

2. If the IE "Inter-RAT cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

   - if the IE "Removed Inter-RAT cells" is received, at the position indicated by the IE "Inter-RAT cell id":

     - clear the cell information stored in the variable CELL_INFO_LIST; and

     - mark the position "vacant";

- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-RAT cell id" is received:
      - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-RAT cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and
- mark the position as "occupied";

Reference

3GPP TS 25.331 clause 8.6.7.3, 14.3.1.2

8.4.1.34.3 Test Purpose

1 To confirm that the UE sends MEASUREMENT REPORT message if event 3b is configured, if the estimated quality of the other system is below a given threshold.

2 To confirm that the hysteresis and time to trigger behaviours for event 3b are correctly implemented. To confirm that the UE updates the list of inter-RAT cells it stores according to what is ordered in the MEASUREMENT CONTROL messages received from UTRAN.

8.4.1.34.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell and 3 GSM cells. The initial configurations of the 4 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

Table 8.4.1.34.4-1

Parameter	Unit	Cell 1 (GSM)		Cell 2 (GSM)		Cell 3 (GSM)	
		T0	T1	T0	T1	T0	T1
Test Channel	#	GSM Ch.1		GSM Ch.2		GSM Ch.3	
BCCH ARFCN	#	1		7		2	
CELL identity	#	0		1		2	
BSIC	#	BSIC 1		BSIC 2		BSIC 3	
RF Signal Level	dBm	-70	-90	-70	-70	-90	-90

The two tables above illustrate the downlink power to be applied for the two cells at various instants of the test execution. Column marked "T0" denotes the initial conditions, while column marked "T1" indicates the values to be applied subsequently.

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT

measurements. Event 3b is set up in this message, and compressed mode is activated. The monitored GSM cells at measurement establishment are GSM cells 1 and 2.

At instant T1, the RF signal strength for GSM cell 1 drops as described in table 8.4.1.34.4-1.

When the MEASUREMENT REPORT has been received by the SS, a MEASUREMENT CONTROL message is sent to the UE, to add GSM cell 3 to the monitored GSM cells.

A second MEASUREMENT REPORT triggered by event 3b shall be received shortly after by the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3b in the UE. Compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in tables 8.4.1.34.4-1.
7	→		MEASUREMENT REPORT	After about 60 ms, the UE sends a MEASUREMENT REPORT to SS triggered by event 3b.
8	←		MEASUREMENT CONTROL	SS adds GSM cell 3 to the list of the monitored GSM cells.
9	→		MEASUREMENT REPORT	After about 60 ms, the UE sends a MEASUREMENT REPORT to SS triggered by event 3b.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
-T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
-T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence	

configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL(depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	5 s

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1

- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL(depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	5 s

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3b
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	2
- Time to Trigger	60 ms
- Reporting cell status	3 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3b
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	2
- Time to Trigger	60 ms
- Reporting cell status	3 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 7)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
-CHOICE event result	Check that this is set to inter-RAT measurement event results
-Inter-RAT event identity	Check that this is set to 3b
-Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
-CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3b
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

MEASUREMENT CONTROL (Step 8)

Information Element	Value/Remark
Measurement Identity	3
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Not present
- Periodic Reporting / Event Trigger Reporting Mode	Not present
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove no inter-RAT cells
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=1
- inter-RAT cell id	Not present
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	2
- Cell for measurement	Not present
- inter-RAT measurement quantity	Not present
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3b
- Threshold own system	Not present
- W	Not present
- Threshold other system	-80
- Hysteresis	2
- Time to Trigger	60 ms
-Reporting cell status	Not present
Physical channel information elements	Not present

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Not present
- Periodic Reporting / Event Trigger Reporting Mode	Not present
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove no inter-RAT cells
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=1
- inter-RAT cell id	Not present
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	2
- Cell for measurement	Not present
- inter-RAT measurement quantity	Not present
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3b
- Threshold own system	Not present
- W	Not present
- Threshold other system	-80
- Hysteresis	2
- Time to Trigger	60 ms
- Reporting cell status	Not present
Physical channel information elements	Not present

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for three GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0, 1 or 2
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 0, 1 or 2 and that this inter-RAT cell id is different from the previous inter-RAT cell id.
- Observed time difference to GSM cell	Check that the IE is not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 0, 1 or 2 and that this inter-RAT cell id is different from the two previous inter-RAT cell id.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
-CHOICE event result	Check that this is set to inter-RAT measurement event results
-Inter-RAT event identity	Check that this is set to 3b
-Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
-CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 2.

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for three GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0, 1 or 2
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 0, 1 or 2 and that this inter-RAT cell id is different from the previous inter-RAT cell id.
- Observed time difference to GSM cell	Check that the IE is not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 0, 1 or 2 and that this inter-RAT cell id is different from the two previous inter-RAT cell id.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3b
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 2.

8.4.1.34.5 Test requirement

Between instants T0 and T1, the UE shall not send any MEASUREMENT REPORT message to the SS.

Event 3b shall be triggered in the UE (i.e. the transmission of the first MEASUREMENT REPORT message shall begin) about 60 ms after instant T1.

About 60 ms after the reception by the UE of the second MEASUREMENT CONTROL message, the UE shall begin to transmit the second MEASUREMENT REPORT message (since the signal strength for GSM cell 3 is below the threshold for triggering event 3b).

8.4.1.35 Measurement Control and Report: Inter-RAT measurement, event 3c

8.4.1.35.1 Definition

8.4.1.35.2 Conformance requirement

When this event is ordered by UTRAN in a measurement control message the UE shall send a report when the estimated quality of the other system is above the value of the IE "Threshold other system" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains information specific for the other system. For the measurement, which triggered the MEASUREMENT REPORT message, the UE shall set the IE "measured results" to include measurements according to the IE "reporting quantity" of that measurement.

Reference

3GPP TS 25.331 clauses 14.3.1.3, 8.4.2.2.

8.4.1.35.3 Test Purpose

1 To confirm that the UE sends MEASUREMENT REPORT message if event 3c is configured, and if the quality of the other system becomes better than the given threshold for event 3c.

2 To confirm that no other UE MEASUREMENT REPORT message is sent by the UE for a cell that has already triggered event 3c as long as the hysteresis condition for triggering once again event 3c has not been fulfilled.

8.4.1.35.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell and 2 GSM cells. The initial configurations of the 4 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

Table 8.4.1.35.4-1

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0		T1	
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				7			
CELL identity	#	0				1			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	-80	-90	-80	-80	-80	-80	-80

The two tables above illustrate the downlink power to be applied for the two cells at various instants of the test execution. Column marked "T0" denotes the initial conditions, while column marked "T1", "T2" and "T3" indicate the values to be applied subsequently.

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements. Event 3c is set up in this message, and compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.35.4-1.

At instant T2, the RF signal strength for GSM cell 2 drops as described in table 8.4.1.35.4-1, and at instant T3, it increases again to its previous level.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3c in the UE. Compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in tables 8.4.1.35.4-1.
7	→		MEASUREMENT REPORT	After about 100 ms, the UE sends a MEASUREMENT REPORT to SS triggered by event 3b.
8				SS re-adjusts the downlink transmission power settings according to columns "T2" in tables 8.4.1.35.4-1.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in tables xxxx and xxxx.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
-T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
-T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence	

~~configuration parameters~~	
~~- TGMP~~	~~GSM BSIC re-confirmation~~
~~- TGPRC~~	~~Infinity~~
~~- TGSN~~	~~4~~
~~- TGL1~~	~~7~~
~~- TGL2~~	~~Not present~~
~~- TGD~~	~~0~~
~~- TGPL1~~	~~8~~
~~- TGPL2~~	~~Not present~~
~~- RPP~~	~~Mode 1~~
~~- ITP~~	~~Mode 0~~
~~CHOICE UL/DL Mode~~	~~UL and DL(depends on UE's Measurement capability)~~
~~- Downlink compressed mode method~~	~~SF/2~~
~~- Uplink compressed mode method~~	~~SF/2~~
~~- Downlink frame type~~	~~A~~
~~- DeltaSIR1~~	~~1.0~~
~~- DeltaSIRAfter1~~	~~0.5~~
~~- DeltaSIR2~~	~~Not Present~~
~~- DeltaSIR2After2~~	~~Not Present~~
~~- N identify abort~~	~~Not Present~~
~~- T Reconfirm abort~~	~~5 s~~

Information Element	**Value/remark**
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0

CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL(depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	5 s

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	10
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3c
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	5
- Time to Trigger	100 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	10
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3c
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	5
- Time to Trigger	100 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 7)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
-CHOICE event result	Check that this is set to inter-RAT measurement event results
-Inter-RAT event identity	Check that this is set to 3c
-Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
-CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.35.4 Test requirement

About 100 ms after instant T1, since the cell individual offset for GSM cell 1 is +10 dB, event 3c shall be triggered in the UE, i.e the UE shall begin to transmit a MEASUREMENT REPORT to the SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is 0 dB.

After instant T2, no MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for it to trigger the event once again.

8.4.1.36 Measurement Control and Report: Inter-RAT measurement, event 3d

8.4.1.36.1 Definition

8.4.1.36.2 Conformance requirement

If any of the quality estimates for the cells in the other system becomes better than the quality estimate for the currently best cell in the other system, and event 3d has been ordered by UTRAN then this event shall trigger a report to be sent from the UE when the hysteresis and time to trigger conditions is fulfilled. The corresponding report contains (at least) information the best cell in the other system.

Reference

3GPP TS 25.331 clause 14.3.1.4.

8.4.1.36.3 Test Purpose

To confirm that the UE sends MEASUREMENT REPORT message if event 3d is configured, and if the best cell changes in the other system. To confirm that no other UE MEASUREMENT REPORT message is sent by the UE for a cell that has already triggered event 3d as long as the hysteresis condition for triggering once again event 3d has not been fulfilled.

8.4.1.36.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell and 2 GSM cells. The initial configurations of the 4 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

Table 8.4.1.36.4-1

Parameter	Unit	Cell 1 (GSM)		Cell 2 (GSM)	
		T0	T2	T0	T1
Test Channel	#	GSM Ch.1		GSM Ch.2	
BCCH ARFCN	#	1		7	
CELL identity	#	0		1	
BSIC	#	BSIC 1		BSIC 2	
RF Signal Level	dBm	-70	-90	-90	-70

The two tables above illustrate the downlink power to be applied for the two cells at various instants of the test execution. Column marked "T0" denotes the initial conditions, while column marked "T1", "T2" and "T3" indicate the values to be applied subsequently.

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements. Event 3d is set up in this message, and compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases while the RF signal strength for GSM cell 2 decreases as described in table 8.4.1.36.4-1.

A MEASUREMENT CONTROL is then sent to the UE that releases the inter-RAT measurement, and deactivates compressed mode.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3d in the UE. Compressed mode is started.
5	→		MEASUREMENT REPORT	The UE sends a MEASUREMENT REPORT to UTRAN indicating which is the best GSM cells just after the initiation of the measurement
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in tables 8.4.1.36.4-1.
7	→		MEASUREMENT REPORT	After about 200 ms, the UE sends a MEASUREMENT REPORT to SS triggered by event 3b.
8	←		MEASUREMENT CONTROL	SS releases the inter-RAT measurements, and deactivates compressed mode.
9				SS checks that the UE has deactivated compressed mode.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

Information Element	Value/Remarks
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL(depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
-T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
-T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence	

~~configuration parameters~~	
~~- TGMP~~	~~GSM BSIC re-confirmation~~
~~- TGPRC~~	~~Infinity~~
~~- TGSN~~	~~4~~
~~- TGL1~~	~~7~~
~~- TGL2~~	~~Not present~~
~~- TGD~~	~~0~~
~~- TGPL1~~	~~8~~
~~- TGPL2~~	~~Not present~~
~~- RPP~~	~~Mode 1~~
~~- ITP~~	~~Mode 0~~
~~CHOICE UL/DL Mode~~	~~UL and DL(depends on UE's Measurement capability)~~
~~- Downlink compressed mode method~~	~~SF/2~~
~~- Uplink compressed mode method~~	~~SF/2~~
~~- Downlink frame type~~	~~A~~
~~- DeltaSIR1~~	~~1.0~~
~~- DeltaSIRAfter1~~	~~0.5~~
~~- DeltaSIR2~~	~~Not Present~~
~~- DeltaSIR2After2~~	~~Not Present~~
~~- N identify abort~~	~~Not Present~~
~~- T Reconfirm abort~~	~~5 s~~

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL(depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0

CHOICE UL/DL Mode	UL and DL (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	12
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL(depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	5 s

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	Not present
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	Not present
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3d
- Threshold own system	Not present
- W	Not present
- Threshold other system	Not present
- Hysteresis	5
- Time to Trigger	200 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	Not present
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	Not present
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3d
- Threshold own system	Not present
- W	Not present
- Threshold other system	Not present
- Hysteresis	5
- Time to Trigger	200 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	active
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 5)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 3~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Inter-RAT measured results list"~~
~~- Inter-RAT measured result list~~	
~~- CHOICE system~~	~~GSM~~
~~- Measured GSM cells~~	~~Check that measurement results for two GSM cells are included~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOICE BSIC~~	~~Check it is set to verified BSIC~~
~~- inter-RAT cell id~~	~~Check that it is set to either 0 or 1~~
~~- Observed time difference to GSM cell~~	~~Check that the IE is not included~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOICE BSIC~~	~~Verified BSIC~~
~~- inter-RAT cell id~~	~~Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.~~
~~- Observed time difference to GSM cell~~	~~Check that the IE is not present~~
~~Measured results on RACH~~	~~Check that not present~~
~~Additional Measured results~~	~~Check that not present~~
~~Event results~~	~~Check that the IE is included~~
~~-CHOICE event result~~	~~Check that this is set to inter-RAT measurement event results~~
~~-Inter-RAT event identity~~	~~Check that this is set to 3d~~
~~-Cells to report (1 to <maxCellMeas>)~~	~~Check that <maxCellMeas> is set to 1~~
~~-CHOICE BSIC~~	~~Check that this is set to verified BSIC~~
~~- Inter-RAT cell id~~	~~Check that this is set to 0.~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3d
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

MEASUREMENT REPORT (Step 7)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
-CHOICE event result	Check that this is set to inter-RAT measurement event results
-Inter-RAT event identity	Check that this is set to 3d
-Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
-CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 1.

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3d
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 1.

MEASUREMENT CONTROL (Step 8)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~3~~
~~Measurement Command~~	~~Release~~
~~Physical channel information elements~~	
~~- DPCH compressed mode status info~~	
~~- TGPS reconfiguration CFN~~	~~(Current CFN + (256 – TTI/10msec))mod 256~~
~~- Transmission gap pattern sequence (1 to <MaxTGPS>)~~	~~<MaxTGPS>=3~~
~~- TGPSI~~	~~1~~
~~- TGPS status flag~~	~~Inactive~~
~~- TGCFN~~	~~Not present~~
~~- TGPSI~~	~~2~~
~~- TGPS status flag~~	~~Inactive~~
~~- TGCFN~~	~~Not present~~
~~- TGPSI~~	~~3~~
~~- TGPS status flag~~	~~Inactive~~
~~- TGCFN~~	~~Not present~~

Information Element	**Value/remark**
Measurement Identity	3
Measurement Command	Release
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	Inactive
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Inactive
- TGCFN	Not present
- TGPSI	3
- TGPS status flag	Inactive
- TGCFN	Not present

8.4.1.35.4 Test requirement

Shortly after the UE has received the first MEASUREMENT CONTROL message it shall transmit a MEASUREMENT REPORT to the SS.

About 200 ms after instant T1, the UE shall begin to transmit a MEASUREMENT REPORT triggered by event 3d to the SS.

After receiving the second MEASUREMENT CONTROL message, the UE shall then stop running compressed mode.

8.4.1.37 Measurement Control and Report: UE internal measurement, event 6c

8.4.1.37.1 Definition

8.4.1.37.2 Conformance requirement

When this event is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE Tx power reaches its minimum value.

Reference

3GPP TS 25.331 clause 14.6.2.3.

8.4.1.37.3 Test Purpose

To confirm that the UE sends a measurement report for event 6c when the UE Tx power reaches its minimum value when event 6c has been configured in the UE through a MEASUREMENT CONTROL message.

8.4.1.37.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell.

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108.

The SS sends a MEASUREMENT CONTROL message to the UE that configures event 6c.

The SS sends TPC_cmd equal to -1 until the transmitter power of the UE reaches its minimum value.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		MEASUREMENT CONTROL	SS configures event 6c in the UE.
3	←			The SS sends TPC_cmd equal to -1 until the transmitter power of the UE reaches its minimum value, which shall be below –50 dBm.
4	→		MEASUREMENT REPORT	The UE sends a MEASUREMENT REPORT to SS triggered by event 6c.

Specific message content

MEASUREMENT CONTROL (Step 2)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~6~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Event triggered~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	
~~- UE internal measurement~~	
~~- UE internal measurement quantity~~	~~UE Transmitter Power~~
~~- Filter coefficient~~	~~0~~
~~- UE internal reporting quantity~~	
~~- UE Transmitted power~~	~~TRUE~~
~~- CHOICE mode~~	
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~CHOICE report criteria~~	
~~- UE internal measurement reporting criteria~~	
~~- Parameters sent for each UE internal measurement event~~	~~1 event~~
~~- UE internal event identity~~	~~event 6c~~
~~- Time to trigger~~	~~0~~

Information Element	**Value/remark**
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- UE internal measurement	
- UE internal measurement quantity	UE Transmitter Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted power	TRUE
CHOICE mode	
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	
- UE internal measurement reporting criteria	
- Parameters sent for each UE internal measurement event	1 event
- UE internal event identity	event 6c
- Time to trigger	0

MEASUREMENT REPORT (Step 4)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 6~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "UE internal measurement"~~
~~- UE internal measured results~~	
~~- UE Transmitted Power~~	~~Check that this IE is set a value that is below –50 dBm.~~
~~- UE Rx-Tx report entities~~	~~Check that this IE is not included~~
~~Measured results on RACH~~	~~Check that this IE is not included~~
~~Additional measured results~~	~~Check that this IE is not included~~
~~Event Results~~	
~~CHOICE *event result*~~	~~Check that this IE is set to UE internal measurement event results~~
~~UE internal measurement results~~	
~~UE internal event identity~~	~~Check that this IE is set to 6c~~
~~CHOICE *mode*~~	
~~Primary CPICH info~~	~~This IE should not be included~~

Information Element	**Value/remark**
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "UE internal measurement"
- UE internal measured results	
- UE Transmitted Power	Check that this IE is set a value that is below –50 dBm.
- UE Rx-Tx report entities	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6c
CHOICE *mode*	
Primary CPICH info	This IE should not be included

8.4.1.37.5 Test requirement

The UE shall then begin transmitting a MEASUREMENT REPORT message to SS triggered by event 6c when its transmit power has reached its minimum output power. The minimum transmitted power of the UE shall be less than –50dBm.

8.4.1.38 Measurement Control and Report: UE internal measurement, event 6d

8.4.1.38.1 Definition

8.4.1.38.2 Conformance requirement

When this event is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE Tx power reaches its maximum value.

Reference

3GPP TS 25.331 clause 14.6.2.4

8.4.1.38.3 Test Purpose

To confirm that the UE sends a measurement report for event 6d when the UE Tx power reaches its maximum value when event 6d has been configured in the UE through a MEASUREMENT CONTROL message.

8.4.1.38.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell .

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108.

The SS sends TPC_cmd equal to +1 until the transmitter power of the UE reaches its maximum value.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		MEASUREMENT CONTROL	SS configures event 6d in the UE.
3	←			The SS sends TPC_cmd equal to +1 until the transmitter power of the UE reaches its maximum value.
4	→		MEASUREMENT REPORT	After about 200 ms, the UE sends a MEASUREMENT REPORT to SS triggered by event 6d.

MEASUREMENT CONTROL (Step 1)

~~Information Element~~	~~Value/Remark~~
~~Measurement Identity~~	~~6~~
~~Measurement Command~~	~~Setup~~
~~Measurement Reporting Mode~~	
~~- Measurement Reporting Transfer Mode~~	~~Acknowledged Mode RLC~~
~~- Periodic Reporting / Event Trigger Reporting Mode~~	~~Event triggered~~
~~Additional measurements list~~	~~Not Present~~
~~CHOICE measurement type~~	
~~- UE internal measurement~~	
~~- UE internal measurement quantity~~	~~UE Transmitter Power~~
~~- Filter coefficient~~	~~0~~
~~-UE internal reporting quantity~~	
~~-UE Transmitted power~~	~~TRUE~~
~~-CHOICE mode~~	
~~- UE Rx-Tx time difference~~	~~FALSE~~
~~CHOICE report criteria~~	
~~- UE internal measurement reporting criteria~~	
~~-Parameters sent for each UE internal measurement event~~	~~1 event~~
~~-UE internal event identity~~	~~event 6d~~
- ~~Time to trigger~~	~~200~~

Information Element	Value/remark
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- UE internal measurement	
- UE internal measurement quantity	UE Transmitter Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted power	TRUE
- CHOICE mode	
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	
- UE internal measurement reporting criteria	
- Parameters sent for each UE internal measurement event	1 event
- UE internal event identity	event 6d
- Time to trigger	200

MEASUREMENT REPORT (Step 3)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 6~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "UE internal measurement"~~
~~- UE internal measured results~~	
~~- UE Transmitted Power~~	~~Check that this IE is set to the maximum outpower of the UE.~~
~~-UE Rx-Tx report entities~~	~~Check that this IE is not included~~
~~Measured results on RACH~~	~~Check that this IE is not included~~
~~Additional measured results~~	~~Check that this IE is not included~~
~~Event Results~~	
~~CHOICE *event result*~~	~~Check that this IE is set to UE internal measurement event results~~
~~UE internal measurement results~~	
~~UE internal event identity~~	~~Check that this IE is set to 6d~~
~~CHOICE *mode*~~	
~~Primary CPICH info~~	~~This IE should not be included~~

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "UE internal measurement"
- UE internal measured results	
- UE Transmitted Power	Check that this IE is set to the maximum outpower of the UE.
- UE Rx-Tx report entities	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6d
CHOICE *mode*	
Primary CPICH info	This IE should not be included

8.4.1.38.5 Test requirement

The UE shall then begin transmitting a MEASUREMENT REPORT message to SS triggered by event 6d when its transmit power has reached its maximum. The maximum transmitted power of the UE shall be according to the class of the UE.

8.4.1.39 Measurement Control and Report: UE internal measurement, event 6e

8.4.1.39.1 Definition

8.4.1.39.2 Conformance requirement

When this event is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE RSSI reaches the UE's dynamic receiver range.

Reference

3GPP TS 25.331 clause 14.6.2.5

8.4.1.39.3 Test Purpose

To confirm that the UE sends a measurement report for event 6e when the UE RSSI reaches the UE's dynamic receiver range when event 6e has been configured in the UE through a MEASUREMENT CONTROL message.

8.4.1.39.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell .

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108.

The SS increases its output power by 0.5 dB step until the UE RSSI reaches the UE's receiver dynamic range.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		MEASUREMENT CONTROL	SS configures event 6e in the UE.
3	←			The SS increases its output power by 0.5 dB steps until the UE RSSI reaches the UE's receiver dynamic range.
4	→		MEASUREMENT REPORT	The UE sends a MEASUREMENT REPORT to SS triggered by event 6e.

MEASUREMENT CONTROL (Step 1)

Information Element	Value/Remark
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- UE internal measurement	
- UE internal measurement quantity	UTRA Carrier RSSI
- Filter coefficient	0
- UE internal reporting quantity	Not included
CHOICE report criteria	
- UE internal measurement reporting criteria	
- Parameters sent for each UE internal measurement event	1 event
- UE internal event identity	event 6e
- Time to trigger	0

Information Element	Value/remark
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- UE internal measurement	
- UE internal measurement quantity	UTRA Carrier RSSI
- Filter coefficient	0
- UE internal reporting quantity	Not included
CHOICE report criteria	
- UE internal measurement reporting criteria	
- Parameters sent for each UE internal measurement event	1 event
- UE internal event identity	event 6e
- Time to trigger	0

MEASUREMENT REPORT (Step 3)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 6
Measured Results	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6e
CHOICE *mode*	
Primary CPICH info	This IE should not be included

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6e
CHOICE *mode*	
Primary CPICH info	This IE should not be included

8.4.1.39.5 Test requirement

The UE shall then begin transmitting a MEASUREMENT REPORT message to SS triggered by event 6e when the UE RSSI reaches the UE's receiver dynamic range.

8.4.1.40 Measurement Control and Report: Inter-RAT measurement, event 3C, in CELL_DCH state using sparse compressed mode pattern

8.4.1.40.1 Definition

8.4.1.40.2 Conformance requirement

1. Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in 3GPP TS 25.331 clause 8.6 unless otherwise specified below.

   The UE shall:

   - read the IE "Measurement command";
   - if the IE "measurement command" has the value "setup":
     - store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", possibly overwriting the measurement previously stored with that identity;
     - for measurement types "inter-RAT measurement" or "inter-frequency measurement":
       - if, according to its measurement capabilities, the UE requires compressed mode to perform the measurements and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or
       - if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
         - begin measurements according to the stored control information for this measurement identity;

2. Event 3c: The estimated quality of other system is above a certain threshold. When this event is ordered by UTRAN in a measurement control message the UE shall send a report when the estimated quality of the other system is above the value of the IE "Threshold other system" and the hysteresis and time to trigger conditions are fulfilled. The corresponding report contains information specific for the other system.

Reference

3GPP TS 25.331 clause 8.4.1.3, 14.3.1.3.

8.4.1.40.3 Test Purpose

1. To verify that the UE performs Inter-RAT measurement using a sparse compressed mode pattern as specified in the MEASUREMENT CONTROL message.

2. To verify that the UE send MEASUREMENT REPORT message when event 3C is triggered, and if the quality of the other system becomes better than the given threshold for event 3c.

3. To confirm that no other UE MEASUREMENT REPORT message is sent by the UE for a cell that has already triggered event 3c as long as the hysteresis condition for triggering once again event 3c has not been fulfilled.

8.4.1.40.4 Method of test

Table 8.4.1.40.4.1 Sparse compressed mode pattern for Inter.RAT measurement

TGMP	TGCFN	TGPRC	TGSN	TGL1	TGL2	TGD	TGPL1	TGPL2	Comment
GSM carrier RSSI measurement	Note 1	Inf.	4	7	Not sent	0	16	16	Set-up to monitor 12 GSM neighbours every second measurement period, i.e. every second 480ms period.
GSM Initial BSIC identification	Note 1	Inf.	8	14	Not sent	0	24	24	Equal to Pattern 6 in TS 25.133 table 8.7.
GSM BSIC re-confirmation	Note 1	Inf.	8	14	Not sent	0	24	24	Equal to Pattern 12 in TS 25.133 table 8.8.

NOTE 1: TGCFN can be found in the MEASUREMENT CONTROL message.

Initial Condition

System simulator: 1 UTRAN FDD cell and 2 GSM cells. The initial configurations of the 2 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

UE: CELL_DCH state, state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

Table 8.4.1.40.4.2 Inter-RAT cell specific data

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0	T1	T2	T3
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				3			
CELL identity	#	0				1			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	-80	-90	-80	-80	-80	-80	-80

GSM cell 3 to 12 as indicated in the a MEASUREMENT CONTROL message shall not be active in the test, i.e. no BCCH carrier shall be transmitted for GSM cell 3 to 12 in this test.

The table above illustrate the downlink power to be applied for the two cells at various instants of the test execution. Column marked "T0" denotes the initial conditions, while column marked "T1", "T2" and "T3" indicate the values to be applied subsequently.

The UE is initially in CELL_DCH, state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is

received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements on 12 GSM cells. Event 3c is set up in this message, and compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.40.4.2, since the cell individual offset for GSM cell 1 is 10 dB, event 3c shall be triggered in the UE. A MEASUREMENT REPORT shall be sent to the SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is 0 dB.

At instant T2, the RF signal strength for GSM cell 1 drops as described in table 8.4.1.40.4.2, and at instant T3, it increases again to its previous level. No MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for it to trigger the event once again.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3c in the UE. Compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.40.4.2.
7	→		MEASUREMENT REPORT	After about 2 s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3c.
8				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.40.4.2.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.40.4.2.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type in Annex A titled "Speech in CS", with the following exceptions:

~~Information Element~~	~~Value/Remarks~~
~~Downlink information common for all radio links~~ ~~- DPCH compressed mode info~~ ~~- TGPSI~~ ~~- TGPS Status Flag~~	 ~~1~~ ~~Inactive~~

- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	16
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	8
- TGL1	14
- TGL2	Not present
- TGD	0
- TGPL1	24
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	21
T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	8
- TGL1	14
- TGL2	Not present
- TGD	0
- TGPL1	24
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2

- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	4.8 s

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	16
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- DPCH compressed mode info	
- TGPSI	2
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	8
- TGL1	14
- TGL2	Not present
- TGD	0
- TGPL1	24
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	21
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Inactive
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	8
- TGL1	14
- TGL2	Not present
- TGD	0
- TGPL1	24
- TGPL2	Not present
- RPP	Mode 1

- ITP	Mode 0
CHOICE UL/DL Mode	UL and DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	4.8 s

MEASUREMENT CONTROL (Step 4)

~~Information Element~~	~~Value/Remark~~

Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=12
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	10
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	3
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	2
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	5
- inter-RAT cell id	3
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC4
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	4
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC5
- Band indicator	DCS 1800 band used
- BCCH ARFCN	9
- inter-RAT cell id	5
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC6
- Band indicator	DCS 1800 band used
- BCCH ARFCN	11
- inter-RAT cell id	6
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC7
- Band indicator	DCS 1800 band used
- BCCH ARFCN	13
- inter-RAT cell id	7
CHOICE Radio Access Technology	GSM
- Cell individual offset	0

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=12
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	10
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	3
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	2
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	5
- inter-RAT cell id	3
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC4
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	4
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC5
- Band indicator	DCS 1800 band used
- BCCH ARFCN	9
- inter-RAT cell id	5
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC6
- Band indicator	DCS 1800 band used
- BCCH ARFCN	11
- inter-RAT cell id	6
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC7
- Band indicator	DCS 1800 band used

- BCCH ARFCN	13
- inter-RAT cell id	7
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC8
- Band indicator	DCS 1800 band used
- BCCH ARFCN	15
- inter-RAT cell id	8
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC9
- Band indicator	DCS 1800 band used
- BCCH ARFCN	17
- inter-RAT cell id	9
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC10
- Band indicator	DCS 1800 band used
- BCCH ARFCN	19
- inter-RAT cell id	10
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC11
- Band indicator	DCS 1800 band used
- BCCH ARFCN	21
- inter-RAT cell id	11
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC12
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3c
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	5
- Time to Trigger	100 ms
- Reporting cell status	2 cells
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	active
- TGCFN	(Current CFN + (256 – 11 – TTI/10msec))mod 256
- TGPSI	2

- TGPS status flag - TGCFN - TGPSI - TGPS status flag - TGCFN	active (Current CFN + (256 – 7 – TTI/10msec))mod 256 3 active (Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 7)

~~Information Element~~	~~Value/Remarks~~
~~Measurement identity~~	~~Check to see if set to 3~~
~~Measured Results~~	
~~- CHOICE measurement~~	~~Check to see if set to "Inter-RAT measured results list"~~
~~- Inter-RAT measured result list~~	
~~- CHOICE system~~	~~GSM~~
~~- Measured GSM cells~~	~~Check that measurement results for two GSM cells are included~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOICE BSIC~~	~~Check it is set to verified BSIC~~
~~- inter-RAT cell id~~	~~Check that it is set to either 0 or 1~~
~~- Observed time difference to GSM cell~~	~~Check that the IE is not included~~
~~- GSM carrier RSSI~~	~~Check that measurement result is reasonable~~
~~CHOICE BSIC~~	~~Verified BSIC~~
~~- inter-RAT cell id~~	~~Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.~~
~~- Observed time difference to GSM cell~~	~~Check that the IE is not present~~
~~Measured results on RACH~~	~~Check that not present~~
~~Additional Measured results~~	~~Check that not present~~
~~Event results~~	~~Check that the IE is included~~
~~-CHOICE event result~~	~~Check that this is set to inter-RAT measurement event results~~
~~-Inter-RAT event identity~~	~~Check that this is set to 3c~~
~~-Cells to report (1 to <maxCellMeas>)~~	~~Check that <maxCellMeas> is set to 1~~
~~-CHOICE BSIC~~	~~Check that this is set to verified BSIC~~
~~- Inter-RAT cell id~~	~~Check that this is set to 0.~~

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.40.5 Test Requirement

About 2 s after instant T1, since the cell individual offset for GSM cell 1 is +10 dB, event 3c shall be triggered in the UE, i.e the UE shall begin to transmit a MEASUREMENT REPORT to the SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is 0 dB.

After instant T2, no MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for it to trigger the event once again.