

**Source:** T1  
**Title:** CR's to TS 34.123-1 v5.1.1 related to package 3 and 4 test cases  
**Agenda item:** 5.1.3  
**Document for:** Approval

This document contains 27 CRs to TS 34.123-1 v5.1.1 related to package 3 and 4 test cases. These CRs have been agreed by T1 and are put forward to TSG T for approval.

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

*CR related to corrections to idle mode test cases:*

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	359	-	Rel-5	Corrections to package 3 idle mode test cases	F	5.1.1	5.2.0	T1-020820	TEI	R99, Rel-4, Rel-5
34.123-1	368	-	Rel-5	Corrections and updates for Idle mode TCs (TDD) in a pure 3GPP environment	F	5.1.1	5.2.0	T1-020695	TEI	R99, Rel-4, Rel-5

*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	326	-	Rel-5	Correction of test case for timing re-initialised inter-frequency handover (revision of T1S-020569)	F	5.1.1	5.2.0	T1-020698	TEI	R99, Rel-4, Rel-5
34.123-1	327	-	Rel-5	Corrections to test cases 8.3.1.23, 8.3.1.24 and 8.3.2.13 (HCS Reselection)	F	5.1.1	5.2.0	T1-020699	TEI	R99, Rel-4, Rel-5
34.123-1	360	-	Rel-5	Corrections to package 3 RRC 8_1_x (Connection mgmt) as revision of T1S-020778.	F	5.1.1	5.2.0	T1-020821	TEI	R99, Rel-4, Rel-5
34.123-1	361	-	Rel-5	Corrections to package 3 RRC 8_2_x (Radio Bearer procedure) as revision of T1S-020779.	F	5.1.1	5.2.0	T1-020822	TEI	R99, Rel-4, Rel-5
34.123-1	362	-	Rel-5	Corrections to package 3 RRC 8_3_x (Connection mobility procedure) as revision of T1S-020780.	F	5.1.1	5.2.0	T1-020823	TEI	R99, Rel-4, Rel-5
34.123-1	363	-	Rel-5	Corrections to package 3 Inter-RAT measurement test cases	F	5.1.1	5.2.0	T1-020824	TEI	R99, Rel-4, Rel-5
34.123-1	378	-	Rel-5	Correction to non-package 1&2 RRC test cases	F	5.1.1	5.2.0	T1-020836	TEI	R99, Rel-4, Rel-5
34.123-1	379	-	Rel-5	Clause 8.1 (Non-package 1&2) Rel-5: Correction from CRs approved in RP17meeting	F	5.1.1	5.2.0	T1-020837	TEI	R99, Rel-4, Rel-5
34.123-1	380	-	Rel-5	Clause 8.4 (Non-package 1&2) Rel-5: Correction from CRs approved in RP17meeting	F	5.1.1	5.2.0	T1-020838	TEI	R99, Rel-4, Rel-5
34.123-1	381	-	Rel-5	Corrections to package 3 Measurement test cases as revision of T1S-020781.	F	5.1.1	5.2.0	T1-020864	TEI	R99, Rel-4, Rel-5
34.123-1	401	-	Rel-5	Clause 8.2 (Non-package 1&2) Rel-5: Correction from CRs approved in RP17meeting	F	5.1.1	5.2.0	T1-020867	TEI	R99, Rel-4, Rel-5

(T1S020742rev1)

*CR related to new RRC test cases:*

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	371	-	Rel-5	New TDD test cases for 8.2.1 Radio Bearer Establishment and 8.2.2 Radio Bearer Reconfiguration.	F	5.1.1	5.2.0	T1-020826	TEI	R99, Rel-4, Rel-5
34.123-1	399	-	Rel-5	Addition of new test case for RRC Connection Release following network authentication failure requested by upper layers	F	5.1.1	5.2.0	T1-020863	TEI	R99, Rel-4, Rel-5

*CR related to corrections to CS and PS NAS test cases:*

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Workitem	Releases affected
34.123-1	384	-	Rel-5	Correction to package 3 MM test case 9.4.7	F	5.1.1	5.2.0	T1-020845	TEI	R99, Rel-4, Rel-5
34.123-1	385	-	Rel-5	Correction to package 3 SM test case 11.1.1.2.1	F	5.1.1	5.2.0	T1-020846	TEI	R99, Rel-4, Rel-5
34.123-1	386	-	Rel-5	Correction to package 3 test case 16.1.2 SMS mobile originated	F	5.1.1	5.2.0	T1-020847	TEI	R99, Rel-4, Rel-5
34.123-1	387	-	Rel-5	Correction to package 3 test case 16.1.9 Multiple SMS mobile originated	F	5.1.1	5.2.0	T1-020848	TEI	R99, Rel-4, Rel-5
34.123-1	388	-	Rel-5	Correction to package 3 test case 16.2.1 SMS mobile terminated	F	5.1.1	5.2.0	T1-020849	TEI	R99, Rel-4, Rel-5
34.123-1	389	-	Rel-5	Correction to package 3 test case 16.2.2 SMS mobile originated	F	5.1.1	5.2.0	T1-020850	TEI	R99, Rel-4, Rel-5
34.123-1	393	-	Rel-5	Update to clause 13 Emergency call tests as revision of T1S-020759rev1	F	5.1.1	5.2.0	T1-020854	TEI	R99, Rel-4, Rel-5
34.123-1	395	-	Rel-5	Correction to package 3 test case 16.2.10 Test of capabilities of simultaneously receiving an SM whilst sending an MO SM (as of T1S-020751rev1)	F	5.1.1	5.2.0	T1-020859	TEI	R99, Rel-4, Rel-5
34.123-1	396	-	Rel-5	Correction to package 3 test case 16.1.10 Test of capabilities of simultaneously receiving an SM whilst sending an MO SM (as of T1S-020797rev1)	F	5.1.1	5.2.0	T1-020860	TEI	R99, Rel-4, Rel-5
34.123-1	406	-	Rel-5	Correction to package 3 test case 16.1.1 SMS mobile terminated (as of T1S-020791rev1)	F	5.1.1	5.2.0	T1-020858	TEI	R99, Rel-4, Rel-5

*CR related to corrections to Radio Bearer test cases:*

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Workitem	Releases affected
34.123-1	320	-	Rel-5	Corrections to title of radio bearer test cases 14.4.2a.1, 14.4.2a.2 and 14.4.2a.3	F	5.1.1	5.2.0	T1-020688	TEI	R99, Rel-4, Rel-5
34.123-1	392	-	Rel-5	Test case for alternative RAB configuration agreed during T1/SIG #25	F	5.1.1	5.2.0	T1-020853	TEI	R99, Rel-4, Rel-5

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020688

3GPP TSG- T1 SIG Meeting #25  
Singapore, 18<sup>th</sup> – 20<sup>th</sup> Sept 2002

Tdoc # T1S-020635

CR-Form-v7	
<b>CHANGE REQUEST</b>	
# <b>34.123-1 CR 320</b> # rev <b>-</b> #	Current version: <b>5.1.0</b> #

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

<b>Title:</b>	# Corrections to title of radio bearer test cases 14.4.2a.1, 14.4.2a.2 and 14.4.2a.3		
<b>Source:</b>	# Ericsson		
<b>Work item code:</b>	# TEI <span style="float: right;"><b>Date:</b> # 15/09/2002</span>		
<b>Category:</b>	# <b>F</b> <span style="float: right;"><b>Release:</b> # REL-5</span>		
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <i>Use <u>one</u> of the following categories:</i>  <b>F</b> (correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (addition of feature),  <b>C</b> (functional modification of feature)  <b>D</b> (editorial modification)                      Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.                 </td> <td style="width: 50%; vertical-align: top;"> <i>Use <u>one</u> of the following releases:</i>  <b>2</b> (GSM Phase 2)  <b>R96</b> (Release 1996)  <b>R97</b> (Release 1997)  <b>R98</b> (Release 1998)  <b>R99</b> (Release 1999)  <b>Rel-4</b> (Release 4)  <b>Rel-5</b> (Release 5)  <b>Rel-6</b> (Release 6)                 </td> </tr> </table>	<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<i>Use <u>one</u> of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)
<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<i>Use <u>one</u> of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)		

<b>Reason for change:</b>	# Title incorrect for radio bearer test cases 14.4.2a.1, 14.4.2a.2 and 14.4.2a.3
<b>Summary of change:</b>	# Changed titles for radio bearer test cases 14.4.2a.1, 14.4.2a.2 and 14.4.2a.3 to reflect the test cases test the 2 x IB 32/32 kbps PS RAB
<b>Consequences if not approved:</b>	# Incorrect titles

<b>Clauses affected:</b>	# 14.4.2a.1, 14.4.2a.2 and 14.4.2a.3																
<b>Other specs affected:</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 5%;"></td> <td style="width: 5%; text-align: center;"><b>Y</b></td> <td style="width: 5%; text-align: center;"><b>N</b></td> <td style="width: 85%;"></td> </tr> <tr> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Other core specifications</td> </tr> <tr> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Test specifications</td> </tr> <tr> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td>O&amp;M Specifications</td> </tr> </table>		<b>Y</b>	<b>N</b>			<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other core specifications		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test specifications		<input checked="" type="checkbox"/>	<input type="checkbox"/>	O&M Specifications
	<b>Y</b>	<b>N</b>															
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other core specifications														
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test specifications														
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	O&M Specifications														
<b>Other comments:</b>	# Affects R99, REL-4 and REL-5																

**How to create CRs using this form:**

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

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

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

## 14.4.2a Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.3.2a.

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

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

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

This configuration is verified in test case 14.4.2a.1.

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

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

This configuration is verified in test case 14.4.2a.2.

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

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

This configuration is verified in test case 14.4.2a.3.

### 14.4.2a.1 One SCCPCH: [Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH](#)

#### 14.4.2a.1.1 Conformance requirement

See 14.2.4.1.

#### 14.4.2a.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.3.2a and 6.10.2.4.4.2 for the case when two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.4.2 (Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

#### 14.4.2a.1.3 Method of Test

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

See 14.1.1 for test procedure.

**NOTE** The test procedure for single radio bearer configurations is used as there are no uplink transport format combination for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:

	TFI	RB7+RB8+SRB (2x32 kbps on RACH)
TFS	TF0, bits	1x168
	TF1, bits	1x360

Uplink TFCS:

TFCI	RB7 + RB8
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

		SRBs	RB7 + RB8 (2x32 kbps)
TFS	TF0, bits	0x168	0x360
	TF1, bits	1x168	1x360
	TF2, bits	2x168	N/A

Downlink TFCS:

TFCI	(SRB, RB7+RB8)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits RB8: 312 bits	RB7: 312 bits RB8: No data
2	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits RB8: 312 bits	RB7: No data RB8: 312 bits
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB7 and RB8: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

#### 14.4.2a.1.4 Test Requirements

See 14.1.1 for definition of step 15

1. At step 15 the UE transmitted transport format shall be TF1 (1x360).
2. At step 15 the UE shall return
  - for sub test 1: an RLC SDU on RB7 having the same content as sent by SS
  - for sub test 2: an RLC SDU on RB8 having the same content as sent by SS

#### 14.4.2a.2 Two SCCPCHs: [Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH](#)

##### 14.4.2a.2.1 Conformance requirement

See 14.2.4.1.

##### 14.4.2a.2.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.10.2.4.3.2 and 6.10.2.4.4.2 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.4.2 (Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

##### 14.4.2a.2.3 Method of Test

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

See 14.1.1 for test procedure.

**NOTE** The test procedure for single radio bearer configurations is used as there are no uplink transport format combination for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:

	<b>TFI</b>	<b>RB7 + RB8 (2x32 kbps on RACH)</b>
TFS	TF0, bits	1x168
	TF1, bits	1x360

Uplink TFCS:

<b>TFCI</b>	<b>RB7 + RB8</b>
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

		<b>SRBs</b>	<b>RB7 + RB8 (2x32 kbps)</b>
TFS	TF0, bits	0x168	0x360
	TF1, bits	1x168	1x360
	TF2, bits	2x168	N/A

Downlink TFCS:

<b>TFCI</b>	<b>(SRB, RB7+RB8)</b>
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitely tested	Restricted UL TFCSs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits RB8: 312 bits	RB7: 312 bits RB8: No data
2	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits RB8: 312 bits	RB7: No data RB8: 312 bits
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB7 and RB8: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

#### 14.4.2a.2.4 Test Requirements

See 14.1.1 for definition of step 15

1. At step 15 the UE transmitted transport format shall be TF1 (1x360).
2. At step 15 the UE shall return
  - for sub test 1: an RLC SDU on RB7 having the same content as sent by SS
  - for sub test 2: an RLC SDU on RB8 having the same content as sent by SS

#### 14.4.2a.3 One SCCPCH/connected mode: [Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH](#)

##### 14.4.2a.3.1 Conformance requirement

See 14.2.4.1.

##### 14.4.2a.3.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.10.2.4.3.2 and 6.10.2.4.4.2 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.4.2 (Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

##### 14.4.2a.3.3 Method of Test

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

See 14.1.1 for test procedure.

NOTE The test procedure for single radio bearer configurations is used as there are no uplink transport format combination for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:



	TFI	RB7+RB8+SRB (2x32 kbps on RACH)
TFS	TF0, bits	1x168
	TF1, bits	1x360

Uplink TFCS:

TFCI	RB7 + RB8
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

		SRBs	RB7 + RB8 (2x32 kbps)
TFS	TF0, bits	0x168	0x360
	TF1, bits	1x168	1x360
	TF2, bits	2x168	N/A

Downlink TFCS:

TFCI	(SRB, RB7+RB8)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits RB8: 312 bits	RB7: 312 bits RB8: No data
2	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits RB8: 312 bits	RB7: No data RB8: 312 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.  
RB7 and RB8: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

#### 14.4.2a.3.4 Test Requirements

1. At step 15 the UE transmitted transport format shall be TF1 (1x360).
2. At step 15 the UE shall return
  - for sub test 1: an RLC SDU on RB7 having the same content as sent by SS
  - for sub test 2: an RLC SDU on RB8 having the same content as sent by SS

3GPP TSG-T1 Meeting #17  
 Luton, UK, 4<sup>th</sup>-8<sup>th</sup> November 2002

Tdoc: T1-020695

CR-Form-v4
<b>CHANGE REQUEST</b>
⌘ <b>34.123-1 CR 368</b> ⌘ ev - ⌘ Current version: <b>5.1.1</b> ⌘

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

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

<b>Title:</b>	⌘ Corrections and updates for Idle mode TCs (TDD) in a pure 3GPP environment
<b>Source:</b>	⌘ Siemens
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 10/11/2002</span>
<b>Category:</b>	⌘ <b>F</b> <span style="float: right;"><b>Release:</b> ⌘ REL-5</span> Use <u>one</u> of the following categories: <span style="float: right;">Use <u>one</u> of the following releases:</span> F (correction) <span style="float: right;">2 (GSM Phase 2)</span> A (corresponds to a correction in an earlier release) <span style="float: right;">R96 (Release 1996)</span> B (addition of feature), <span style="float: right;">R97 (Release 1997)</span> C (functional modification of feature) <span style="float: right;">R98 (Release 1998)</span> D (editorial modification) <span style="float: right;">R99 (Release 1999)</span> Detailed explanations of the above categories can <span style="float: right;">REL-4 (Release 4)</span> be found in 3GPP <a href="#">TR 21.900</a> . <span style="float: right;">REL-5 (Release 5)</span>

<b>Reason for change:</b>	⌘ Test cases will not work properly
<b>Summary of change:</b>	⌘ - - 6.1.1.1.4, 6.1.1.2.4, Method of test: values for TDD updated according to TS 25.123, (clause 9.1) range (-94...-50) and idle mode tolerances (clause 4.2) - 6.1.1.3 Method of investigation: o correction in the step description. In k step, cell 2 is switched off. o Unnecessary information is deleted - 6.1.1.5, Method of test: values for TDD updated according to TS 25.123, (clause 9.1) range (-94...-50) and idle mode tolerances (clause 4.2) - 6.1.1.6.2 Conformance requirement included - 6.1.1.6.4 Method of test: o values for TDD updated according to TS 25.123, (clause 9.1) range (-94...-50) and idle mode tolerances (clause 4.2) o Unnecessary information is deleted - 6.1.1.7.4 Method of test: values included for TDD mode. - 6.1.2.3.4, 6.1.2.6.4, 6.1.2.7.4, Method of test: values for TDD updated according to TS 25.123, (clause 9.1) range (-94...-50) and idle mode tolerances (clause 4.2) -
<b>Consequences if not approved:</b>	⌘ Information will be incomplete and confusing

<b>Clauses affected:</b>	⌘ 6.1
<b>Other specs</b>	⌘ <input type="checkbox"/> Other core specifications ⌘

<b>affected:</b>	<input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	
<b>Other comments:</b>	⌘ Affects R99, REL-4, REL-5 Update of T1S-020591: Some corrections were included in T1S-020640 (update of P1 and P2 idle ode TCs)  <u>This document was approved at Singapore meeting with number T1S-020648. Changes for Test cases 6.1.2.4 and 6.1.2.5 are deleted because T1S-020770, to be approved in Luton meeting, includes the updates needed for this test cases.</u>	

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm).

Below is a brief summary:

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

## 6.1 In a pure 3GPP environment

### 6.1.1 PLMN selection and reselection

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

##### 6.1.1.1.1 Definition

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

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

##### 6.1.1.1.2 Conformance requirement

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

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

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

2. Manual Network Selection Mode Procedure:

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

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

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

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

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

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

#### References

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

NOTE: TS 31.102 defines the USIM fields.

#### 6.1.1.1.3 Test purpose

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

#### 6.1.1.1.4 Method of test

##### Initial conditions

The UE is in manual PLMN selection mode.

Cell levels are from table 6.3. (FDD).

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_ Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_ RSCP [dBm] (TDD)	Test Channel	PLMN
Cell 1	-60	-540	1	PLMN 1
Cell 2	-65	-595	2	PLMN 2
Cell 3	-70	-640	3	PLMN 3
Cell 4	-75	-695	4	PLMN 4
Cell 5	-80	-740	5	PLMN 5
Cell 6	-85	-795	6	PLMN 6

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

USIM field	Priority	PLMN
EF <sub>LOCI</sub>		PLMN 1
EF <sub>HPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 2
EF <sub>PLMNwAcT</sub>	1 <sup>st</sup>	PLMN 3
	2 <sup>nd</sup>	PLMN 4
EF <sub>OPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 5
	2 <sup>nd</sup>	PLMN 6
EF <sub>FPLMN</sub>	PLMN 3	

#### Test procedure

##### Method B is applied.

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

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

#### 6.1.1.1.5 Test Requirements

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

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

##### 6.1.1.2.1 Definition

Test to verify that the UE can present the available PLMNs in priority order to the user when asked to do so in manual mode and that the displayed PLMNs can be selected / reselected by the user. Forbidden PLMNs shall also be displayed in the list. In this test are only considered "Other PLMN/access technology combinations" in the priority list. Only UTRAN cells and a UE equipped with a USIM with Radio Access Technology fields set to UTRAN are considered.

## 6.1.1.2.2 Conformance requirement

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

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

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

2. Manual Network Selection Mode Procedure:

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

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

2.1 HPLMN;

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

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

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

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

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

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

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

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

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

## References

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

NOTE: TS 31.102 defines the USIM fields.

## 6.1.1.2.3 Test purpose

1. To verify that in Manual Network Selection Mode Procedure, the UE presents "Other PLMN/access technology combinations" in a prioritized order according to conformance requirement 2.4 and 2.5.
2. To verify that forbidden PLMNs are also displayed in the list.

## 6.1.1.2.4 Method of test

## Initial conditions

The UE is in manual PLMN selection mode.

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_ RSCP [dBm] (TDD)	High Quality signal	Test Channel	PLMN
Cell 1	-85	-74	Yes	1	PLMN 6
Cell 2	-80	-69	Yes	2	PLMN 7
Cell 3	-80	-69	Yes	3	PLMN 8
Cell 4	-94	-84 <del>3</del>	No	4	PLMN 9
Cell 5	-99	-89 <del>8</del>	No	5	PLMN 10
Cell 6	-104	-94 <del>3</del>	No	6	PLMN 11

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

USIM field	Priority	PLMN
EF <sub>LOCI</sub>		PLMN 1
EF <sub>HPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 2
EF <sub>PLMNwAcT</sub>	1 <sup>st</sup>	PLMN 3
	2 <sup>nd</sup>	PLMN 4
EF <sub>OPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 5
	2 <sup>nd</sup>	PLMN 6
EF <sub>FPLMN</sub>	PLMN 10	

## Test procedure

## Method B is applied.

- a) The SS activates cells 1-6 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) PLMN 9 shall be selected when the PLMN list is presented.
- d) The SS waits for random access requests from the UE.
- e) Cell 4 is switched off.
- f) PLMN 7 shall be selected when the PLMN list is presented.
- g) The SS waits for random access requests from the UE.
- h) Cell 2 is switched off.



- i) PLMN 6 shall be selected when the PLMN list is presented.
- j) The SS waits for random access requests from the UE.
- k) Cell 1 is switched off.
- l) PLMN 11 shall be selected when the PLMN list is presented.
- m) The SS waits for random access requests from the UE.
- n) Cell 6 is switched off.
- o) PLMN 10 shall be selected when the PLMN list is presented. The SS shall reject the Registration Request from the UE.
- p) Cell 5 is switched off.
- q) PLMN 8 shall be selected (the list is already available)
- r) The SS waits for random access requests from the UE.
- s) Cell 3 is switched off.

#### 6.1.1.2.5 Test Requirements

- 1) In step c), the list shall be presented. The priority shall be as follows: PLMN 6 followed by PLMN 7, PLMN 8 in random order, followed by PLMN 9, PLMN 10, PLMN 11.
- 2) In step d), the response from the UE shall be on Cell 4. The displayed PLMN shall be PLMN 9.
- 3) In step f), the list shall be presented. The priority shall be as follows: PLMN 6 followed by PLMN 7, PLMN 8 in random order, followed by PLMN 10, PLMN 11.
- 4) In step g), the response from the UE shall be on Cell 2. The displayed PLMN shall be PLMN 7.
- 5) In step i), the list shall be presented. The priority shall be as follows: PLMN 6, PLMN 8, PLMN 10, PLMN 11.
- 6) In step j), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 6.
- 7) In step l), the list shall be presented. The priority shall be as follows: PLMN 8, PLMN 10, PLMN 11.
- 8) In step m), the response from the UE shall be on Cell 6. The displayed PLMN shall be PLMN 11.
- 9) In step o), the list shall be presented. The priority shall be as follows: PLMN 8, PLMN 10. After PLMN 10 has been selected, the list shall appear again as the UE cannot perform registration.
- 10) In step q), the list shall be presented and shall only contain PLMN 8.
- 11) In step r), the UE shall respond on Cell 3. The displayed PLMN shall be PLMN 8.
- 12) After step s), the UE shall inform that no network is available.

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

##### 6.1.1.3.1 Definition

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

##### 6.1.1.3.2 Conformance requirement

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

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

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

## 2. Manual Network Selection Mode Procedure:

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

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

2.1 HPLMN;

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

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

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

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

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

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

## References

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

NOTE: TS 31.102 defines the USIM fields.

### 6.1.1.3.3 Test purpose

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

### 6.1.1.3.4 Method of investigation

#### Initial conditions

The UE is in manual PLMN selection mode.  
"IMSI attach" flag in the BCCH is set to allowed.  
For FDD only:

Step a-d:

Parameter	Unit	Cell 1	Cell 2	Cell 3
Test Channel		1	2	3
CPICH_Ec	dBm/3.8 4 MHz	-60	-70	OFF
PLMN		1	2	3

Step e-f:

CPICH_Ec	dBm/3.8 4 MHz	-60 -> OFF	-70	OFF
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Step g-h:

CPICH_Ec	dBm/3.8 4 MHz	OFF	-70	OFF -> -60
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Step i-l:

CPICH_Ec	dBm/3.8 4 MHz	OFF	-70 -> OFF	-60
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For TDD only:

Step a-d:

Parameter	Unit	Cell 1	Cell 2	Cell 3
Test Channel		1	2	3
P-CCPCH RSCP	dBm	-69	-74 <del>2</del>	OFF
<del>Qrxlevmin</del>	dBm	-103	-103	-103
<del>Srxlev*</del>	dB	34	34	-
PLMN		1	2	3

Step e-f:

P-CCPCH RSCP		-69 -> OFF	-74 <del>2</del>	OFF
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Step g-h:

P-CCPCH RSCP		OFF	-74 <del>2</del>	OFF -> -69
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Step ~~k~~-l:

P-CCPCH RSCP		OFF	-74 <del>2</del> -> OFF	-69
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The UE is equipped with a USIM containing default values except for those listed below.

USIM field	Priority	PLMN
EF <sub>LOCI</sub>		
EF <sub>HPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 1
EF <sub>PLMNwAcT</sub>	1 <sup>st</sup>	PLMN 3

Test procedure

Method C is applied.

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

#### 6.1.1.3.5 Test Requirements

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

### <Next change>

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

##### 6.1.1.5.1 Definition

Test to verify that in Automatic Network Selection Mode, the UE selects PLMNs in a prioritized order. Forbidden PLMNs shall not be selected. In this test are only considered "Other PLMN/access technology combinations" in the priority list.

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

##### 6.1.1.5.2 Conformance requirement

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

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

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

2. Automatic Network Selection Mode Procedure:

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

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

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

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

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

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

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

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

#### References

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

NOTE: TS 31.102 defines the USIM fields.

#### 6.1.1.5.3 Test purpose

1. To verify that in Automatic Network Selection Mode Procedure, the UE selects "Other PLMN/access technology combinations" in a prioritized order according to conformance requirement 2.4 and 2.5.
2. To verify that forbidden PLMNs are not selected.

#### 6.1.1.5.4 Method of test

#### Initial conditions

The UE is in automatic PLMN selection mode.  
All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_Ec [dBm/3.84 MHz] (FDD)	P-CCPCH_RSCP [dBm] (TDD)	High Quality signal	Test Channel	PLMN
Cell 1	-85	-74	Yes	1	PLMN 6
Cell 2	-80	-69	Yes	2	PLMN 7
Cell 3	-80	-69	Yes	3	PLMN 8
Cell 4	-94	-84 <del>3</del>	No	4	PLMN 9
Cell 5	-99	-89 <del>8</del>	No	5	PLMN 10
Cell 6	-104	-94 <del>3</del>	No	6	PLMN 11

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

USIM field	Priority	PLMN
EF <sub>LOCI</sub>		PLMN 1
EF <sub>HPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 2
EF <sub>PLMNwAcT</sub>	1 <sup>st</sup>	PLMN 3
	2 <sup>nd</sup>	PLMN 4
EF <sub>OPLMNwAcT</sub>	1 <sup>st</sup>	PLMN 5
	2 <sup>nd</sup>	PLMN 6
EF <sub>FPLMN</sub>		PLMN 10

### Test procedure

Method B is applied.

- a) The SS activates cells 1-6 and monitors the cells for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) Cell 1 is switched off.
- e) The SS waits for random access requests from the UE.
- f) The cell associated to the currently shown PLMN shall be switched off.
- g) The SS waits for random access requests from the UE.
- h) The cell associated to the currently shown PLMN shall be switched off.
- i) The SS waits for random access requests from the UE.
- j) Cell 4 is switched off.
- k) The SS waits for random access requests from the UE.
- l) Cell 6 is switched off.

#### 6.1.1.5.5 Test Requirements

- 1) In step c), the response from the UE shall be on Cell 1. The displayed PLMN shall be PLMN 6.
- 2) In step e), the response from the UE shall be on either Cell 2 or 3. The displayed PLMN shall be the one associated with the cell on which the response was received.
- 3) In step g), the response from the UE shall be on either Cell 2 or 3 (excluding the cell in step 2). The displayed PLMN shall be the one associated with the cell on which the response was received.
- 4) In step i), the response from the UE shall be on Cell 4. The displayed PLMN shall be PLMN 9.
- 5) In step k), the response from the UE shall be on Cell 6. The displayed PLMN shall be PLMN 11.
- 6) After step l), the UE shall inform that only limited service is possible.

## 6.1.1.6 UE will transmit only if PLMN available

### 6.1.1.6.1 Definition

Test to verify that the UE will not generate any RF output if no PLMN is available.

### 6.1.1.6.2 Conformance requirement

~~[FFS: Currently no requirements exist in core specs.]~~

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

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

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

2. Automatic Network Selection Mode Procedure:

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

2.1 HPLMN (if not previously selected);

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

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

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

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

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

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

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

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

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

4. The UE shall scan all RF channels in the UTRA band according to its capabilities to find available PLMNs. On each carrier, the UE shall search for the strongest cell according to the cell search procedures (for FDD, see TS 25.214, and TDD, see TS 25.224) and read its system information, in order to find out which PLMN the cell belongs to. If the UE can read the PLMN identity, the found PLMN shall be reported to the NAS as a high quality PLMN (but without the RSCP value), provided that the following high quality criterion is fulfilled:

- For an FDD cell, the measured primary CPICH RSCP value shall be greater than or equal to -95 dBm.
- For a TDD cell, the measured P-CCPCH RSCP shall be greater than or equal to -84 dBm.

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

#### References

1. [TS 23.122, clause 4.4.3.1.](#)
2. [TS 23.122, clause 4.4.3.1.1.](#)
3. [TS 23.122, clause 3.1.](#)
4. [TS 25.304, clause 5.1.2.2.](#)

NOTE: TS 31.102 defines the USIM fields.

#### 6.1.1.6.3 Test purpose

1. To verify that the UE does not give any "Service indication" when no PLMN is available.
2. To verify that the UE will not generate any RF output when no PLMN is available.

#### 6.1.1.6.4 Method of test

Initial conditions

For FDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-60	-65	-70

For TDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	<del>-74</del>	<del>-79</del>
<del>Qrxlevmin</del>	<del>dBm</del>	<del>-103</del>	<del>-103</del>	<del>-103</del>
<del>Srxlev*</del>	<del>dB</del>	<del>34</del>	<del>32</del>	<del>30</del>

Test procedure

Method C is applied.

- a) The SS activates the cells 1-3 and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access request from the UE.
- d) Cells 1-3 are switched off.
- e) The SS shall wait 20 s to allow the UE to detect the loss of cells.
- f) By MMI, an attempt to originate a call is made.
- g) By MMI, an attempt to originate an emergency call is made (only if UE supports speech).

#### 6.1.1.6.5 Test Requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step f) and g), the UE shall not produce any RF output, neither give any "service indication" within 2 min.



### 6.1.1.7 Cell reselection of ePLMN in manual mode

#### 6.1.1.7.1 Definition

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

#### 6.1.1.7.2 Conformance requirement

##### B) Manual network selection mode

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

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

or,

- ii) The user selects automatic mode.

References:

TS 22.011 clause 3.2.2.2B

#### 6.1.1.7.3 Test purpose

To verify that in Manual Network Selection Mode Procedure, the UE can perform reselection to an equivalent PLMN.

#### 6.1.1.7.4 Method of test

##### Initial conditions

The UE is in manual PLMN selection mode.

Cell\_selection\_and\_reselection\_quality\_measure is CPICH\_RSCP (FDD).

All Radio Access Technology USIM fields and cells are UTRAN.

Cell	CPICH_RSCP [dBm] (FDD)	P-CCPCH_RSCP [dBm] (TDD)	Test Channel	PLMN
Cell 1	-78	-69 <del>[TBD]</del>	1	PLMN 1
Cell 2	-62	-54 <del>[TBD]</del>	2	PLMN 2
Cell 3	-68	-64 <del>[TBD]</del>	3	PLMN 3

PLMN1 is the HPLMN.

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

USIM field	Priority	PLMN
EF <sub>Loc1</sub>		PLMN 1

##### Test procedure

- a) The SS activates cells 1.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) A Location Update Accpet message shall be sent on reception of a Location Update message from the UE. The Location Update Accept message shall include PLMN3 in the equivalent PLMN list.
- e) Cell 2 and 3 are activated.

### 6.1.1.7.5 Test Requirements

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

## 6.1.2 Cell selection and reselection

### <Next change>

### 6.1.2.3 HCS Cell reselection

#### 6.1.2.3.1 Definition

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

#### 6.1.2.3.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
  - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
  - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria for hierarchical cells:
  - 2.1 The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is calculated from the Q, Q<sub>hcs</sub>, TEMP\_OFFSET and PENALTY\_TIME parameters.
  - 2.2 The UE shall perform ranking of all cells that fulfil the S criterion among all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ .
  - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If an FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.
  - 2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval T<sub>reselection</sub>.
  - 2.5 The cell-ranking criterion R is derived from Q, Q<sub>hyst</sub>, Q<sub>offset</sub>, TEMP\_OFFSET, PENALTY\_TIME.

#### References

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

#### 6.1.2.3.3 Test purpose

1. Verify that the UE ignores cells with  $H < 0$  for reselection and that H is calculated from Q<sub>hcs</sub>. The modification of this parameter on the BCCH shall trigger the cell reselection evaluation process.
2. Verify that the UE ranks cells based on both HCS priority and R. Q<sub>hyst</sub>, Q<sub>offset</sub>, TEMP\_OFFSET, PENALTY\_TIME and T<sub>reselection</sub> are not applied so R equals CPICH\_RSCP for FDD cells, and P-CCPCH RSCP for TDD cells.

## 6.1.2.3.4 Method of test

Initial conditions

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.8 4 MHz	-60	-65	-70
HCS priority		6	7	7
Qhcs <sub>s</sub>	dBm	-80	-50	-50
H <sub>s</sub> *	dBm	20	-15	-20

Step d-e:

Qhcs <sub>s</sub>	dBm	-80	-50	-50 -> -80
H <sub>s</sub> *	dBm	20	-15	-20 -> 10

Step f-g:

Qhcs <sub>s</sub>	dBm	-80	-50 -> -80	-80
H <sub>s</sub> *	dBm	20	-15 -> 15	10

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	-74 <del>1</del>	-79 <del>3</del>
HCS priority		6	7	7
Qhcs <sub>s</sub>	dB	-89 <del>30</del>	-59 <del>40</del>	-59 <del>40</del>
H <sub>s</sub> *	dB	-20 <del>39</del>	-15 <del>64</del>	-20 <del>63</del>

Step d-e:

Qhcs <sub>s</sub>	dB	-89 <del>30</del>	-59 <del>40</del>	-59 <del>40</del> -> - 89 <del>30</del>
H <sub>s</sub> *	dB	20- <del>39</del>	-15 <del>64</del>	-20 <del>63</del> -> - 10 <del>43</del>

Step f-g:

Qhcs <sub>s</sub>	dB	-89 <del>30</del>	-59 <del>40</del> -> - 89 <del>30</del>	-89 <del>30</del>
H <sub>s</sub> *	dB	20- <del>39</del>	-15 <del>64</del> -> 15- 44	10- <del>43</del>

Test procedure

Method B is applied.

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

## 6.1.2.3.5 Test requirements

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

## <Next change>

### 6.1.2.6 Emergency calls

#### 6.1.2.6.1 Definition

Test to verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.

#### 6.1.2.6.2 Conformance requirement

1. Acceptable cell:

An "acceptable cell" is a cell on which the UE may camp to obtain limited service (originate emergency calls). Such a cell shall fulfil the following requirements, which is the minimum set of requirements to initiate an emergency call in a UTRAN network:

1.1 The cell is not barred;

1.2 The cell selection criteria are fulfilled.

2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.

2.1 The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.

2.2 The cell is not barred.

2.3 The cell is not part of the list of "forbidden LAs for roaming".

2.4 The cell selection criteria are fulfilled.

3. If the UE is unable to find any suitable cell of selected PLMN the UE shall enter the *Any cell selection* state.

4. Any Cell Selection State: In this state, the UE shall attempt to find an acceptable cell of an any PLMN to camp on, trying all RATs that are supported by the UE and searching first for a high quality cell. The UE, which is not camped on any cell, shall stay in this state until an acceptable cell is found.

5. Camped on Any Cell State: In this state the UE obtains limited service. The UE shall regularly attempt to find a suitable cell of the selected PLMN, trying RATs that are supported by the UE. If a suitable cell is found, this causes an exit to the Camped normally State.

6. In the Camped on Any Cell State, the UE shall perform the cell reselection evaluation process on the following occasions/triggers:

6.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and TS 25.123 for TDD mode.

6.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.

#### References

1. TS 25.304, clause 4.3.
2. TS 25.304, clause 4.3.
3. TS 25.304, clause 5.2.2.1.
4. TS 25.304, clause 5.2.8.
5. TS 25.304, clause 5.2.2.5.
6. TS 25.304, clause 5.2.9.1.

## 6.1.2.6.3 Test purpose

1. To verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.
2. To verify that the UE selects a cell with  $S > 0$  and  $\text{CellBarred} = 0$  (acceptable cell) when no suitable cells of the selected PLMN are available.
3. To verify that the UE ranks the acceptable cells according to the cell-ranking criterion R which in this test case equals Q as  $Q_{\text{hyst}}$ ,  $Q_{\text{offset}}$ ,  $\text{TEMP\_OFFSET}$  and  $\text{PENALTY\_TIME}$  parameters are not used. Treselection is not used either.

## 6.1.2.6.4 Method of test

## Initial conditions

In step a-d, Cell 1 and 2 are neither suitable nor acceptable cells. Cell 3 is an acceptable cell but not suitable.

In step e-f, both Cell 1 and 3 are acceptable cells.

## Step a-d:

For FDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-65	-60	-70
Qrxlevmin	dBm	-80	-50	-80
Srxlev*	dBm	15	-10	10
CellBarred		1	0	0
PLMN		forbidden	forbidden	forbidden

For TDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	<del>-64</del>	<del>-74</del>
CellBarred		1	0	0
PLMN		forbidden	forbidden	forbidden

## Step e-f:

CellBarred		1 -> 0	0	0
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NOTE: All the BCCH cells belong to the same PLMN, which is not the UE's home PLMN and is in the USIM's forbidden PLMN's list.

## Test procedure

Method C is applied.

- a) The SS activates the cells and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) 50 s after switch on, an emergency call is initiated on the UE.
- d) The SS waits for random access request from the UE.
- e) The SS changes the CellBarred of Cell 1 to 0.
- f) After 30 s an emergency call is initiated on the UE.
- g) The SS waits for random access request from the UE.

## 6.1.2.6.5 Test requirements

- 1) In step d), the first access from the UE shall be on Cell 3.

2) In step g), the first access from the UE shall be on Cell 1.

## 6.1.2.7 Emergency calls; Intra-frequency cell "Not allowed"

### 6.1.2.7.1 Definition

Test to verify that for emergency call and cell status "barred", the Intra-frequency cell re-selection indicator IE is ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

### 6.1.2.7.2 Conformance requirement

1. When cell status "barred" is indicated:
  - The UE is not permitted to select/re-select this cell, not even for emergency calls.
  - The UE shall select another cell according to the following rule:
    - If the "Intra-frequency cell re-selection indicator" IE is set to "not allowed" the UE shall not re-select a cell on the same frequency as the barred cell. For emergency call, the Intra-frequency cell re-selection indicator IE shall be ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

### References

1. TS 25.304, clause 5.3.1.1.

### 6.1.2.7.3 Test purpose

To verify that for emergency call and cell status "barred", the Intra-frequency cell re-selection indicator IE is ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

### 6.1.2.7.4 Method of test

#### Initial conditions

Cell 1 and 2 are on the same carrier frequency.

Step a-c:

For FDD only:

Parameter	Unit	Cell 1	Cell 2
CPICH_Ec	dBm/3.84 MHz	-60	-70
Intra-frequency cell re-selection indicator		Not allowed	Not allowed
CellBarred		0	0

For TDD only:

Parameter	Unit	Cell 1	Cell 2
P-CCPCH RSCP	dBm	<del>-769</del>	<del>-679</del>
CellBarred	dBm	0	0

Step d-i:

CellBarred		0 -> 1	0
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#### Test procedure

Method C is applied.

- a) The SS activates the cells and monitors them for any random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access request from the UE.
- d) The SS sets Cell 1 to be barred.
- e) The SS waits to see if there is any random access request from the UE.
- f) By MMI, an attempt to originate a call is made.
- g) The SS waits to see if there is any random access request from the UE.
- h) By MMI, an emergency call is initiated on the UE.
- i) The SS waits for random access request from the UE.

#### 6.1.2.7.5 Test requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- 2) In step e), there shall be no response from the UE within 2 min.
- 3) In step g), there shall be no response from the UE within 2 min. It shall not be possible to originate the call.
- 4) In step i), the UE shall respond on Cell 2. It shall be possible to originate the emergency call.

3GPP TSG- T1 Meeting #17  
Luton, England 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

Tdoc # T1-020698

3GPP TSG–T1/SIG Meeting #25  
Singapore, 18<sup>th</sup>- 20<sup>th</sup> September 2002

Tdoc T1S-020651

CR-Form-v4
CHANGE REQUEST
⌘ <b>34.123-1 CR 326</b> ⌘ ev - ⌘ Current version: <b>5.1.0</b> ⌘

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

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

<b>Title:</b>	⌘	Correction of test case for timing re-initialised inter-frequency handover (revision of T1S-020569)	
<b>Source:</b>	⌘	Ericsson	
<b>Work item code:</b>	⌘	TEI	<b>Date:</b> ⌘ 20 September 2002
<b>Category:</b>	⌘	<b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b> ⌘ <b>REL-5</b> Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘	<p><b>The changes in this CR are proposed for the following reasons:</b></p> <p><u>Clause 8.2.6.37.4. Step 5</u></p> <ul style="list-style-type: none"> <li>The test specifications should not only verify the SF/2 compressed mode method. According to the core specification UE implementations are required to support all compressed mode methods. Since there is a significant difference between the different methods and the use of SF/2 has drawbacks concerning the use of scarce radio resources, there should at least be one TC verifying the use of the HLS method. Therefore the proposal is to verify the HLS method for the PS case in this TC.</li> </ul>
<b>Summary of change:</b>	⌘	<p><b>This CR includes the following changes</b></p> <p><u>Clause 8.2.6.37.4</u></p> <p>The proposal is the same as included in T1S-020438, with the following exceptions:</p> <ul style="list-style-type: none"> <li>In Table 8.2.6.37-1, the difference in CPICH Ec value between cell 3 and 4 has been increased from 2 to 5 dB to prevent that some UEs report cell 4 as best cell due to measurement inaccuracies</li> <li>In step 5, the IE TGPS Status Flag is now set to "Inactive" also for the PS case</li> <li>In step 9, for all reported cells the remarks column for IE Cell synchronisation information now reads "Check that this IE is absent"</li> </ul>



	<ul style="list-style-type: none"> <li>In step 9, the remarks column for IE "Primary scrambling code" within the event results not reads "Check that the value of this IE is set to Scrambling code 3 (or scrambling code 2)" since the best cell that is to be reported can either be cell 3 or cell 4</li> <li>In step 10, the statement "Not present" in the remarks column for IE Downlink DPCH info common for all RLs was removed</li> <li>In step 13, the measurement identity was changed from 11 to 1</li> </ul> <p>In this revision following changes were done:</p> <p>Editorial mistake in step 10 corrected.</p> <p>Tableformats for specific message contents aligned with ETSIs proposal.</p> <p>"Inactive" corrected to be "Deactivate".</p> <p>Table 8.2.6.37-1 changed to contain cells 4,5,6 instead of cells 3,4,5 after suggestion from TF160.</p>
<b>Consequences if not approved:</b>	⌘ If changes are not approved, the HLS compressed mode method is not covered in the test specifications

<b>Clauses affected:</b>	⌘ 8.2.6.37.4												
<b>Other specs affected:</b>	<table border="0"> <tr> <td>⌘ <input type="checkbox"/></td> <td>Other core specifications</td> <td>⌘</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Test specifications</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>O&amp;M Specifications</td> <td></td> <td></td> </tr> </table>	⌘ <input type="checkbox"/>	Other core specifications	⌘		<input type="checkbox"/>	Test specifications			<input type="checkbox"/>	O&M Specifications		
⌘ <input type="checkbox"/>	Other core specifications	⌘											
<input type="checkbox"/>	Test specifications												
<input type="checkbox"/>	O&M Specifications												
<b>Other comments:</b>	⌘ Affects R99, REL-4, REL-5												

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

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

### 8.2.6.37 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Hard handover to another frequency with timing re-initialised)

#### 8.2.6.37.1 Definition

#### 8.2.6.37.2 Conformance requirement

In case the reconfiguration procedure is used to remove all existing RL(s) in the active set while new RL(s) are established the UE shall:

- 1> apply the hard handover procedure as specified (below);
- 1> be able to perform this procedure even if no prior UE measurements have been performed on the target cell and/or frequency.

...

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

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

...

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

- 1> stop all intra-frequency and inter-frequency measurements on the cells listed in the variable CELL\_INFO\_LIST until a MEASUREMENT CONTROL message is received from UTRAN.

...

When the UE is in CELL\_DCH state and receives any of the messages causing the UE to perform a hard handover, the UE shall check the IE "Timing indication" in that message and:

- 1> if IE "Timing indication" has the value "initialise" (i.e. timing re-initialised hard handover):
  - 2> read SFN on target cell identified by the first radio link listed in the IE "Downlink information per radio link list" included in that message;
  - 2> set the CFN according to the following formula:
    - 3> for FDD:

$$\text{CFN} = (\text{SFN} - (\text{DOFF} \text{ div } 38400)) \text{ mod } 256$$

where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN.

...

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS\_IDENTITY):
  - 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
    - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" received in this message, when the new configuration received in this message is taken into use;

...

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell\_DCH to Cell\_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

- 1> set the 20 MSB of the HFN component of COUNT-C for TM-RLC to the value of the latest transmitted IE "START" or "START List" for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and
- 1> set the remaining LSBs of the HFN component of COUNT-C to zero;
- 1> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN;
- 1> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now" for this IE;
- 1> calculate the START value according to subclause 8.5.9;
- 1> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;
- 1> at the CFN value as indicated in the response message in the IE "COUNT-C activation time":
  - 2> set the 20 MSB of the HFN component of the COUNT-C variable to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and
  - 2> set the remaining LSBs of the HFN component of COUNT-C to zero;
  - 2> increment the HFN component of the COUNT-C variable by one;
  - 2> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;
  - 2> step the COUNT-C variable, as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

## Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.3.5, 8.5.15.2, 8.6.6.15, 8.6.6.28

### 8.2.6.37.3 Test Purpose

To confirm that the UE is able to perform a hard-handover with change of frequency, with and without prior measurements on the target frequency.

To confirm that the UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message when the procedure has been initiated with the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE stops intra-frequency measurements after the inter-frequency handover has been performed, until a MEASUREMENT CONTROL message is received from the SS.

To confirm that the UE computes as it shall the CFN to be used after the handover.

To confirm that the UE deactivates compressed mode when it has been ordered to do so in the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE includes the IE "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info") in the response message if ciphering is active for any radio bearer using RLC-TM.

### 8.2.6.37.4 Method of test

#### Initial Condition

System Simulator: 5 cells – Cell 1 and cell 2 on frequency  $f_1$ , cell 43 and cell 54 on frequency  $f_2$ , and cell 65 on frequency  $f_3$ . Cells 2 and 54 shall have the same primary scrambling code.

UE: "CS-DCCH+DTCH\_DCH" (state 6-9) or "PS-DCCH+DTCH\_DCH" (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the test case shall be run twice, once starting from state 6-9, once starting from state 6-10. Ciphering shall be activated.

### Test Procedure

Table 8.2.6.37-1 illustrates the downlink power to be applied for the 54 cells, as well as the frequency and scrambling code for each cell.

**Table 8.2.6.37-1**

Parameter	Unit	Cell 1			Cell 2			Cell 43			Cell 54			Cell 65		
Frequency		f <sub>1</sub>			f <sub>1</sub>			f <sub>2</sub>			f <sub>2</sub>			f <sub>3</sub>		
Scrambling code		Scrambling code 1			Scrambling code 2			Scrambling code 3			Scrambling code 2			Scrambling code 4		
		T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2
CPICH Ec	dBm/3.8 4 MHz	-60	-60	-75	-95	-60	-75	-60	-60	-60	-60	-60	65	-50	-50	-50

The UE is initially in CELL\_DCH, and has only cell 1 in its active set.

At instant T1, the downlink power is changed according to what is shown in table 8.2.6.37 -1. Cell 2 should then trigger event 1a as has been configured through the default System Information Block Type 11. The UE shall thus send a MEASUREMENT REPORT to the SS, triggered by cell 2.

The SS adds then cell 2 to the active set of the Ue, by sending an ACTIVE SET UPDATE message to the UE. The UE shall answer with an ACTIVE SET UPDATE COMPLETE message.

The SS configures then compressed mode, to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message.

At instant T2, the downlink power is changed according to what is shown in table 8.2.6.37-1. Frequency f<sub>2</sub> shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 43 on frequency f<sub>2</sub>. The UE is also ordered to stop compressed mode after the handover.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH\_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering. The SS shall restart incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

The SS then waits for 20 seconds, and checks that no MEASUREMENT REPORT is received from the UE.

The SS sends then a MEASUREMENT CONTROL message to the UE, to modify the intra-frequency cell info list of the UE. About 640 ms after, a MEASUREMENT REPORT message shall be received from the UE, triggered by cell 54. Subsequent MEASUREMENT REPORT messages shall be received at 4 seconds interval.

The SS sends then a MEASUREMENT CONTROL message to the UE that sets up inter-frequency measurements, but does not activate compressed mode in that message. It waits then for 20 seconds, and checks that no MEASUREMENT REPORT message triggered by cell 65 is received.

The SS then sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 65 on frequency f<sub>3</sub>.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH\_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS changes the power of the cells according to column T1 in table 8.2.6.37-1
2		→	MEASUREMENT REPORT	Event 1a is triggered by cell 2 in the UE, which sends a MEASUREMENT REPORT message to the SS
3		←	ACTIVE SET UPDATE	The SS adds cell 2 to the active set of the UE.
4		→	ACTIVE SET UPDATE COMPLETE	The UE answers with an ACTIVE SET UPDATE COMPLETE message to the SS
5		←	PHYSICAL CHANNEL RECONFIGURATION	The SS downloads the compressed mode parameters in the UE.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of the compressed mode parameters.
7		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE, and activates compressed mode.
8				The SS changes the power of the cells according to column T2 in table 8.2.6.37-1.
9		→	MEASUREMENT REPORT	Frequency $f_2$ triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
10		←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 4 on frequency $f_2$ .
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.
12				The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.

13	←	MEASUREMENT CONTROL	The SS updates the list of intra-frequency cells in the UE.
14	→	MEASUREMENT REPORT	Cell 54 triggers event 1a in the UE, which sends a MEASUREMENT REPORT message to the SS. Subsequent MEASUREMENT REPORT messages shall be received from the UE at 4 seconds interval.
15	←	MEASUREMENT CONTROL	The SS sets up an inter-frequency measurement in the UE, but does not activate compressed mode.
16			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
17	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 65 on frequency $f_3$ .
18	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.

### Specific Message Content

~~FPS~~

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

## MEASUREMENT REPORT (Step 2)

Information Element	Value/Remark
<u>Message Type</u>	
<u>Integrity check info</u>	
- <u>Message authentication code</u>	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- <u>RRC Message sequence number</u>	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
<u>Measurement identity</u>	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
<u>Measured Results</u>	1
- <u>Intra-frequency measured results</u>	
- <u>Cell measured results</u>	
- <u>Cell Identity</u>	Check that this IE is absent
- <u>SFN-SFN observed time difference</u>	Check that this IE is absent
- <u>Cell synchronisation information</u>	Check that this IE is absent
- <u>Primary CPICH info</u>	
- <u>Primary scrambling code</u>	Scrambling code 1 (or scrambling code 2)
- <u>CPICH Ec/N0</u>	Check that this IE is absent
- <u>CPICH RSCP</u>	Check that this IE is present
- <u>Pathloss</u>	Check that this IE is absent
- <u>Cell measured results</u>	
- <u>Cell Identity</u>	Check that this IE is absent
- <u>SFN-SFN observed time difference</u>	Check that this IE is absent
- <u>Cell synchronisation information</u>	Check that this IE is present and includes IE COUNT-C-SFN frame difference
- <u>Primary CPICH info</u>	
- <u>Primary scrambling code</u>	Scrambling code 2 (or scrambling code 1 if the previous scrambling code included by the UE was scrambling code 2)
- <u>CPICH Ec/N0</u>	Check that this IE is absent
- <u>CPICH RSCP</u>	Check that this IE is present
- <u>Pathloss</u>	Check that this IE is absent
<u>Measured results on RACH</u>	Check that this IE is absent
<u>Additional measured results</u>	Check that this IE is absent
<u>Event results</u>	
- <u>Intra-frequency measurement event results</u>	
- <u>Intra-frequency event identity</u>	1a
- <u>Cell measurement event results</u>	
- <u>Primary CPICH info</u>	
- <u>Primary scrambling code</u>	Scrambling code 2

ACTIVE SET UPDATE (Step 3)

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

<u>Information Element</u>	<u>Value/Remark</u>
<u>Radio link addition information</u>	
<u>- Primary CPICH Info</u>	
<u>- Primary Scrambling Code</u>	<u>Scrambling code 2</u>
<u>- Downlink DPCH info for each RL</u>	<u>Reference to TS34.108 clause 6.10</u>
	<u>Parameter Set</u>
<u>- CHOICE mode</u>	<u>FDD</u>
<u>- Primary CPICH usage for channel estimation</u>	<u>P-CPICH can be used.</u>
<u>- DPCH frame offset</u>	<u>Calculated value from Cell synchronisation information</u>
	<u>Not Present</u>
<u>- Secondary CPICH info</u>	
<u>- DL channelisation code</u>	
<u>- Secondary scrambling code</u>	<u>Not Present</u>
<u>- Spreading factor</u>	<u>Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets"</u>
	<u>Any value between 0 and Spreading factor-1 (use different values for each DPCH in case several DPCHs are allocated to the UE).</u>
<u>- Code Number</u>	<u>Not Present</u>
	<u>0</u>
<u>- Scrambling code change</u>	<u>Not Present</u>
<u>- TPC Combination Index</u>	<u>Not Present</u>
<u>- SSDT Cell Identity</u>	<u>Not Present</u>
<u>- Close loop timing adjustment mode</u>	<u>Not Present</u>
<u>- TFCI Combining Indicator</u>	<u>Not Present</u>
<u>- SCCPCH information for FACH</u>	<u>Not Present</u>



## PHYSICAL CHANNEL RECONFIGURATION (Step 5 for the CS case)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Activation time</u>	<u>Not Present</u>
<u>New U-RNTI</u>	<u>Not Present</u>
<u>New C-RNTI</u>	<u>Not Present</u>
<u>New DSCH-RNTI</u>	<u>Not Present</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>Not Present</u>
<u>CN information info</u>	<u>Not Present</u>
<u>URA identity</u>	<u>Not Present</u>
<u>Downlink counter synchronisation info</u>	<u>Not Present</u>
<u>Frequency info</u>	<u>Not Present</u>
<u>Maximum allowed UL TX power</u>	<u>Not Present</u>
<u>CHOICE channel requirement</u>	<u>Not Present</u>
<u>CHOICE mode</u>	<u>FDD</u>
- <u>Downlink PDSCH information</u>	<u>Not Present</u>
<u>Downlink information common for all radio links</u>	
- <u>Downlink DPCH info common for all RL</u>	<u>Not Present</u>
- <u>DPCH compressed mode info</u>	
- <u>TGPSI</u>	<u>1</u>
- <u>TGPS Status Flag</u>	<u>Deactivate</u>
- <u>TGCFN</u>	<u>Not present</u>
- <u>Transmission gap pattern sequence configuration parameters</u>	
- <u>TGMP</u>	<u>FDD Measurement</u>
- <u>TGPRC</u>	<u>Infinity</u>
- <u>TGSN</u>	<u>4</u>
- <u>TGL1</u>	<u>7</u>
- <u>TGL2</u>	<u>Not Present</u>
- <u>TGD</u>	<u>0</u>
- <u>TGPL1</u>	<u>3</u>
- <u>TGPL2</u>	<u>Not Present</u>
- <u>RPP</u>	<u>Mode 0</u>
- <u>ITP</u>	<u>Mode 0</u>
- <u>CHOICE UL/DL Mode</u>	<u>UL and DL, UL only or DL only (depending on the UE capability)</u>
- <u>Downlink compressed mode method</u>	<u>SF/2 (or not sent, depending on the UE capability)</u>
- <u>Uplink compressed mode method</u>	<u>SF/2 (or not sent, depending on the UE capability)</u>
- <u>Downlink frame type</u>	<u>B</u>
- <u>DeltaSIR1</u>	<u>2.0</u>
- <u>DeltaSIRAfter1</u>	<u>1.0</u>
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRAfter2</u>	<u>Not Present</u>
- <u>N identify abort</u>	<u>Not Present</u>
- <u>T Reconfirm abort</u>	<u>Not Present</u>
- <u>TX Diversity mode</u>	<u>Not Present</u>
- <u>SSDT information</u>	<u>Not Present</u>
- <u>Default DPCH Offset Value</u>	<u>Not Present</u>
<u>Downlink information per radio link list</u>	<u>2 radio links</u>
<u>Downlink information for each radio link</u>	
- <u>CHOICE mode</u>	<u>FDD</u>
- <u>Primary CPICH info</u>	<u>Scrambling code 1</u>
- <u>Cell ID</u>	<u>Not present</u>
- <u>PDSCH with SHO DCH info</u>	<u>Not present</u>
- <u>PDSCH code mapping</u>	<u>Not present</u>
- <u>Downlink DPCH info for each RL</u>	
- <u>CHOICE mode</u>	<u>FDD</u>
- <u>Primary CPICH usage for channel estimation</u>	<u>Primary CPICH may be used</u>
- <u>DPCH frame offset</u>	<u>0</u>

- <a href="#">Secondary CPICH info</a>	<a href="#">Not present</a>
- <a href="#">DL channelisation code</a>	
- <a href="#">Secondary scrambling code</a>	<a href="#">Not present</a>
- <a href="#">Spreading factor</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
	<a href="#">Parameter Set</a>
- <a href="#">Code number</a>	<a href="#">Same as the code currently allocated to the UE in cell 1</a>
- <a href="#">Scrambling code change</a>	<a href="#">Code change</a>
- <a href="#">TPC combination index</a>	<a href="#">0</a>
- <a href="#">SSDT cell identity</a>	<a href="#">Not present</a>
- <a href="#">Closed loop timing adjustment mode</a>	<a href="#">Not present</a>
<a href="#">Downlink information for each radio link</a>	
- <a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Primary CPICH info</a>	<a href="#">Scrambling code 2</a>
- <a href="#">Cell ID</a>	<a href="#">Not present</a>
- <a href="#">PDSCH with SHO DCH info</a>	<a href="#">Not present</a>
- <a href="#">PDSCH code mapping</a>	<a href="#">Not present</a>
- <a href="#">Downlink DPCH info for each RL</a>	
- <a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Primary CPICH usage for channel estimation</a>	<a href="#">Primary CPICH may be used</a>
- <a href="#">DPCH frame offset</a>	<a href="#">0</a>
- <a href="#">Secondary CPICH info</a>	<a href="#">Not present</a>
- <a href="#">DL channelisation code</a>	
- <a href="#">Secondary scrambling code</a>	<a href="#">Not present</a>
- <a href="#">Spreading factor</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
	<a href="#">Parameter Set</a>
- <a href="#">Code number</a>	<a href="#">Same as the code currently allocated to the UE in cell 2</a>
- <a href="#">Scrambling code change</a>	<a href="#">No code change</a>
- <a href="#">TPC combination index</a>	<a href="#">0</a>

## PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 5 for the PS case)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Activation time</u>	<u>Not Present</u>
<u>New U-RNTI</u>	<u>Not Present</u>
<u>New C-RNTI</u>	<u>Not Present</u>
<u>New DSCH-RNTI</u>	<u>Not Present</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>Not Present</u>
<u>CN information info</u>	<u>Not Present</u>
<u>URA identity</u>	<u>Not Present</u>
<u>Downlink counter synchronisation info</u>	<u>Not Present</u>
<u>Frequency info</u>	<u>Not Present</u>
<u>Maximum allowed UL TX power</u>	<u>Not Present</u>
<u>CHOICE channel requirement</u>	<u>Not Present</u>
<u>CHOICE mode</u>	<u>FDD</u>
- <u>Downlink PDSCH information</u>	<u>Not Present</u>
<u>Downlink information common for all radio links</u>	
- <u>Downlink DPCH info common for all RL</u>	<u>Not Present</u>
- <u>DPCH compressed mode info</u>	
- <u>TGPSI</u>	<u>1</u>
- <u>TGPS Status Flag</u>	<u>Deactivate</u>
- <u>TGCFN</u>	<u>(Current CFN+(256 – TTI/10msec)) mod 256</u>
- <u>Transmission gap pattern sequence configuration parameters</u>	
- <u>TGMP</u>	<u>FDD Measurement</u>
- <u>TGPRC</u>	<u>Infinity</u>
- <u>TGSN</u>	<u>4</u>
- <u>TGL1</u>	<u>7</u>
- <u>TGL2</u>	<u>Not Present</u>
- <u>TGD</u>	<u>0</u>
- <u>TGPL1</u>	<u>3</u>
- <u>TGPL2</u>	<u>Not Present</u>
- <u>RPP</u>	<u>Mode 0</u>
- <u>ITP</u>	<u>Mode 0</u>
- <u>CHOICE UL/DL Mode</u>	<u>UL and DL, UL only or DL only (depending on the UE capability)</u>
- <u>Downlink compressed mode method</u>	<u>HLS(or not sent, depending on the UE capability)</u>
- <u>Uplink compressed mode method</u>	<u>HLS(or not sent, depending on the UE capability)</u>
- <u>Downlink frame type</u>	<u>B</u>
- <u>DeltaSIR1</u>	<u>2.0</u>
- <u>DeltaSIRAfter1</u>	<u>1.0</u>
- <u>DeltaSIR2</u>	<u>Not Present</u>
- <u>DeltaSIRAfter2</u>	<u>Not Present</u>
- <u>N identify abort</u>	<u>Not Present</u>
- <u>T Reconfirm abort</u>	<u>Not Present</u>
- <u>TX Diversity mode</u>	<u>Not Present</u>
- <u>SSDT information</u>	<u>Not Present</u>
- <u>Default DPCH Offset Value</u>	<u>Not Present</u>
<u>Downlink information for each radio link</u>	<u>Not Present</u>

## MEASUREMENT CONTROL (Step 7)

Information Element	Value/Remark
<u>Measurement Identity</u>	<u>2</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	<u>Acknowledged Mode RLC</u>
- <u>Periodical Reporting / Event Trigger Reporting Mode</u>	<u>Event Trigger</u>
<u>Additional measurements list</u>	<u>Not Present</u>
<u>CHOICE measurement type</u>	<u>Inter-frequency measurement</u>
- <u>Inter-frequency cell info list</u>	
- <u>CHOICE inter-frequency cell removal</u>	<u>No inter-frequency cells removed</u>
- <u>New inter-frequency info list</u>	<u>2 inter-frequency cells</u>
- <u>Inter-frequency cell id</u>	<u>4</u>
- <u>Frequency info</u>	
- <u>UARFCN uplink (Nu)</u>	<u>UARFCN for the uplink corresponding to <math>f_2</math></u>
- <u>UARFCN downlink (Nd)</u>	<u>UARFCN for the downlink corresponding to <math>f_2</math></u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE Mode</u>	<u>FDD</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Scrambling code 3</u>
- <u>Primary CPICH TX power</u>	<u>Not Present</u>
- <u>TX Diversity Indicator</u>	<u>FALSE</u>
- <u>Inter-frequency cell id</u>	<u>5</u>
- <u>Frequency info</u>	
- <u>UARFCN uplink (Nu)</u>	<u>UARFCN for the uplink corresponding to <math>f_2</math></u>
- <u>UARFCN downlink (Nd)</u>	<u>UARFCN for the downlink corresponding to <math>f_2</math></u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE Mode</u>	<u>FDD</u>
- <u>Primary CPICH Info</u>	<u>Not present</u>
- <u>Primary Scrambling Code</u>	<u>Scrambling code 2</u>
- <u>Primary CPICH TX power</u>	<u>Not Present</u>
- <u>TX Diversity Indicator</u>	<u>FALSE</u>
- <u>Cells for measurement</u>	<u>Not present</u>
- <u>Inter-frequency measurement quantity</u>	
- <u>CHOICE reporting criteria</u>	<u>Inter-frequency reporting criteria</u>
- <u>Filter Coefficient</u>	<u>0</u>
- <u>Measurement quantity for frequency quality estimate</u>	<u>CPICH RSCP</u>
- <u>Inter-frequency reporting quantity</u>	
- <u>UTRA Carrier RSSI</u>	<u>FALSE</u>
- <u>Frequency quality estimate</u>	<u>FALSE</u>
- <u>Non frequency related cell reporting quantities</u>	
- <u>SFN-SFN observed time difference reporting indicator</u>	<u>No report</u>
- <u>Cell synchronisation information reporting indicator</u>	<u>FALSE</u>
- <u>Cell Identity reporting indicator</u>	<u>TRUE</u>
- <u>CPICH Ec/No reporting indicator</u>	<u>FALSE</u>
- <u>CPICH RSCP reporting indicator</u>	<u>TRUE</u>
- <u>Pathloss reporting indicator</u>	<u>FALSE</u>
- <u>Reporting cell status</u>	<u>Not present</u>
- <u>Measurement validity</u>	
- <u>UE State</u>	<u>CELL_DCH</u>
- <u>Inter-frequency set update</u>	
- <u>UE autonomous update</u>	<u>On with no reporting</u>
- <u>Non autonomous update mode</u>	<u>Not present</u>
- <u>CHOICE report criteria</u>	<u>Inter-frequency measurement reporting criteria</u>
- <u>Parameters required for each event</u>	
- <u>Inter-frequency event identity</u>	<u>2b</u>
- <u>Threshold used frequency</u>	<u>-70 dBm</u>

- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	10 seconds

## MEASUREMENT REPORT (Step 9)

Information Element	Value/Remark
<u>Message Type</u> <u>Integrity check info</u>	<p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p>
<ul style="list-style-type: none"> <li>- <u>Message authentication code</u></li> <li>- <u>RRC Message sequence number</u></li> </ul>	
<u>Measurement identity</u> <u>Measured Results</u>	<p>2</p>
<ul style="list-style-type: none"> <li>- <u>Inter-frequency measured results list</u></li> <li>- <u>Frequency info</u></li> <li>- <u>CHOICE mode</u></li> <li>- <u>UARFCN uplink</u></li> </ul>	
<ul style="list-style-type: none"> <li>- <u>UARFCN downlink</u></li> </ul>	<p>FDD</p> <p>Check that the value of this IE is set to UARFCN for the uplink corresponding to <math>f_2</math> (Could be absent in case the duplex distance is 190 MHz)</p> <p>Check that the value of this IE is set to UARFCN for the downlink corresponding to <math>f_2</math></p>
<ul style="list-style-type: none"> <li>- <u>UTRA carrier RSSI</u></li> <li>- <u>Inter-frequency cell measurement results</u></li> <li>- <u>Cell measured results</u></li> <li>- <u>Cell Identity</u></li> <li>- <u>SFN-SFN observed time difference</u></li> <li>- <u>Cell synchronisation information</u></li> <li>- <u>Primary CPICH info</u></li> <li>- <u>Primary scrambling code</u></li> </ul>	<p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p>
<ul style="list-style-type: none"> <li>- <u>CPICH Ec/N0</u></li> <li>- <u>CPICH RSCP</u></li> <li>- <u>Pathloss</u></li> <li>- <u>Cell measured results</u></li> <li>- <u>Cell Identity</u></li> <li>- <u>SFN-SFN observed time difference</u></li> <li>- <u>Cell synchronisation information</u></li> <li>- <u>Primary CPICH info</u></li> <li>- <u>Primary scrambling code</u></li> </ul>	<p>Check that the value of this IE is set to Scrambling code 3 (or scrambling code 2)</p> <p>Check that this IE is absent</p> <p>Check that this IE is present</p> <p>Check that this IE is absent</p>
<ul style="list-style-type: none"> <li>- <u>CPICH Ec/N0</u></li> <li>- <u>CPICH RSCP</u></li> <li>- <u>Pathloss</u></li> </ul>	<p>Check that this IE is absent</p> <p>Check that this IE is absent</p> <p>Check that this IE is absent</p>
<u>Measured results on RACH</u> <u>Additional measured results</u>	<p>Check that this IE is absent</p> <p>Check that this IE is absent</p>
<u>Event results</u>	<p>2b</p>
<ul style="list-style-type: none"> <li>- <u>Inter-frequency measurement event results</u></li> <li>- <u>Intra-frequency event identity</u></li> <li>- <u>Cell measurement event results</u></li> <li>- <u>Primary CPICH info</u></li> <li>- <u>Primary scrambling code</u></li> </ul>	
	<p>Check that the value of this IE is set to Scrambling code 3</p>

## PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Information Element	Value/Remark
<a href="#">Activation time</a>	<a href="#">Not Present</a>
<a href="#">New U-RNTI</a>	<a href="#">Not Present</a>
<a href="#">New C-RNTI</a>	<a href="#">Not Present</a>
<a href="#">New DSCH-RNTI</a>	<a href="#">Not Present</a>
<a href="#">RRC State indicator</a>	<a href="#">CELL_DCH</a>
<a href="#">UTRAN DRX cycle length coefficient</a>	<a href="#">Not Present</a>
<a href="#">CN information info</a>	<a href="#">Not Present</a>
<a href="#">URA identity</a>	<a href="#">Not Present</a>
<a href="#">Downlink counter synchronisation info</a>	<a href="#">Not Present</a>
<a href="#">Frequency info</a>	<a href="#">FDD</a>
- <a href="#">CHOICE mode</a>	<a href="#">UARFCN for the uplink corresponding to <math>f_2</math></a>
- <a href="#">UARFCN uplink (Nu)</a>	<a href="#">(Could be absent in case the duplex distance is 190 MHz)</a>
- <a href="#">UARFCN downlink (Nd)</a>	<a href="#">UARFCN for the downlink corresponding to <math>f_2</math></a>
<a href="#">Maximum allowed UL TX power</a>	<a href="#">Not Present</a>
<a href="#">CHOICE channel requirement</a>	<a href="#">Not Present</a>
<a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Downlink PDSCH information</a>	<a href="#">Not Present</a>
<a href="#">Downlink information common for all radio links</a>	
- <a href="#">Downlink DPCH info common for all RL</a>	
- <a href="#">Timing indication</a>	<a href="#">Initialise</a>
- <a href="#">CFN-targetSFN frame offset</a>	<a href="#">0</a>
- <a href="#">Downlink DPCH power control information</a>	<a href="#">Not Present</a>
- <a href="#">Downlink rate matching restriction information</a>	<a href="#">Not Present</a>
- <a href="#">Spreading factor</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">Fixed or flexible position</a>	<a href="#">Parameter Set</a>
- <a href="#">TFCl existence</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">CHOICE SF</a>	<a href="#">Parameter Set</a>
- <a href="#">DPCH compressed mode info</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">TGPSI</a>	<a href="#">Parameter Set</a>
- <a href="#">TGPS Status Flag</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">TGCFN</a>	<a href="#">Parameter Set</a>
- <a href="#">Transmission gap pattern sequence configuration parameters</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">TX Diversity mode</a>	<a href="#">Parameter Set</a>
- <a href="#">SSDT information</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">Default DPCH Offset Value</a>	<a href="#">Parameter Set</a>
<a href="#">Downlink information per radio link list</a>	<a href="#">1</a>
<a href="#">Downlink information for each radio link</a>	<a href="#">Deactivate</a>
- <a href="#">CHOICE mode</a>	<a href="#">Not present</a>
- <a href="#">Primary CPICH info</a>	<a href="#">Not Present</a>
- <a href="#">Cell ID</a>	<a href="#">Not Present</a>
- <a href="#">PDSCH with SHO DCH info</a>	<a href="#">Not Present</a>
- <a href="#">PDSCH code mapping</a>	<a href="#">Not Present</a>
- <a href="#">Downlink DPCH info for each RL</a>	<a href="#">Arbitrary value between 0..306688 by step of 512</a>
- <a href="#">CHOICE mode</a>	<a href="#">1 radio link</a>
- <a href="#">Primary CPICH usage for channel estimation</a>	<a href="#">FDD</a>
- <a href="#">DPCH frame offset</a>	<a href="#">Scrambling code 3</a>
- <a href="#">Secondary CPICH info</a>	<a href="#">Not present</a>
- <a href="#">DL channelisation code</a>	<a href="#">Not present</a>
- <a href="#">Secondary scrambling code</a>	<a href="#">Not present</a>
- <a href="#">Spreading factor</a>	<a href="#">Not present</a>
- <a href="#">Code number</a>	<a href="#">FDD</a>
- <a href="#">Scrambling code change</a>	<a href="#">Primary CPICH may be used</a>
- <a href="#">TPC combination index</a>	<a href="#">Set to value of DPCH Frame Offset modulo 38400</a>
	<a href="#">Not present</a>
	<a href="#">Reference to TS34.108 clause 6.10</a>
	<a href="#">Parameter Set</a>
	<a href="#">Not present</a>
	<a href="#">Reference to TS34.108 clause 6.10</a>
	<a href="#">Parameter Set</a>
	<a href="#">Any value between 0 and Spreading factor-1</a>
	<a href="#">Not Present</a>
	<a href="#">0</a>

<a href="#">- SS DT cell identity</a>	<a href="#">Not present</a>
<a href="#">- Closed loop timing adjustment mode</a>	<a href="#">Not present</a>

[PHYSICAL CHANNEL RECONFIGURATION COMPLETE \(Steps 11 and 18 for the CS case\)](#)

<a href="#">Information Element</a>	<a href="#">Value/Remark</a>
<a href="#">Message Type</a>	
<a href="#">RRC transaction identifier</a>	<a href="#">Checked to see if it is set to identical value of the same IE in the downlink PHYSICAL CHANNEL RECONFIGURATION message</a>
<a href="#">Integrity check info</a>	<a href="#">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.</a>
<a href="#">- Message authentication code</a>	<a href="#">This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</a>
<a href="#">- RRC Message sequence number</a>	<a href="#">This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</a>
<a href="#">Uplink integrity protection activation info</a>	<a href="#">Check that not present</a>
<a href="#">CHOICE mode</a>	<a href="#">FDD</a>
<a href="#">COUNT-C activation time</a>	<a href="#">Check that this IE shall be present</a>
<a href="#">Radio bearer uplink ciphering activation time info</a>	<a href="#">Check that not present</a>
<a href="#">Uplink counter synchronisation info</a>	<a href="#">Check that present</a>
<a href="#">&gt;RB with PDCP information list</a>	<a href="#">Check that absent</a>
<a href="#">&gt;START list</a>	<a href="#">Check that this IE is set to 1</a>
<a href="#">&gt;&gt;CN Domain identity</a>	<a href="#">Check that this IE is set to CS Domain</a>
<a href="#">&gt;&gt;START</a>	<a href="#">Not checked</a>

[PHYSICAL CHANNEL RECONFIGURATION COMPLETE \(Steps 11 and 18 for the PS case\)](#)

<a href="#">Information Element</a>	<a href="#">Value/Remark</a>
<a href="#">Message Type</a>	
<a href="#">RRC transaction identifier</a>	<a href="#">Checked to see if it is set to identical value of the same IE in the downlink PHYSICAL CHANNEL RECONFIGURATION message</a>
<a href="#">Integrity check info</a>	<a href="#">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.</a>
<a href="#">- Message authentication code</a>	<a href="#">This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</a>
<a href="#">- RRC Message sequence number</a>	<a href="#">This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</a>
<a href="#">Uplink integrity protection activation info</a>	<a href="#">Check that not present</a>
<a href="#">CHOICE mode</a>	<a href="#">FDD</a>
<a href="#">COUNT-C activation time</a>	<a href="#">Check that not present</a>
<a href="#">Radio bearer uplink ciphering activation time info</a>	<a href="#">Check that not present</a>
<a href="#">Uplink counter synchronisation info</a>	<a href="#">Check that not present</a>

## MEASUREMENT CONTROL (Step 13)

Information Element	Value/Remark
<a href="#">Measurement Identity</a>	<a href="#">1</a>
<a href="#">Measurement Command</a>	<a href="#">Modify</a>
<a href="#">Measurement Reporting Mode</a>	<a href="#">Not present</a>
<a href="#">Additional measurements list</a>	<a href="#">Not present</a>
<a href="#">CHOICE measurement type</a>	<a href="#">Intra-frequency measurement</a>
- <a href="#">Intra-frequency cell info list</a>	<a href="#"></a>
- <a href="#">CHOICE intra-frequency cell removal</a>	<a href="#">Remove all intra-frequency cells</a>
- <a href="#">New intra-frequency info list</a>	<a href="#">2 new intra-frequency cells</a>
- <a href="#">Intra-frequency cell id</a>	<a href="#">4</a>
- <a href="#">Cell info</a>	<a href="#"></a>
- <a href="#">Cell individual offset</a>	<a href="#">0 dB</a>
- <a href="#">Reference time difference to cell</a>	<a href="#">Not present</a>
- <a href="#">Read SFN Indicator</a>	<a href="#">FALSE</a>
- <a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Primary CPICH Info</a>	<a href="#"></a>
- <a href="#">Primary Scrambling Code</a>	<a href="#">Scrambling code 3 (for cell 4)</a>
- <a href="#">Primary CPICH TX power</a>	<a href="#">Not Present</a>
- <a href="#">TX Diversity Indicator</a>	<a href="#">FALSE</a>
- <a href="#">Cells selection and Re-selection info</a>	<a href="#">Not Present</a>
- <a href="#">Intra-frequency cell id</a>	<a href="#">5</a>
- <a href="#">Cell info</a>	<a href="#"></a>
- <a href="#">Cell individual offset</a>	<a href="#">0 dB</a>
- <a href="#">Reference time difference to cell</a>	<a href="#">Not present</a>
- <a href="#">Read SFN Indicator</a>	<a href="#">FALSE</a>
- <a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Primary CPICH Info</a>	<a href="#"></a>
- <a href="#">Primary Scrambling Code</a>	<a href="#">Scrambling code 2 (for cell 5)</a>
- <a href="#">Primary CPICH TX power</a>	<a href="#">Not Present</a>
- <a href="#">TX Diversity Indicator</a>	<a href="#">FALSE</a>
- <a href="#">Cells selection and Re-selection info</a>	<a href="#">Not Present</a>
- <a href="#">Cells for measurement</a>	<a href="#">Not Present</a>
- <a href="#">Intra-frequency measurement quantity</a>	<a href="#">Not Present</a>
- <a href="#">Intra-frequency reporting quantity</a>	<a href="#">Not Present</a>
- <a href="#">Reporting cell status</a>	<a href="#">Not Present</a>
- <a href="#">Measurement validity</a>	<a href="#">Not Present</a>
- <a href="#">CHOICE report criteria</a>	<a href="#">Not Present</a>



## MEASUREMENT REPORT (Step 14)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Message Type</u>	
<u>Integrity check info</u>	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- 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.
<u>Measurement identity</u>	1
<u>Measured Results</u>	
- Intra-frequency measured results	
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that this IE is set to Scrambling code 2 (or scrambling code 3)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is present and includes IE COUNT-C-SFN frame difference
- Primary CPICH info	
- Primary scrambling code	Check that this IE is set to Scrambling code 3 (or scrambling code 2 if scrambling code 3 was indicated first)
- CPICH Ec/N0	Checked that this IE is absent
- CPICH RSCP	Checked that this IE is present
- Pathloss	Checked that this IE is absent
<u>Measured results on RACH</u>	Checked that this IE is absent
<u>Additional measured results</u>	Checked that this IE is absent
<u>Event results</u>	
- Intra-frequency measurement event results	
- Intra-frequency event identity	1a
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that this IE is set to Scrambling code 2

## MEASUREMENT CONTROL (Step 15)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Measurement Identity</u>	<u>2</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	<u>Acknowledged Mode RLC</u>
- <u>Periodical Reporting / Event Trigger Reporting Mode</u>	<u>Event Trigger</u>
<u>Additional measurements list</u>	<u>Not Present</u>
<u>CHOICE measurement type</u>	<u>Inter-frequency measurement</u>
- <u>Inter-frequency cell info list</u>	
- <u>CHOICE inter-frequency cell removal</u>	<u>No inter-frequency cells removed</u>
- <u>New inter-frequency info list</u>	<u>2 inter-frequency cells</u>
- <u>Inter-frequency cell id</u>	<u>1</u>
- <u>Frequency info</u>	
- <u>UARFCN uplink (Nu)</u>	<u>UARFCN for the uplink corresponding to f<sub>1</sub></u>
- <u>UARFCN downlink (Nd)</u>	<u>UARFCN for the downlink corresponding to f<sub>1</sub></u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE Mode</u>	<u>FDD</u>
- <u>Primary CPICH Info</u>	
- <u>Primary Scrambling Code</u>	<u>Scrambling code 1</u>
- <u>Primary CPICH TX power</u>	<u>Not Present</u>
- <u>TX Diversity Indicator</u>	<u>FALSE</u>
- <u>Inter-frequency cell id</u>	<u>2</u>
- <u>Frequency info</u>	
- <u>UARFCN uplink (Nu)</u>	<u>UARFCN for the uplink corresponding to f<sub>1</sub></u>
- <u>UARFCN downlink (Nd)</u>	<u>UARFCN for the downlink corresponding to f<sub>1</sub></u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE Mode</u>	<u>FDD</u>
- <u>Primary CPICH Info</u>	<u>Not present</u>
- <u>Primary Scrambling Code</u>	<u>Scrambling code 2</u>
- <u>Primary CPICH TX power</u>	<u>Not Present</u>
- <u>TX Diversity Indicator</u>	<u>FALSE</u>
- <u>Cells for measurement</u>	<u>Not present</u>
- <u>Inter-frequency measurement quantity</u>	
- <u>CHOICE reporting criteria</u>	<u>Inter-frequency reporting criteria</u>
- <u>Filter Coefficient</u>	<u>0</u>
- <u>Measurement quantity for frequency quality estimate</u>	<u>CPICH RSCP</u>
- <u>Inter-frequency reporting quantity</u>	
- <u>UTRA Carrier RSSI</u>	<u>FALSE</u>
- <u>Frequency quality estimate</u>	<u>FALSE</u>
- <u>Non frequency related cell reporting quantities</u>	
- <u>SFN-SFN observed time difference reporting indicator</u>	<u>No report</u>
- <u>Cell synchronisation information reporting indicator</u>	<u>FALSE</u>
- <u>Cell Identity reporting indicator</u>	<u>TRUE</u>
- <u>CPICH Ec/No reporting indicator</u>	<u>FALSE</u>
- <u>CPICH RSCP reporting indicator</u>	<u>TRUE</u>
- <u>Pathloss reporting indicator</u>	<u>FALSE</u>
- <u>Reporting cell status</u>	<u>Not present</u>
- <u>Measurement validity</u>	

<a href="#">- UE State</a>	<a href="#">CELL_DCH</a>
<a href="#">- Inter-frequency set update</a>	<a href="#">On with no reporting</a>
<a href="#">- UE autonomous update</a>	<a href="#">Not present</a>
<a href="#">- Non autonomous update mode</a>	<a href="#">Inter-frequency measurement reporting criteria</a>
<a href="#">- CHOICE report criteria</a>	
<a href="#">- Parameters required for each event</a>	<a href="#">2c</a>
<a href="#">- Inter-frequency event identity</a>	<a href="#">Not present</a>
<a href="#">- Threshold used frequency</a>	<a href="#">Not present</a>
<a href="#">- W used frequency</a>	<a href="#">Not present</a>
<a href="#">- Hysteresis</a>	<a href="#">1.0 dB</a>
<a href="#">- Time to trigger</a>	<a href="#">10 seconds</a>
<a href="#">- Reporting cell status</a>	
<a href="#">- CHOICE reported cell</a>	<a href="#">Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency</a>
<a href="#">- Maximum number of reported cells</a>	<a href="#">2</a>
<a href="#">- Parameters required for each non-used frequency</a>	<a href="#">1 frequency</a>
<a href="#">- Threshold non used frequency</a>	<a href="#">-90 dBm</a>
<a href="#">- W non-used frequency</a>	<a href="#">0.0</a>
<a href="#">DPCH compressed mode status info</a>	<a href="#">Not present</a>

## PHYSICAL CHANNEL RECONFIGURATION (Step 17)

Information Element	Value/Remark
<a href="#">Activation time</a>	<a href="#">Not Present</a>
<a href="#">New U-RNTI</a>	<a href="#">Not Present</a>
<a href="#">New C-RNTI</a>	<a href="#">Not Present</a>
<a href="#">New DSCH-RNTI</a>	<a href="#">Not Present</a>
<a href="#">RRC State indicator</a>	<a href="#">CELL_DCH</a>
<a href="#">UTRAN DRX cycle length coefficient</a>	<a href="#">Not Present</a>
<a href="#">CN information info</a>	<a href="#">Not Present</a>
<a href="#">URA identity</a>	<a href="#">Not Present</a>
<a href="#">Downlink counter synchronisation info</a>	<a href="#">Not Present</a>
<a href="#">Frequency info</a>	<a href="#">FDD</a>
- <a href="#">CHOICE mode</a>	<a href="#">UARFCN for the uplink corresponding to <math>f_3</math></a>
- <a href="#">UARFCN uplink (Nu)</a>	<a href="#">(Could be absent in case the duplex distance is 190 MHz)</a>
- <a href="#">UARFCN downlink (Nd)</a>	<a href="#">UARFCN for the downlink corresponding to <math>f_3</math></a>
<a href="#">Maximum allowed UL TX power</a>	<a href="#">Not Present</a>
<a href="#">CHOICE channel requirement</a>	<a href="#">Not Present</a>
<a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Downlink PDSCH information</a>	<a href="#">Not Present</a>
<a href="#">Downlink information common for all radio links</a>	<a href="#">Not Present</a>
- <a href="#">Downlink DPCH info common for all RL</a>	<a href="#">Not Present</a>
- <a href="#">Timing indication</a>	<a href="#">Initialise</a>
- <a href="#">CFN-targetSFN frame offset</a>	<a href="#">0</a>
- <a href="#">Downlink DPCH power control information</a>	<a href="#">Not Present</a>
- <a href="#">Downlink rate matching restriction information</a>	<a href="#">Not Present</a>
- <a href="#">Spreading factor</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">Fixed or flexible position</a>	<a href="#">Parameter Set</a>
- <a href="#">TFCl existence</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">CHOICE SF</a>	<a href="#">Parameter Set</a>
- <a href="#">DPCH compressed mode info</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">TX Diversity mode</a>	<a href="#">Parameter Set</a>
- <a href="#">SSDT information</a>	<a href="#">Not present</a>
- <a href="#">Default DPCH Offset Value</a>	<a href="#">Not Present</a>
<a href="#">Downlink information per radio link list</a>	<a href="#">Arbitrary set to value 0..306688 by step of 512</a>
- <a href="#">Downlink information for each radio link</a>	<a href="#">1 radio link</a>
- <a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Primary CPICH info</a>	<a href="#">Scrambling code 4</a>
- <a href="#">Cell ID</a>	<a href="#">Not present</a>
- <a href="#">PDSCH with SHO DCH info</a>	<a href="#">Not present</a>
- <a href="#">PDSCH code mapping</a>	<a href="#">Not present</a>
- <a href="#">Downlink DPCH info for each RL</a>	<a href="#">Not present</a>
- <a href="#">CHOICE mode</a>	<a href="#">FDD</a>
- <a href="#">Primary CPICH usage for channel estimation</a>	<a href="#">Primary CPICH may be used</a>
- <a href="#">DPCH frame offset</a>	<a href="#">Set to value of DPCH Frame Offset modulo 38400</a>
- <a href="#">Secondary CPICH info</a>	<a href="#">Not present</a>
- <a href="#">DL channelisation code</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">Secondary scrambling code</a>	<a href="#">Parameter Set</a>
- <a href="#">Spreading factor</a>	<a href="#">Not present</a>
- <a href="#">Code number</a>	<a href="#">Reference to TS34.108 clause 6.10</a>
- <a href="#">Scrambling code change</a>	<a href="#">Parameter Set</a>
- <a href="#">TPC combination index</a>	<a href="#">Any value between 0 and Spreading factor-1</a>
- <a href="#">SSDT cell identity</a>	<a href="#">Not Present</a>
- <a href="#">Closed loop timing adjustment mode</a>	<a href="#">Not Present</a>
	<a href="#">0</a>
	<a href="#">Not present</a>
	<a href="#">Not present</a>

## 8.2.6.37.5 Test Requirement

After step 1, the UE shall send a MEASUREMENT REPORT message triggered by event 1a for cell 2.

After step 3, the UE shall send an ACTIVE SET UPDATE COMPLETE message to acknowledge that it has added cell 2 to its active set.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters that were sent in the PHYSICAL CHANNEL RECONFIGURATION message of step 4.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency  $f_2$ . In that message, cell 43 shall be the only cell included in the IE event results.

After step 10, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 43 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message. The UE shall also start incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

After step 11, the UE shall not send any MEASUREMENT REPORT message triggered by event 1a for cell 54.

After step 13, the UE send a MEASUREMENT REPORT message triggered by event 1a for cell 54.

After step 15, the UE shall not send any MEASUREMENT REPORT message triggered by event 2c for frequency 1.

After step 17, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 43 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message.

## CHANGE REQUEST

⌘ **34.123-1 CR 327** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

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

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

<b>Title:</b>	⌘	Corrections to test cases 8.3.1.23, 8.3.1.24 and 8.3.2.13 (HCS Reselection)	
<b>Source:</b>	⌘	Motorola	
<b>Work item code:</b>	⌘	TEI	<b>Date:</b> ⌘ 12/09/2002
<b>Category:</b>	⌘	<b>F</b>	<b>Release:</b> ⌘ REL-5
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		<b>F</b> (correction)	2 (GSM Phase 2)
		<b>A</b> (corresponds to a correction in an earlier release)	R96 (Release 1996)
		<b>B</b> (addition of feature),	R97 (Release 1997)
		<b>C</b> (functional modification of feature)	R98 (Release 1998)
		<b>D</b> (editorial modification)	R99 (Release 1999)
		Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	⌘	The value of Temporary Offset = 10 is not valid as per 25.331 June -02 Temporary offset is not applied to the neighbouring cell if its HCS priority is same as HCS priority of serving cell, as the parameter Ln in calculation of Hn will be zero (Ref 25.304 sec 5.2.6.1.4)
<b>Summary of change:</b>	⌘	Value of temporary offset changed from 10 to 12 The statement 'after at-least 40 Seconds (penalty time)' in the test procedure is deleted.
<b>Consequences if not approved:</b>	⌘	Test as specified is incorrect

<b>Clauses affected:</b>	⌘	8.3.1.23, 8.3.1.24 and 8.3.2.13										
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications	⌘
		Y	N									
			X									
			X									
	X											
		Test specifications										
		O&M Specifications										

**Other comments:** ☹ Affects R99, REL-4 and REL-5 test cases.

**How to create CRs using this form:**

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

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

### 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

The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ . Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion  $H \geq 0$ . This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval  $T_{reselection}$ .
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

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

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

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

3> if the UE is in CELL\_FACH or CELL\_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL\_FACH state and the variable C\_RNTI is empty:

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



## Reference

3GPP TS 25.331 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

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters.
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell.
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

### 8.3.1.23.4 Method of test

#### Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in Table 8.3.1.21-1. 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
- 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
- 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 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
- 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	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	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

**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	-60	-60	-60	-80	-80	-70	-80	-70	-75
H* (After PenaltyTime)		16	16	16	-4	-4	6	-4	6	1
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 "T0" 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 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 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
- 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 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
- 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 11 (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	

- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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 <sub>s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	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 <sub>s,n</sub>	-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	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q <sub>HCS</sub>	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q <sub>HCS</sub>	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm



Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

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

Information Element	Value/remark
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'

## CELL UPDATE CONFIRM (Step 5 and 9)

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

Information Element	Value/remark
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

The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ . Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion  $H \geq 0$ . This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval  $T_{reselection}$ .
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

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

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

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

3> if the UE is in CELL\_FACH or CELL\_PCH state and the UE performs cell reselection; or

3> if the UE is in CELL\_FACH state and the variable C\_RNTI is empty:

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

#### Reference

3GPP TS 25.331 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

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters.
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell.
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

#### 8.3.1.24.4 Method of test

##### Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in table 8.3.1.21-1. 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
- 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 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
- 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 11 (FDD) (Cell 1)

Information Element	Value/remark
- Measurement control system information	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm



Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

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	-60	-60	-60	-80	-80	-70	-80	-70	-75
H* (After Penalty Time)		16	16	16	-4	-4	6	-4	6	1
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 "T0" 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 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
- 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 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
- 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 11 (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm



Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	

- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- Measurement control system information	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- 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 <sub>s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	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 <sub>s,n</sub>	-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	12
- 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

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

Information Element	Value/remark
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 TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator UTRAN DRX cycle length coefficient	CELL_PCH 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".

8.3.2.13 URA Update: Change of URA due to HCS Cell Reselection

8.3.2.13.1 Definition

8.3.2.13.2 Conformance requirement

The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ . Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion  $H \geq 0$ . This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval  $T_{reselection}$ .
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

A UE in URA\_PCH state shall initiate the URA update procedure in the following cases:

- 1> URA reselection:



2> if the UE detects that the current URA assigned to the UE, stored in the variable URA\_IDENTITY, is not present in the list of URA identities in system information block type 2; or

...

3> perform URA update using the cause "change of URA".

#### Reference

3GPP TS 25.331 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

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters.
2. To confirm that the UE executes an URA update procedure after the successful change of URA due to HCS Cell Reselection.
3. To confirm UE responds correctly when it re-selects to a new cell while waiting from URA UPDATE CONFIRM message from SS.

#### 8.3.2.13.4 Method of test

##### Initial Condition

System Simulator: 3 cells - Cell 1 is active with URA-ID 1 and downlink transmission power shown in column marked "T0" in table 8.3.2.11-1. Cell2 with URA-ID 1 and Cell 3 with URA-ID 2 are switched off

UE: URA\_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE, with URA-ID 1 from the list of URA-ID in cell 1

##### Specific Message Content

For system information blocks 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
- 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 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
- 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	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	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q <sub>HCS</sub>	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Q <sub>qualmin</sub>	-20 dB
- Q <sub>rxlevmin</sub>	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q <sub>HCS</sub>	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Q <sub>qualmin</sub>	-20 dB
- Q <sub>rxlevmin</sub>	-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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- 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
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm



**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	-60	-60	-60	-80	-80	-70	-80	-70	-75
H* (After PenaltyTime)		16	16	16	-4	-4	6	-4	6	1
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (After PenaltyTime)		-41	-41	-41	-60	-60	-47	-60	-53	-53

\* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the URA\_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. SS configures Cell 2 and 3 with power level given in column "T0", and URA-Id 1 and 2 respectively and starts broadcast of BCCH on the primary CCPCH in cells 2 and 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.2.13-1. SS then adjusts the transmission power again according to 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. UE on performing cell reselection to cell 3 finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL\_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits URA UPDATE CONFIRM message which includes the IEs "RRC State Indicator" and "URA-ID" to the UE on the downlink 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 - , 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
- 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 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
- 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 11 (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	used
- Use of HCS	CPICH RSCP
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q <sub>HCS</sub>	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Q <sub>qualmin</sub>	-20 dB
- Q <sub>rxlevmin</sub>	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	-20dB
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q <sub>HCS</sub>	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	12
- CHOICE mode	FDD
- Q <sub>qualmin</sub>	-20 dB
- Q <sub>rxlevmin</sub>	-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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1

- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	12
- 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 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
- 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
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	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	12
- 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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	12
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

URA UPDATE (Step 5, 8 and 10)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 6)

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

Information Element	Value/remark
URA identity	URA-ID 2

URA UPDATE CONFIRM (Step 11)

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

Information Element	Value/remark
URA identity	URA-ID 1

8.3.2.13.5 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".

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020820

3GPP TSG- T1 SIG Meeting #26  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1S-020770

CR-Form-v7

## CHANGE REQUEST

⌘ **34.123-1 CR 359** ⌘ rev - ⌘ Current version: **5.1.0** ⌘

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

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

<b>Title:</b>	⌘ CR to TS34.123-1 REL-5: Corrections to package 3 idle mode test cases		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 27/10/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ <b>REL-5</b> Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Section 6.1.1.7: 1. Corrections in Initial Conditions  2. Alignment of cell numbering according to rules in default configurations in 34.108 for intra- and inter-frequency cells (Intra-freq cells: Cell 1,2,3,7 and 8; Inter-freq cells: Cell 4,5 and 6)  Section 6.1.2.3: Miscellaneous corrections.  Section 6.1.2.4: 1. Conformance requirement requirement added from TS 25.304 that specifies how the UE shall handle the PENALTY_TIME at cell re-selection  2. Initial conditions: Miscellaneous corrections  3. Test requirements: Time needed for UE to read System Information not considered.  Section 6.1.2.5: 1. Conformance requirement requirement added from TS 25.304 that specifies how the UE shall handle the PENALTY_TIME at cell re-selection  2. Test purpose: Miscellaneous corrections.
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3. Initial conditions:  
Miscellaneous corrections.
4. Test requirements:  
Time needed for UE to read System Information not considered.

Section 6.1.2.6:  
Miscellaneous corrections.

Section 6.1.2.7:  
Miscellaneous corrections.

**Summary of change:** ⌘

Section 6.1.1.7:

1. Initial conditions  
CPICH\_RSCP [dBm] changed to CPICH\_Ec [dBm/33.84 MHz].  
Added that each cell shall include all other cells as neighbouring cells in System Information Block Type 11.
2. Changed cell id numbers for inter-frequency cells to Cell 4 and Cell 5 (was Cell 2 and Cell 3)

Section 6.1.2.3:

1. CPICH Ec value for Cell 1 changed, to avoid that Cell 1 is the strongest cell, for proper HCS evaluation.
2. Initial conditions:  
In the tables, Qhcs and H parameters are corrected for proper evaluation of HCS cell re-selection rules.  
For TDD, P-CCPCH RSCP values are corrected.  
For clarification, the tables are completed with Qhcs and H parameters values for all cells.
3. Test procedure:  
Added that SS shall notify UE of the BCCH modification.

Section 6.1.2.4:

1. Conformance requirement:  
Requirement that specifies how the UE shall handle the PENALTY\_TIME at cell re-selection, is added from TS 25.304.
2. Initial conditions:  
Added that CPICH RSCP (FDD) is used as the basis for cell re-selection evaluation.  
TEMP\_OFFSET2 changed to TEMP\_OFFSET1, in accordance with core specifications  
Values for TEMP\_OFFSET1 are changed to “Inf” (infinity). “Infinity” have been chosen as the purpose of the Temp\_Offset parameter is to make sure the UE does not select a new (better) cell during the time set by the PENALTY\_TIME parameter and thus should have a high value.  
For clarification, the tables are completed with Qhcs, H, TEMP\_OFFSET1 and PENALTY\_TIME parameters values for all cells.  
P-CCPCH RSCP (TDD) values corrected.
3. Test requirements:  
Upper limits in test requirement 2 changed from 44s to 49s; and from 64s to 69s respectively to allow 5s for UE to read system information.  
Minor editorial corrections.

Section 6.1.2.5:

1. Conformance requirement:  
Requirement that specifies how the UE shall handle the PENALTY\_TIME at cell re-selection, is added from TS 25.304.

2. Test purpose:  
Start criteria for PENALTY\_TIME timer corrected (Qoffset2 changed to Qoffset1), so that the criteria is applicable for the case CPICH RSCP (FDD) is used as basis for cell re-selection evaluation.
3. Initial conditions:  
Added that CPICH RSCP (FDD) is used as the basis for cell re-selection evaluation.  
TEMP\_OFFSET2 changed to TEMP\_OFFSET1, in accordance with core specifications  
Values for TEMP\_OFFSET1 are changed to “Inf” (infinity). “Infinity” have been chosen as the purpose of the Temp\_Offset parameter is to make sure the UE does not select a new (better) cell during the time set by the PENALTY\_TIME parameter and thus should have a high value.  
For clarification, the tables are completed with Qhcs, H, TEMP\_OFFSET1, PENALTY\_TIME and R parameters values for all cells. P-CCPCH RSCP (TDD) values corrected.
4. Test requirements:  
Upper limits in test requirement 2 of test case 6.1.2.4 changed from 50s to 55s; and from 70s to 75s respectively to allow 5s for UE to read system information.  
Minor editorial corrections.

Section 6.1.2.6:

1. Test purpose:  
Editorial correction on Cell Barred parameter.
2. Initial conditions:  
Table added with specific values on USIM fields, to align with similar test cases.  
Editorial changes to tables, to align with core specifications (CellBarred, Intra-frequency cell re-selection indicator, Tbarred).

Section 6.1.2.7:

1. Test purpose:  
Editorial correction
2. Initial conditions:  
Editorial changes to tables, to align with core specifications (CellBarred, Intra-frequency cell re-selection indicator, Tbarred).  
Test channel added.  
P-CCPCH values modified (TDD).

**Consequences if not approved:** ☹ Incorrect test will remain in specifications.

**Clauses affected:** ☹ 6.1.1.7, 6.1.2.3, 6.1.2.4, 6.1.2.5, 6.1.2.6, 6.1.2.7,

**Other specs affected:** ☹

Y	N
X	
X	
X	

Other core specifications ☹  
Test specifications ☹  
O&M Specifications ☹

**Other comments:** ☹ Affects R99, REL-4 and REL-5 test cases.

**How to create CRs using this form:**

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

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



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

## &lt;Start of first modified section&gt;

## 6.1.1.7 Cell reselection of ePLMN in manual mode

## 6.1.1.7.1 Definition

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

## 6.1.1.7.2 Conformance requirement

## B) Manual network selection mode

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

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

or,

- ii) The user selects automatic mode.

## References:

TS 22.011 clause 3.2.2.2B

## 6.1.1.7.3 Test purpose

To verify that in Manual Network Selection Mode Procedure, the UE can perform reselection to an equivalent PLMN.

## 6.1.1.7.4 Method of test

## Initial conditions

The UE is in manual PLMN selection mode.

Cell\_selection\_and\_reselection\_quality\_measure is CPICH\_RSCP (FDD).

All Radio Access Technology USIM fields and cells are UTRAN.

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

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

PLMN1 is the HPLMN.

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

USIM field	Priority	PLMN
EF <sub>LocI</sub>		PLMN 1

#### Test procedure

- a) The SS activates cells 1.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) A Location Update Accept message shall be sent on reception of a Location Update message from the UE. The Location Update Accept message shall include PLMN3 in the equivalent PLMN list.
- e) Cell 42 and 53 are activated.

#### 6.1.1.7.5 Test Requirements

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

**<End of modified section>**

## &lt;Start of next modified section&gt;

## 6.1.2.3 HCS Cell reselection

## 6.1.2.3.1 Definition

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

## 6.1.2.3.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
  - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
  - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria for hierarchical cells:
  - 2.1 The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is calculated from the Q, Q<sub>hcs</sub>, TEMP\_OFFSET and PENALTY\_TIME parameters.
  - 2.2 The UE shall perform ranking of all cells that fulfil the S criterion among all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ .
  - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If an FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.
  - 2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval T<sub>reselection</sub>.
  - 2.5 The cell-ranking criterion R is derived from Q, Q<sub>hyst</sub>, Q<sub>offset</sub>, TEMP\_OFFSET, PENALTY\_TIME.

## References

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

## 6.1.2.3.3 Test purpose

1. Verify that the UE ignores cells with  $H < 0$  for reselection and that H is calculated from Q<sub>hcs</sub>. The modification of this parameter on the BCCH shall trigger the cell reselection evaluation process.
2. Verify that the UE ranks cells based on both HCS priority and R. Q<sub>hyst</sub>, Q<sub>offset</sub>, TEMP\_OFFSET, PENALTY\_TIME and T<sub>reselection</sub> are not applied so R equals CPICH\_RSCP for FDD cells, and P-CCPCH RSCP for TDD cells.

## 6.1.2.3.4 Method of test

## Initial conditions

[SS shall indicate in System Information that HCS is in use.](#)

[Each cell shall include the other cells as neighbouring cells in System Information Block Type 11.](#)

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.8 4 MHz	<del>-60</del> 70	-65	-70
HCS priority		6	7	7
Qhcs <sub>s</sub>	dBm	-80	-50	-50
Qhcs <sub>n=1</sub>	dBm	n/a	-80	-80
Qhcs <sub>n=2</sub>	dBm	-50	n/a	-50
Qhcs <sub>n=3</sub>	dBm	-50	-50	n/a
H <sub>s</sub> *	dBm	<del>20</del> 10	-15	-20
H <sub>n=1</sub> *	dB	n/a	10	10
H <sub>n=2</sub> *	dB	-15	n/a	-15
H <sub>n=3</sub> *	dB	-20	-20	n/a

Step d-e:

Qhcs <sub>s</sub>	dBm	-80	-50	-50 -> -80
Qhcs <sub>n=3</sub>	dBm	-50 -> -80	-50 -> -80	n/a
H <sub>s</sub> *	dBm	<del>20</del> 10	-15	-20 -> 10
H <sub>n=3</sub> *	dB	-20 -> 10	-20 -> 10	n/a

Step f-g:

Qhcs <sub>s</sub>	dBm	-80	-50 -> -80	-80
Qhcs <sub>n=2</sub>	dBm	-50 -> -80	n/a	-50 -> -80
H <sub>s</sub> *	dBm	<del>20</del> 10	-15 -> 15	10
H <sub>n=2</sub> *	dB	-15 -> 15	n/a	-15 -> 15

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	<del>-74</del> 4	<del>-79</del> 3
HCS priority		6	7	7
Qhcs <sub>s</sub>	dBm	<del>-89</del> 30	<del>-59</del> 40	<del>-59</del> 40
Qhcs <sub>n=1</sub>	dBm	n/a	-89	-89
Qhcs <sub>n=2</sub>	dBm	-59	n/a	-59
Qhcs <sub>n=3</sub>	dBm	-59	-59	n/a
H <sub>s</sub> *	dB	<del>20</del> 39	<del>-15</del> 64	<del>-20</del> 63
H <sub>n=1</sub> *	dB	n/a	20	20
H <sub>n=2</sub> *	dB	-15	n/a	-15
H <sub>n=3</sub> *	dB	-20	-20	n/a

Step d-e:

Qhcs <sub>s</sub>	dBm	<del>-89</del> 30	<del>-59</del> 40	<del>-59</del> 40 -> - 8930
Qhcs <sub>n=3</sub>	dBm	-59 -> -89	-59 -> -89	n/a
H <sub>s</sub> *	dB	20-39	-1564	<del>-20</del> 63 -> - 1043
H <sub>n=3</sub> *	dB	-20 -> 10	-20 -> 10	n/a

Step f-g:

Qhcs <sub>s</sub>	dBm	<del>-89</del> 30	<del>-59</del> 40 -> - 8930	<del>-89</del> 30
Qhcs <sub>n=2</sub>	dBm	-59 -> -89	n/a	-59 -> -89
H <sub>s</sub> *	dB	20-39	<del>-15</del> 64 -> 15- 44	10-43
H <sub>n=2</sub> *	dB	-15 -> 15	n/a	-15 -> 15

Test procedure

Method B is applied.

- a) The SS activates the cells 1-3 and monitors them for random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access requests from the UE.
- d) The SS changes  $Q_{hcs}$  for Cell 3, [and notifies UE of the BCCH modification](#).
- e) The SS waits for random access requests from the UE.
- f) The SS changes  $Q_{hcs}$  for Cell 2, [and notifies UE of the BCCH modification](#).
- g) The SS waits for random access requests from the UE.

#### 6.1.2.3.5 Test requirements

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

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

#### 6.1.2.4.1 Definition

Test to verify that the UE performs the cell reselection correctly for hierarchical cell structures using TEMP\_OFFSET and PENALTY\_TIME applied to the H criterion.

#### 6.1.2.4.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
  - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
  - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria for hierarchical cells:
  - 2.1 The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is calculated from the Q,  $Q_{hcs}$ , TEMP\_OFFSET and PENALTY\_TIME parameters.
  - 2.2 The UE shall perform ranking of all cells that fulfil the S criterion among all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ .
  - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If an FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.
  - 2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval T<sub>reselection</sub>.
  - 2.5 The cell-ranking criterion R is derived from Q,  $Q_{hyst}$ ,  $Q_{offset}$ , TEMP\_OFFSET and PENALTY\_TIME.
3. TEMP\_OFFSET<sub>n</sub> applies an offset to the H criteria for the duration of PENALTY\_TIME<sub>n</sub> after the timer T<sub>n</sub> has started for that cell. T<sub>n</sub> shall be started from zero when  $Q_{meas,n} > Q_{hcs,n}$ . TEMP\_OFFSET is only applied to the H criteria if the cells have different HCS priorities.
4. [At cell-reselection, a timer T<sub>n</sub> is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T<sub>n</sub> for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T<sub>n</sub> shall be continued to be run for the](#)

[corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.](#)

## References

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

## 6.1.2.4.3 Test purpose

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

## 6.1.2.4.4 Method of test

## Initial conditions

[Cell selection and reselection quality measure is CPICH\\_RSCP \(FDD\).](#)

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-60	-70	-70
HCS priority		2	4	7
Qhcs <sub>s</sub>	dBm	-80	<del>-50</del>	<del>-50</del>
Qhcs <sub>n=1</sub>	dBm	n/a	<del>-80</del>	<del>-80</del>
Qhcs <sub>n=2</sub>	dBm	-50	<del>n/a</del>	<del>-50</del>
Qhcs <sub>n=3</sub>	dBm	-50	<del>-50</del>	<del>n/a</del>
TEMP_OFFSET <sub>1n=1</sub>	<del>dBm</del>	<del>n/a</del>	<del>n/a</del>	<del>n/a</del>
TEMP_OFFSET <sub>1n=2</sub>	<del>dBm</del>	<del>30</del> inf	<del>n/a</del>	<del>n/a</del>
TEMP_OFFSET <sub>1n=3</sub>	<del>dBm</del>	<del>30</del> inf	<del>inf</del>	<del>n/a</del>
H <sub>s</sub> *	dBm	20	<del>-20</del>	<del>-20</del>
H <sub>n=1</sub> *	dB	n/a	<del>20</del>	<del>20</del>
H <sub>n=2</sub> *	dBm	-20	<del>n/a</del>	<del>-20</del>
H <sub>n=3</sub> *	dBm	-20	<del>-20</del>	<del>n/a</del>
PENALTY_TIME <sub>n=1</sub>	<del>sec</del>	<del>n/a</del>	<del>0</del>	<del>0</del>
PENALTY_TIME <sub>n=2</sub>	sec	40	<del>n/a</del>	<del>0</del>
PENALTY_TIME <sub>n=3</sub>	sec	60	<del>60</del>	<del>n/a</del>

Step d-e:

Qhcs <sub>s</sub>	dBm	-80	<del>-50 -&gt; -80</del>	<del>-50 -&gt; -80</del>
Qhcs <sub>n=2</sub>	dBm	-50 -> -80	<del>n/a</del>	<del>-50 -&gt; -80</del>
Qhcs <sub>n=3</sub>	dBm	-50 -> -80	<del>-50 -&gt; -80</del>	<del>n/a</del>
H <sub>s</sub> *	dBm	20	<del>-20 -&gt; 10</del>	<del>-20 -&gt; 10</del>
H <sub>n=2</sub> *	dBm	<del>-20</del> <del>inf</del> -> 10 (after 40 sec)	<del>n/a</del>	<del>-20 -&gt; 10</del>
H <sub>n=3</sub> *	dBm	<del>inf</del> <del>20</del> -> 10 (after 60 sec)	<del>-inf -&gt; 10</del> (after 60 sec)	<del>n/a</del>

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	-74 <del>3</del>	-74 <del>3</del>
HCS priority		2	4	7
Qhcs <sub>s</sub>	<del>D</del> dBm	-20-89	-10-54	-54-10
Qhcs <sub>n=1</sub>	dBm	n/a	-89	-89
Qhcs <sub>n=2</sub>	<del>D</del> dBm	-54	n/a	-54
Qhcs <sub>n=3</sub>	dBm	-54	-54	n/a
TEMP_OFFSET <sub>1n=1</sub>	dB	n/a	n/a	n/a
TEMP_OFFSET <sub>1n=2</sub>	dB	40inf	n/a	n/a
TEMP_OFFSET <sub>1n=3</sub>	dB	40inf	inf	n/a
H <sub>s</sub> *	dB	-4920	-20	-20
H <sub>n=1</sub> *	dB	n/a	20	20
H <sub>n=2</sub> *	dB	-63-20	n/a	-20
H <sub>n=3</sub> *	dB	-20-63	-20	n/a
PENALTY_TIME <sub>n=1</sub>	sec	n/a	0	0
PENALTY_TIME <sub>n=2</sub>	sec	40	n/a	0
PENALTY_TIME <sub>n=3</sub>	sec	60	60	n/a

Step d-e:

Qhcs <sub>s</sub>	<del>D</del> dBm	-89-20	-54 -> -94	-54 -> -94
Qhcs <sub>n=2</sub>	<del>D</del> dBm	-54 -> -94	n/a	-54 -> -94
Qhcs <sub>n=3</sub>	dBm	-54 -> -94 -10 -> -20	-54 -> -94	n/a
H <sub>s</sub> *	dB	-4920	-20 -> 10	-20 -> 10
H <sub>n=2</sub> *	dB	-63-inf -> -5310 (after 40 sec)	n/a	-20 -> 10
H <sub>n=3</sub> *	dB	-63-inf -> -5310 (after 60 sec)	-inf -> 10 (after 60 sec)	n/a

## Test procedure

Method B is applied.

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

### 6.1.2.4.5 Test requirements

- In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- In step e), there shall be no response from the UE on Cell 2 within 38 s ~~of~~ after changing the parameters in step d), but the UE shall respond on Cell 2 within 49~~4~~ s. There shall be no response from the UE on Cell 3 within 58 s ~~of~~ after changing the parameters in step d), but the UE shall respond on Cell 3 within 69~~4~~ s.

NOTE: Minimum time set by PENALTY\_TIME (cell 2) - 2 s tolerance. Maximum time set by PENALTY\_TIME (cell 2) + 1 280 msec. for DRX cycle + 2 s tolerance + 5 s tolerance (for UE to read System Information). Same calculation for Cell 3.



## 6.1.2.5 HCS Cell reselection using reselection timing parameters for the R criterion

### 6.1.2.5.1 Definition

Test to verify that the UE performs the cell reselection correctly for hierarchical cell structures using TEMP\_OFFSET and PENALTY\_TIME applied to the R criterion.

### 6.1.2.5.2 Conformance requirement

1. When camped normally, the UE shall execute the cell reselection evaluation process on the following occasions/triggers:
  - 1.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and in TS 25.123 for TDD mode.
  - 1.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.
2. Cell Reselection Criteria for hierarchical cells:
  - 2.1 The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is calculated from the Q, Qhcs, TEMP\_OFFSET and PENALTY\_TIME parameters.
  - 2.2 The UE shall perform ranking of all cells that fulfil the S criterion among all cells, not considering HCS priority levels, if no cell fulfil the criterion  $H \geq 0$ .
  - 2.3 The cells shall be ranked according to the R criteria. The best ranked cell is the cell with the highest R value. If a FDD cell is ranked as the best cell, the UE shall perform cell re-selection to that FDD cell. If a TDD cell is ranked as the best cell, the UE shall perform cell re-selection to that TDD cell.
  - 2.4 In all cases, the UE shall reselect the new cell, only if the cell reselection criteria are fulfilled during a time interval T<sub>reselection</sub>.
  - 2.5 The cell-ranking criterion R is derived from Q, Qhyst, Qoffset, TEMP\_OFFSET, PENALTY\_TIME.
3. TEMP\_OFFSET<sub>n</sub> applies an offset to the R criteria for the duration of PENALTY\_TIME<sub>n</sub> after the timer T<sub>n</sub> has started for that cell. T<sub>n</sub> shall be started from zero when  $Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$ . TEMP\_OFFSET is only applied to the R criteria if the cells have identical priorities.
4. At cell-reselection, a timer T<sub>n</sub> is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T<sub>n</sub> for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T<sub>n</sub> shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

### References

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

### 6.1.2.5.3 Test purpose

1. Verify that TEMP\_OFFSET is applied to the R criterion for a period of PENALTY\_TIME if serving and neighbour cell have identical HCS priorities and that the timer is started when  $Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$  ~~if serving and neighbour cell have identical HCS priorities.~~

### 6.1.2.5.4 Method of test

#### Initial conditions

Cell selection and reselection quality measure is CPICH\_RSCP (FDD).

For FDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
CPICH_Ec	dBm/3.84 MHz	-60	-70	-70
HCS priority		1	1	1
<u>Qhcs<sub>s</sub></u>	<u>dBm</u>	<u>-80</u>	<u>-80</u>	<u>-80</u>
<u>TEMP_OFFSET1<sub>n=1</sub></u>	<u>dB</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
<del>TEMP_OFFSET1<sub>n=2</sub></del>	<del>dBm</del>	<del>20</del> inf	<u>n/a</u>	<u>n/a</u>
<del>TEMP_OFFSET1<sub>n=3</sub></del>	<del>dBm</del>	<del>20</del> inf	<u>inf</u>	<u>n/a</u>
<u>PENALTY_TIME<sub>n=1</sub></u>	<u>sec</u>	<u>n/a</u>	<u>0</u>	<u>0</u>
<u>PENALTY_TIME<sub>n=2</sub></u>	<u>sec</u>	<u>40</u>	<u>n/a</u>	<u>0</u>
<u>PENALTY_TIME<sub>n=3</sub></u>	<u>sec</u>	<u>60</u>	<u>60</u>	<u>n/a</u>
<del>H<sub>s</sub>*</del>	<del>dBm</del>	<del>-60</del> 20	<u>10</u>	<u>10</u>
<u>H<sub>n=1</sub>*</u>	<u>dB</u>	<u>n/a</u>	<u>20</u>	<u>20</u>
<del>H<sub>n=2</sub>*</del>	<del>dBm</del>	<del>-70</del> 10	<u>n/a</u>	<u>10</u>
<del>H<sub>n=3</sub>*</del>	<del>dBm</del>	<del>-70</del> 10	<u>10</u>	<u>n/a</u>
<del>R<sub>s</sub>*</del>	<del>dBm</del>	<del>-60</del>	<u>-70</u>	<u>-70</u>
<u>R<sub>n=1</sub>*</u>	<u>dBm</u>	<u>n/a</u>	<u>-60</u>	<u>-60</u>
<del>R<sub>n=2</sub>*</del>	<del>dBm</del>	<del>-70</del>	<u>n/a</u>	<u>-70</u>
<del>R<sub>n=3</sub>*</del>	<del>dBm</del>	<del>-70</del>	<u>-70</u>	<u>n/a</u>

Step d-e:

CPICH_Ec	dBm/3.84 MHz	-60 -> -70	-70 -> -65	-70 -> -60
<del>R<sub>s</sub>*</del>	<del>dBm</del>	<del>-60 -&gt; -70</del>	<u>-70 -&gt; -65</u>	<u>-70 -&gt; -60</u>
<u>R<sub>n=1</sub>*</u>	<u>dBm</u>	<u>n/a</u>	<u>-60 -&gt; -70</u>	<u>-60 -&gt; -70</u>
<del>R<sub>n=2</sub>*</del>	<del>dBm</del>	<del>-inf</del> 85 -> -65 (after 40 sec)	<u>n/a</u>	<u>-70 -&gt; -65</u>
<del>R<sub>n=3</sub>*</del>	<del>dBm</del>	<del>-inf</del> 80 -> -60 (after 60 sec)	<u>-inf -&gt; -60</u> (after 60 sec)	<u>n/a</u>

For TDD only:

Step a-c:

Parameter	Unit	Cell 1	Cell 2	Cell 3
P-CCPCH RSCP	dBm	-69	<del>-79</del> 3	<del>-79</del> 3
HCS priority		1	1	1
<u>Qhcs<sub>s</sub></u>	<u>dBm</u>	<u>-89</u>	<u>-89</u>	<u>-89</u>
<u>TEMP_OFFSET1<sub>n=1</sub></u>	<u>dB</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
<u>TEMP_OFFSET1<sub>n=2</sub></u>	<u>dB</u>	<u>inf</u>	<u>n/a</u>	<u>n/a</u>
<u>TEMP_OFFSET1<sub>n=3</sub></u>	<u>dB</u>	<u>inf</u>	<u>inf</u>	<u>n/a</u>
<u>PENALTY_TIME<sub>n=2</sub></u>	<u>sec</u>	<u>n/a</u>	<u>0</u>	<u>0</u>
<u>PENALTY_TIME<sub>n=2</sub></u>	<u>sec</u>	<u>40</u>	<u>n/a</u>	<u>0</u>
<u>PENALTY_TIME<sub>n=3</sub></u>	<u>sec</u>	<u>60</u>	<u>60</u>	<u>n/a</u>
<del>H<sub>s</sub>*</del>	<del>dB</del>	<del>-69</del> 20	<u>10</u>	<u>10</u>
<u>H<sub>n=1</sub>*</u>	<u>dB</u>	<u>n/a</u>	<u>20</u>	<u>20</u>
<del>H<sub>n=2</sub>*</del>	<del>dB</del>	<del>-73</del> 10	<u>n/a</u>	<u>10</u>
<del>H<sub>n=3</sub>*</del>	<del>dB</del>	<del>10</del> -73	<u>10</u>	<u>n/a</u>
<del>R<sub>s</sub>*</del>	<del>dBm</del>	<del>-69</del>	<u>-79</u>	<u>-79</u>
<u>R<sub>n=1</sub>*</u>	<u>dBm</u>	<u>n/a</u>	<u>-69</u>	<u>-69</u>
<del>R<sub>n=2</sub>*</del>	<del>dBm</del>	<del>-79</del> 3	<u>n/a</u>	<u>-79</u>
<del>R<sub>n=3</sub>*</del>	<del>dBm</del>	<del>-79</del> 3	<u>-79</u>	<u>n/a</u>

Step d-e:

<del>Qoffset<sub>s,n=2</sub></del>	dB	<del>0</del> → -10		
<del>Qoffset<sub>s,n=3</sub></del>	dB	<del>0</del> → -10		
<del>TEMP_OFFSET<sub>1,n=2</sub></del>	dB	40		
<del>TEMP_OFFSET<sub>1,n=3</sub></del>	dB	40		
<del>PENALTY_TIME<sub>n=2</sub></del>	sec	40		
<del>PENALTY_TIME<sub>n=3</sub></del>	sec	60		
<del>R<sub>s</sub>*</del>	dB	-13		
<del>R<sub>n=2</sub>*</del>	dB	<del>-73</del> → -63 (after 40 sec)		
<del>R<sub>n=3</sub>*</del>	dB	<del>-73</del> → -63 (after 60 sec)		

<u>P-CCPCH RSCP</u>	dBm	<u>-69 -&gt; -79</u>	<u>-79 -&gt; -74</u>	<u>-79 -&gt; -69</u>
<u>R<sub>s</sub>*</u>	dBm	<u>-69 -&gt; -79</u>	<u>-79 -&gt; -74</u>	<u>-79 -&gt; -69</u>
<u>R<sub>n=1</sub>*</u>	dBm	n/a	<u>-69 -&gt; -79</u>	<u>-69 -&gt; -79</u>
<u>R<sub>n=2</sub>*</u>	dBm	<u>-inf -&gt; -74</u> (after 40 sec)	n/a	<u>-79 -&gt; -74</u>
<u>R<sub>n=3</sub>*</u>	dBm	<u>-inf -&gt; -69</u> (after 60 sec)	<u>-inf -&gt; -69</u> (after 60 sec)	n/a

## Test procedure

Method B is applied.

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

### 6.1.2.5.5 Test requirements

- In step c), after the UE has responded on Cell 1, it shall not respond on any other cell within 1 min.
- In step e), there shall be no response from the UE on Cell 2 within 38 s ~~of~~ after changing the parameters in step d), but the UE shall respond on Cell 2 within 55 ~~50~~ s. There shall be no response from the UE on Cell 3 within 58 s ~~of~~ after changing the parameters in step d), but the UE shall respond on Cell 3 within 75 ~~70~~ s.

NOTE: Minimum time set by PENALTY\_TIME (cell 2) – 2 s tolerance. Maximum time set by PENALTY\_TIME (cell 2) + 6.4 s (T<sub>evaluateFDD</sub> from TS 25.133, table 4.1 for FDD mode and T<sub>evaluateTDD</sub> from TS 25.123, table 4.1 for TDD mode) + 1 280 msec + 5 s tolerance (for UE to read System Information); for system info scheduling + 2 s tolerance. Same calculation for Cell 3.

## 6.1.2.6 Emergency calls

### 6.1.2.6.1 Definition

Test to verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.

### 6.1.2.6.2 Conformance requirement

- Acceptable cell:

An "acceptable cell" is a cell on which the UE may camp to obtain limited service (originate emergency calls). Such a cell shall fulfil the following requirements, which is the minimum set of requirements to initiate an emergency call in a UTRAN network:

- 1.1 The cell is not barred;
- 1.2 The cell selection criteria are fulfilled.
2. A "suitable cell" is a cell on which the UE may camp on to obtain normal service. Such a cell shall fulfil all the following requirements.
  - 2.1 The cell is part of the selected PLMN or, of a PLMN considered as equivalent by the UE according to the information provided by the NAS.
  - 2.2 The cell is not barred.
  - 2.3 The cell is not part of the list of "forbidden LAs for roaming".
  - 2.4 The cell selection criteria are fulfilled.
3. If the UE is unable to find any suitable cell of selected PLMN the UE shall enter the *Any cell selection* state.
4. Any Cell Selection State: In this state, the UE shall attempt to find an acceptable cell of an any PLMN to camp on, trying all RATs that are supported by the UE and searching first for a high quality cell. The UE, which is not camped on any cell, shall stay in this state until an acceptable cell is found.
5. Camped on Any Cell State: In this state the UE obtains limited service. The UE shall regularly attempt to find a suitable cell of the selected PLMN, trying RATs that are supported by the UE. If a suitable cell is found, this causes an exit to the Camped normally State.
6. In the Camped on Any Cell State, the UE shall perform the cell reselection evaluation process on the following occasions/triggers:
  - 6.1 UE internal triggers, so as to meet performance as specified in TS 25.133 for FDD mode and TS 25.123 for TDD mode.
  - 6.2 When information on the BCCH used for the cell reselection evaluation procedure has been modified.

## References

1. TS 25.304, clause 4.3.
2. TS 25.304, clause 4.3.
3. TS 25.304, clause 5.2.2.1.
4. TS 25.304, clause 5.2.8.
5. TS 25.304, clause 5.2.2.5.
6. TS 25.304, clause 5.2.9.1.

### 6.1.2.6.3 Test purpose

1. To verify that the UE shall be able to initiate emergency calls when no suitable cells of the selected PLMN are available, but at least one acceptable cell is available.
2. To verify that the UE selects a cell with  $S > 0$  and  $\text{CellBarred} = 0$  Not Barred (i.e. an "acceptable cell") when no suitable cells of the selected PLMN are available.
3. To verify that the UE ranks the acceptable cells according to the cell-ranking criterion R which in this test case equals Q as  $Q_{\text{hyst}}$ ,  $Q_{\text{offset}}$ ,  $\text{TEMP\_OFFSET}$  and  $\text{PENALTY\_TIME}$  parameters are not used. Treselection is not used either.

### 6.1.2.6.4 Method of test

#### Initial conditions

In step a-d, Cell 1 and 2 are neither suitable nor acceptable cells. Cell 3 is an acceptable cell but not suitable.

In step e-f, both Cell 1 and 3 are acceptable cells.

[The UE is equipped with a USIM containing default values except for those listed below.](#)

<a href="#">USIM field</a>	<a href="#">Priority</a>	<a href="#">PLMN</a>
<a href="#">EF<sub>LOCI</sub></a>		<a href="#">PLMN 1</a>
<a href="#">EF<sub>HPLMNwAcT</sub></a>	1 <sup>st</sup>	<a href="#">PLMN 2</a>
<a href="#">EF<sub>FPLMN</sub></a>		<a href="#">PLMN 3</a>

[All cells in this test case belong to PLMN 3.](#)

Step a-d:

For FDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
<a href="#">Test Channel</a>		<a href="#">1</a>	<a href="#">1</a>	<a href="#">1</a>
CPICH_Ec	dBm/3.84 MHz	-65	-60	-70
Qrxlevmin	dBm	<del>-8180</del>	<del>-5150</del>	<del>-8180</del>
Srxlev*	dBm	<del>1645</del>	<del>-9-10</del>	<del>1140</del>
CellBarred		<del>4Barred</del>	<del>0Not barred</del>	<del>Not barred0</del>
<a href="#">Intra-frequency cell re-selection indicator</a>		<a href="#">Allowed</a>		
<a href="#">Tbarred</a>		<a href="#">10s</a>		
<a href="#">PLMN</a>		<del>Forbidden</del>	<del>Forbidden</del>	<del>Forbidden</del>

For TDD only:

Parameter	Unit	Cell 1	Cell 2	Cell 3
<a href="#">Test Channel</a>		<a href="#">1</a>	<a href="#">1</a>	<a href="#">1</a>
P-CCPCH RSCP	dBm	-69	<del>-6477</del>	<del>-7474</del>
CellBarred		<del>4Barred</del>	<del>0Not barred</del>	<del>0Not barred</del>
<a href="#">Intra-frequency cell re-selection indicator</a>		<a href="#">Allowed</a>		
<a href="#">Tbarred</a>		<a href="#">10s</a>		
<a href="#">PLMN</a>		<del>forbidden</del>	<del>forbidden</del>	<del>forbidden</del>

Step e-f:

CellBarred		<del>4Barred -&gt;</del> <del>Not barred0</del>	0	0
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**NOTE:** ~~All the BCCH cells belong to the same PLMN, which is not the UE's home PLMN and is in the USIM's forbidden PLMN's list.~~

Test procedure

Method C is applied.

- The SS activates the cells and monitors them for random access requests from the UE.
- The UE is switched on.
- 50 s after switch on, an emergency call is initiated on the UE.
- The SS waits for random access request from the UE.
- The SS changes the CellBarred of Cell 1 to ~~0'Not barred'~~.
- After 30 s an emergency call is initiated on the UE.

g) The SS waits for random access request from the UE.

#### 6.1.2.6.5 Test requirements

- 1) In step d), the first access from the UE shall be on Cell 3.
- 2) In step g), the first access from the UE shall be on Cell 1.

### 6.1.2.7 Emergency calls; Intra-frequency cell "Not allowed"

#### 6.1.2.7.1 Definition

Test to verify that for emergency call and cell status "barred", the Intra-frequency cell re-selection indicator IE is ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

#### 6.1.2.7.2 Conformance requirement

1. When cell status "barred" is indicated:
  - The UE is not permitted to select/re-select this cell, not even for emergency calls.
  - The UE shall select another cell according to the following rule:
    - If the "Intra-frequency cell re-selection indicator" IE is set to "not allowed" the UE shall not re-select a cell on the same frequency as the barred cell. For emergency call, the Intra-frequency cell re-selection indicator IE shall be ignored, i.e. even if it is set to "not allowed" the UE may select another intra-frequency cell.

#### References

1. TS 25.304, clause 5.3.1.1.

#### 6.1.2.7.3 Test purpose

To verify that for an emergency call and cell status "barred", the IE Intra-frequency cell re-selection indicator IE is ignored, i.e. even if it this IE is set to "not allowed" the UE may select another intra-frequency cell for the emergency call.

#### 6.1.2.7.4 Method of test

##### Initial conditions

~~Cell 1 and 2 are on the same carrier frequency.~~

Step a-c:

For FDD only:

Parameter	Unit	Cell 1	Cell 2
<u>Test Channel</u>		<u>1</u>	<u>1</u>
CPICH_Ec	dBm/3.84 MHz	-60	-70
<del>Intra-frequency cell re-selection indicator</del>		<del>Not allowed</del>	<del>Not allowed</del>
CellBarred		<del>Not barred</del>	<del>Not barred</del>

For TDD only:

Parameter	Unit	Cell 1	Cell 2
P-CCPCH RSCP	dBm	<del>-7697</del>	<del>-679</del>
CellBarred	<del>dBm</del>	<del>Not barred</del>	<del>Not barred</del>

Step d-i:

CellBarred		<u>Not barred</u> <sup>0</sup> -> <u>Barred</u> <sup>1</sup>	<u>Not barred</u> <sup>0</sup>
<u>Intra-frequency cell re-selection indicator</u>		<u>Not allowed</u>	
<u>Tbarred</u>		<u>10s</u>	

### Test procedure

Method C is applied.

- a) The SS activates the cells and monitors them for any random access requests from the UE.
- b) The UE is switched on.
- c) The SS waits for random access request from the UE.
- d) The SS sets Cell 1 to be barred, and notifies UE of the BCCH modification.
- e) The SS waits to see if there is any random access request from the UE.
- f) By MMI, an attempt to originate a call is made.
- g) The SS waits to see if there is any random access request from the UE.
- h) By MMI, an emergency call is initiated on the UE.
- i) The SS waits for random access request from the UE.

#### 6.1.2.7.5 Test requirements

- 1) In step c), after the UE has responded on Cell 1, it shall not<sup>f</sup> respond on any other cell within 1 min.
- 2) In step e), there shall be no response from the UE within 2 min.
- 3) In step g), there shall be no response from the UE within 2 min. It shall not be possible to originate the call.
- 4) In step i), the UE shall respond on Cell 2. It shall be possible to originate the emergency call.

**<End of modified section>**

<small>CR-Form-v7</small>
<h2 style="margin: 0;">CHANGE REQUEST</h2>
⌘ <b>34.123-1 CR 360</b> ⌘ rev <b>-</b> ⌘ Current version: <b>5.1.1</b> ⌘

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

<b>Title:</b>	⌘ CR to TS34.123-1 REL-5; Corrections to package 3 RRC 8_1_x (Connection mgmt) as revision of T1S-020778.		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 07/11/2002</span>		
<b>Category:</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">           ⌘ <b>F</b>            Use <u>one</u> of the following categories:  <b>F</b> (correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (addition of feature),  <b>C</b> (functional modification of feature)  <b>D</b> (editorial modification)            Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.         </td> <td style="width: 50%; vertical-align: top;"> <b>Release:</b> ⌘ Rel-5            Use <u>one</u> of the following releases:            2 (GSM Phase 2)            R96 (Release 1996)            R97 (Release 1997)            R98 (Release 1998)            R99 (Release 1999)            Rel-4 (Release 4)            Rel-5 (Release 5)            Rel-6 (Release 6)         </td> </tr> </table>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b> ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b> ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

<b>Reason for change:</b>	⌘ Changes in this version compared to T1S-020778 marked in yellow.  Only references to Clause 9 of 34.108 corrected to be clause 6.1 for SI messages.  Editorial corrections.  Conformance requirement have been updated in the core specifications  Cell 4 is usually used for inter-frequency tests  Specific message content is not reflecting the difference compared to the default messages in 34.108. Instead they are something in between a complete message and a difference.
<b>Summary of change:</b>	⌘ Conformance requirement updated to the latest version of core specifications  Cell 4 is used instead of cell2 since 4 is inter-frequency  Table written with the new format. Only IEs that are different from default messages are included



**Consequences if not approved:** ⌘ Non accurate test case

**Clauses affected:** ⌘ 8.1.2.10.2, 8.1.2.10.3, 8.1.2.10.4

	Y	N		
<b>Other specs affected:</b>	⌘	X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

**Other comments:** ⌘

**How to create CRs using this form:**

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

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

## &lt;Start of modified section&gt;

## 8.1.2.10 RRC connection establishment in CELL\_DCH on another frequency

## 8.1.2.10.1 Definition

## 8.1.2.10.2 Conformance requirement

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

1> set the IE "Establishment cause" to the value of the variable ESTABLISHMENT\_CAUSE;

1> set the IE "Initial UE identity" to the value of the variable INITIAL\_UE\_IDENTITY;

1> set the IE "Protocol error indicator" to the value of the variable PROTOCOL\_ERROR\_INDICATOR;

1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 11; and

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

1> take care that the maximum allowed message size is not exceeded when forming the IE "Measured results on RACH". ~~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:

...

1> if the UE will be in the CELL\_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).

~~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 8.1.3.3, 8.1.3.6

## 8.1.2.10.3 Test Purpose

To confirm that the UE manages to ~~establish an RRC CONNECTION~~~~synchronize~~ on another frequency when so required by ~~SS~~~~UTRAN~~ in the RRC CONNECTION SET-UP message.

## 8.1.2.10.4 Method of test

## Initial condition

System simulator: 2 cells – Cell 1 on UARFCN 1 and Cell ~~2~~~~4~~ 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~~~~4~~ on the DPCH described in the RRC CONNECTION SET-UP message received from the SS. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	RRC CONNECTION REQUEST	By outgoing call operation
2		←	RRC CONNECTION SETUP	<a href="#">Indicating frequency of cell 4.</a>
3				The UE configures the layer 2 and layer 1.
4		→	RRC CONNECTION SETUP COMPLETE	This message is sent to <a href="#">SS</a> on the frequency indicated in the RRC CONNECTION SETUP message
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific message content

All messages indicated below shall use the same content as [found in TS 34.108 clause 6.1](#)~~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	4
— Intra-frequency cell info list	
— CHOICE intra-frequency cell removal	Remove no intra-frequency cells
— New intra-frequency info list	
— Intra-frequency cell id	4
— 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
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	FDD
- Reporting quantity	CPICH Ec/No
- Maximum number of reported cells on RACH	Current Cell
- Reporting information for state CELL_DCH	Not present

## 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 uplink of cell 2 <u>Not present</u>
- UARFCN downlink(Nd)	UARFCN downlink of cell <u>2</u>

#### 8.1.2.10.5 Test requirement

In step 4, the UE shall send the RRC CONNECTION SETUP COMPLETE message on the frequency indicated in the RRC CONNECTION SETUP message.

**<End of modified section>**

CR-Form-v7
<b>CHANGE REQUEST</b>
# <b>34.123-1 CR 361</b> # rev <b>-</b> # Current version: <b>5.1.1</b> #

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

<b>Title:</b>	# CR to TS34.123-1 REL-5; Corrections to package 3 RRC 8_2_x (Radio Bearer procedure) as revision of T1S-020779.		
<b>Source:</b>	# Ericsson		
<b>Work item code:</b>	# TEI <span style="float: right;"><b>Date:</b> # 07/11/2002</span>		
<b>Category:</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             # <b>F</b>                              Use <u>one</u> of the following categories:  <b>F</b> (correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (addition of feature),  <b>C</b> (functional modification of feature)  <b>D</b> (editorial modification)                              Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.                         </td> <td style="width: 50%; vertical-align: top;"> <b>Release:</b> # Rel-5                              Use <u>one</u> of the following releases:                              2 (GSM Phase 2)                              R96 (Release 1996)                              R97 (Release 1997)                              R98 (Release 1998)                              R99 (Release 1999)                              Rel-4 (Release 4)                              Rel-5 (Release 5)                              Rel-6 (Release 6)                         </td> </tr> </table>	# <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b> # Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
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<b>Reason for change:</b>	# Corrections in this version compared to T1S-020779 marked in yellow.  8.2.2.25  Conformance requirement have been updated in the core specifications  Verification of that a Radio bearer reconfiguration have been done should be tested accurately.  8.2.4.1a  Conformance requirement have been updated in the core specifications  Test purpose is changing TFCS and physical channel information on the DL, the test should be streamlined only related to those core requirements.  Editorial corrections.
<b>Summary of change:</b>	# 8.2.2.25  Conformance requirement updated to the latest version of core specifications

Verification that the Radio bearer reconfiguration was done by checking the RLC configuration in the same manner as for Test case 8.2.2.1.

Step 2a added where SS checks that UE sends periodical RLC STATUS.

Default message changed to have Timer\_STATUS\_periodic set to 400 instead of not present

Test requirement added with periodical RLC STATUS.

Reference to specific message contents in clause 9 of 34.108 added.

8.2.4.1a

Suggestions of this being hard handover removed from the text. Since this is not a hard handover in RAN2 sense. The same RLCs exist both before and after the reconfiguration is performed (see section 8.2.2.3 in 25.331).

Timing maintained removed from title since only when performing a hard handover, the timing indication IE is considered, otherwise it is just ignored (section 8.5.15.2 in TS 25.331).

Conformance requirement updated to the latest version of core specifications

Physical channel IEs added to the first Transport channel reconfiguration procedure since this is the normal UTRAN behaviour.

The second Transport format reconfiguration is removed since there is no test requirement related to this except sending the response message (which is done in a large number of other tests and in this)

**Consequences if not approved:** ⌘ Non accurate test case

**Clauses affected:** ⌘ 8.2.2.25, 8.2.4.1a

<b>Other specs affected:</b>	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td>X</td><td></td></tr></table>	Y	N		X	X		Other core specifications	⌘	TS 34.123-2
		Y	N								
			X								
X											
<table border="1"><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr></table>	X			X	Test specifications						
X											
	X										
<table border="1"><tr><td></td><td>X</td></tr></table>		X	O&M Specifications								
	X										

**Other comments:** ⌘

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

**<Start of modified section>****8.2.2.25 Radio Bearer Reconfiguration for transition from CELL\_FACH to CELL\_DCH including modification of previously signalled CELL\_DCH configuration****8.2.2.25.1 Definition****8.2.2.25.2 Conformance requirement**

**1.** If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

~~1~~**2**> perform the physical layer synchronisation procedure A as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

...

**2.** The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

...

**3.** In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

**Reference**

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

**8.2.2.25.3 Test purpose**

To confirm that the UE applies a previously signalled configuration for CELL\_DCH and in addition modifies the parameters for which reconfiguration is requested in the RADIO BEARER RECONFIGURATION message that is used to initiate transition from CELL\_FACH to CELL\_DCH.



## 8.2.2.25.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

## Test Procedure

- a) The UE is in CELL\_FACH state.
  - b) The SS transmits a RADIO BEARER RECONFIGURATION message including dedicated physical channel information to request the UE to transit from CELL\_FACH to CELL\_DCH [and change the configuration of RLC parameters](#). Upon receiving this message, the UE establishes the radio bearer and transport channel configuration for CELL\_DCH included in a previous RADIO BEARER SETUP message and modifies the parameters for which reconfiguration was requested in the RADIO BEARER RECONFIGURATION message.
  - c) The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.
  - [d\) The SS verifies that the UE starts to transmit periodic RLC STATUS PDUs.](#)
- [e\)](#) SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Initiates the transition from CELL_FACH to CELL_DCH <a href="#">and reconfigures RLC parameters</a> .
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
<a href="#">2a</a>		<a href="#">SS</a>		<a href="#">The SS verifies that periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers each 400 ms during at least 5 seconds.</a>
3		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message is identical as "RADIO BEARER RECONFIGURATION message" as found in [TS 34.108 clause 9 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	
- <a href="#">Timer_poll_prohibit</a>	<a href="#">Not present</a>
- 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
- <a href="#">Timer_ECP</a>	<a href="#">Not present</a>
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	<del>Not Present</del> 400
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Same as for RB identity 2
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	Same as for RB identity 2
- RB mapping info	Not Present
- RB stop/continue	Not Present

## RADIO BEARER RECONFIGURATION COMPLETE (Step 2)

The contents of RADIO BEARER RECONFIGURATION COMPLETE message is identical as "RADIO BEARER RECONFIGURATION COMPLETE message" as found in [clause 9 of TS 34.108 Annex A](#).

### 8.2.2.25.5 Test requirement

After step [12](#) the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

[After step 2, the UE shall start transmitting periodical RLC STATUS PDUs.](#)

<End of modified section>

<Start of next modified section>

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

1. If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

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

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

...

2. If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent;

2> not change its current UL Physical channel configuration;

~~1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.~~

...

3. The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

...

4. 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.

...

5. If the IE "Downlink information for each radio link" is included in a received message, the UE shall:
- 1> in addition, if the message was received in CELL\_DCH state and the UE remains in CELL\_DCH state according to subclause 8.6.3.3 applied on the received message:
  - 2> for each optional IE part of the IE "Downlink information for each radio link" that is not present:
    - 3> do not change its current downlink physical channel configuration corresponding to the IE, which is absent, if not stated otherwise elsewhere.

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4, [8.6.6.4](#).

#### 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 [reconfiguration](#) ~~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 radio bearer is placed into UE test loop mode 1 described in [TS 34.109](#) clause 5.3 and the UL RLC\_SDU size for the loopback scheme is set to the maximum size possible when the maximum uplink TFS, as indicated in RADIO BEARER SETUP message during radio bearer establishment procedure, is used.

The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE to modify the transmission rate which includes a new [physical channel information and the downlink](#) TFCS ~~is reconfigured~~ to restrict the use of [the highest rate](#) TFCSs.

The UE shall reconfigure the new configuration and then transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

UL MAC restriction is imposed on the SS so that SS can only received using the maximum TFS and minimum TFS. Both TFSs belong to the [currently limited](#)~~restricted~~ [downlink](#) TFCS [of the UE](#) (i.e. the TFCS after reconfiguration).

~~Then~~ [In this procedure](#) the SS transmits a RLC\_SDU whose size is the same as the UL RLC\_SDU size for the loopback scheme. ~~The UE receives this RLC\_SDU and decode it according to the new TFCS.~~

~~The UE shall select the maximum uplink TFS in the restricted TFCS (i.e. the TFCS after reconfiguration) on the radio access bearer. The RLC\_SDU is then looped backed to the SS. The SS should receive the expected data as a RLC\_SDU exactly as the one transmitted to the UE. that is sent back by UE.~~

~~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.~~

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		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
2a		←	DOWNLINK RLC SDU	
2b		→	UPLINK RLC SDU	<a href="#">RLC SDU sent back shall be the same as the one sent from the SS.</a>
3		←	<del>TRANSPORT CHANNEL RECONFIGURATION</del> Void	
4		→	<del>TRANSPORT CHANNEL RECONFIGURATION COMPLETE</del> Void	
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

### 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 [TS 34.108 clause 9 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 6.10.2.4 Parameter Set which is used in RADIO BEARER SETUP message in initial procedure.
- CTFC information	
- CTFC	<a href="#">Reference to TS 34.108 clause 6.10.2.4 Parameter Set as This CTFC value is set as defined value to be restricted from the TFCS</a> defined in RADIO BEARER SETUP message <a href="#">with highest rate CTFC removed and repeated for TFC numbers.</a>
- Power offset information	Not Present
<a href="#">Downlink information common for all radio links</a>	
- CHOICE mode	FDD
- Spreading factor	<a href="#">Reference to TS34.108 clause 6.10 Parameter Set. Set to a value that matches the new CTFC.</a>
<a href="#">Downlink information for each radio link list</a>	
- <a href="#">Downlink information for each radio links</a>	
- CHOICE mode	FDD
- DL channelisation code	
- Spreading factor	<a href="#">Reference to TS34.108 clause 6.10 Parameter Set. Set to a value that matches the new CTFC.</a>
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 2a the UE shall transmit a RLC\_SDU that is same as the transmitted data from SS in step 2a on the radio access bearer.

~~After step 3 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

<End of modified section>

CR-Form-v7	
<b>CHANGE REQUEST</b>	
# <b>34.123-1 CR 362</b> # rev <b>-</b> #	Current version: <b>5.1.1</b> #

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

<b>Title:</b>	# CR to TS34.123-1 REL-5; Corrections to package 3 RRC 8_3_x (Connection mobility procedure) as revision of T1S-020780.		
<b>Source:</b>	# Ericsson		
<b>Work item code:</b>	# TEI <span style="float: right;"><b>Date:</b> # 06/11/2002</span>		
<b>Category:</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             # <b>F</b>                              Use <u>one</u> of the following categories:  <b>F</b> (correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (addition of feature),  <b>C</b> (functional modification of feature)  <b>D</b> (editorial modification)                              Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.                         </td> <td style="width: 50%; vertical-align: top;"> <b>Release:</b> # Rel-5                              Use <u>one</u> of the following releases:                              2 (GSM Phase 2)                              R96 (Release 1996)                              R97 (Release 1997)                              R98 (Release 1998)                              R99 (Release 1999)                              Rel-4 (Release 4)                              Rel-5 (Release 5)                              Rel-6 (Release 6)                         </td> </tr> </table>	# <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b> # Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
# <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b> # Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

<b>Reason for change:</b>	# Changes in this version compared to earlier marked in yellow.  8.3.2.11  Error in conformance requirement references  Normal case or URA updates are that the UE goes back to URA_PCH state again. This also simplifies the test.  Message content is missing and states FFS.  8.3.2.12  Expected sequence is missing  Test requirement not written in the same manner as other tests.  8.3.1.23, 8.3.1.24 and 8.3.2.13 Conformance requirement is not up to date with latest core specifications  Test purpose for all the tests are the same but should reflect the difference of the 3 tests.
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SIB3 is not needed to be difference than the default SIB3s since the UE is a connected mode UE and only uses SIB4 if that is present.

It seems too complicated to have both SIB11 and SIB12 included in the test. Test becomes difficult to overlook and the SIB12 always overwrites SIB11 information if they include the same cells with the same ids.

Message content is not up to date with default messages of 34.108. Order of IEs made the same as of 34.108 to increase readability.

Power levels are not big enough to cope with inaccuracies of the UE measurements.

Cell/URA update confirm can be sent on CCCH also as a normal case. This is not reflected in the test case.

**Summary of change: ¶** 8.3.2.11

References update in conformance requirement.

Test is modified not to include assignment of C-RNTI and putting the UE in CELL\_FACH state. Instead the UE is put in URA\_PCH state again. Test purpose and expected sequence is updated accordingly.

FFS removed and Specific message content is included.

**Editorial corrections and unit in table corrected.**

8.3.2.12

Generic procedure C.5 to check that the UE is in URA\_PCH state is included as a last step of the test procedure.

Expected sequence included.

Test requirement written in the manner commonly used in other test cases.

**Editorial corrections and unit in table corrected.**

8.3.1.23

5.2.6.1.4 Included in the Conformance requirement and 5.4.3 text included in conformance requirement.

References to table updated

Test purpose written to reflect what state this test concerns

SIB 3 is removed since a connected mode UE uses only SIB 4. Default SIB3 according to 34.108 is used which indicates existence of SIB4.

SIB12 is removed. There is no use to have two copies of the same information in the test. Only SIB11 is used in the test and since a connected mode UE shall use SIB11 if SIB12 is not present that is good to test in order to increase the test coverage.

Message content is changed to only include the IEs that are different from 34.108.

Serving cell is included in SIB11 for all the SIB11s of the test. Cell ids increased with 1 in neighbour cell lists in SIB11.

SIB11 of cell2 have the order of cells corrected to be aligned with 34.108 default SIB11 for cell2.

SIB11 of cell3 have the order of cells corrected to be aligned with 34.108 default SIB11



for cell3.

Power levels are changed for cell 3 so that the differences are significant enough to trigger the desired re-selections taking into account the inaccuracies of the UE measurements.

Qhcs changed from -76 dBm to -75 dBm for proper evaluation of HCS cell reselection rules.

Qhyst changed from 20 dB to 10 dB to make the power levels aligned with other tests. Temporary Offset changed from 10 dB to 'inf' (infinity, maximum value) to make sure the UE does not select a new better cell during the time set by PENALTY\_TIME parameter and thus should have a high value.

Table 8.3.1.23-1 modified (CPICH Ec and P-CCPCH RSCP levels, H\* and R\*) to take into account the tolerances in SS and UE and for proper evaluation of HCS cell reselection rules.

8.3.1.24 and 8.3.2.13

Similar changes as test case in 8.3.1.23 with the addition that the first Cell/Ura update confirm is changed to be sent on CCCH instead of DCCH to increase the test coverage of this message that can be sent on both CCCH and DCCH. CCCH could typically be used in cases where no new UE identity is assigned (or no security is changed).

8.3.1.24

Qhcs changed from -76 dBm to -75 dBm for proper evaluation of HCS cell reselection rules.

Qhyst changed from 20 dB to 10 dB to make the power levels aligned with other tests. Temporary Offset changed from 10 dB to 'inf' (infinity, maximum value) to make sure the UE does not select a new better cell during the time set by PENALTY\_TIME parameter and thus should have a high value.

Table 8.3.1.24-1 modified (CPICH Ec and P-CCPCH RSCP levels, H\* and R\*) to take into account the tolerances in SS and UE and for proper evaluation of HCS cell reselection rules.

**Consequences if not approved:** ☹ Non accurate test cases

**Clauses affected:** ☹ 8.3.1.23, 8.3.1.24, 8.3.2.11, 8.3.2.12, 8.3.2.13

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

**Other comments:** ☹

**How to create CRs using this form:**

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

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

<Start of modified section>

### 8.3.1.23 Cell Update: HCS cell reselection in CELL\_FACH

#### 8.3.1.23.1 Definition

#### 8.3.1.23.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Q_{hcs_s}$$

$$H_n = Q_{meas,n} - Q_{hcs_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Q_{hyst_s}$$

$$R_n = Q_{meas,n} - Q_{offset_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP\_OFFSET_n * W(PENALTY\_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS\_PRIO_n = HCS\_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS\_PRIO_n <> HCS\_PRIO_s$$

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

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

TEMP\_OFFSET\_n applies an offset to the H and R criteria for the duration of PENALTY\_TIME\_n after a timer T\_n has started for that neighbouring cell.

The timer T\_n is implemented for each neighbouring cell. T\_n shall be started from zero when one of the following conditions becomes true:

- if HCS\_PRIO\_n <> HCS\_PRIO\_s and

$$Q_{meas,n} \geq Q_{hcs_n}$$

Or

- if  $HCS\_PRIO_n = HCS\_PRIO_s$  and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset2_{s,n}}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1_{s,n}}$$

$T_n$  for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for  $TO_n$  is valid only if the associated timer  $T_n$  is still running else  $TO_n$  shall be set to zero.

At cell-reselection, a timer  $T_n$  is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer  $T_n$  for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer  $T_n$  shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells:	$Srxlev > 0$ AND $Squal > 0$
for TDD cells:	$Srxlev > 0$
for GSM cells:	$Srxlev > 0$

Where :

$$Squal = Q_{qualmeas} - Q_{qualmin}$$

$$Srxlev = Q_{rxlevmeas} - Q_{rxlevmin} - P_{compensation}$$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest  $HCS\_PRIO$  among those cells that fulfil the criterion  $H \geq 0$ . Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering  $HCS$  priority levels, if no cell fulfil the criterion  $H \geq 0$ . This case is also valid when it is indicated in system information that  $HCS$  is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval  $T_{reselection}$ .
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The cell reselection process in Connected Mode is the same as cell reselection evaluation process used for idle mode, described in subclause 5.2.6 of 25.304.

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

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

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

3> if the UE is in CELL\_FACH or CELL\_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL\_FACH state and the variable C\_RNTI is empty:

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

## Reference

~~3GPP TS 25.331 clause 8.3.1.~~

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

[3GPP TS 25.331 clause 8.3.1](#)

### 8.3.1.23.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters [in CELL\\_FACH state](#).
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell [in CELL\\_FACH state](#).
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

## 8.3.1.23.4 Method of test

## Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in Table 8.3.1.23.4-1. 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 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

~~Contents of System Information Block type 3 (FDD)~~

Information Element	Value/remark
<del>SIB4 indicator</del>	TRUE
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping info</del>	Not Present
<del>Cell selection and reselection quality measure</del>	CPICH RSCP
<del>CHOICE mode</del>	FDD
<del>Sintrasearch</del>	-16 dB
<del>Sintersearch</del>	0 dB
<del>SsearchHCS</del>	35 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qqualmin</del>	-20 dB
<del>Qrxlevmin</del>	-115 dBm
<del>Qhyst1s</del>	10 (gives actual value of -20 dB)
<del>Qhyst2s</del>	0 dB
<del>Treselctions</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-6
<del>Q-HCS</del>	39 (results in actual value of -76)
<del>TerMax</del>	Not Present

## Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
<del>SIB4 indicator</del>	TRUE
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping info</del>	Not Present
<del>Cell selection_and_reselection_quality_measure</del>	(no data)
<del>CHOICE mode</del>	TDD
<del>Sintrasearch</del>	10 dB
<del>Sintersearch</del>	10 dB
<del>SsearchHCS</del>	47 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qrxlevmin</del>	-103 dBm
<del>Qhyst1s</del>	10 (gives actual value of 20 dB)
<del>Treselections</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-6
<del>Q HCS</del>	39 (results in actual value of -76)
<del>TcrMax</del>	Not Present

## Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
- Cell selection and re-selection info	
<del>Mapping Info</del>	Not present
<del>Cell selection_and_reselection_quality_measure</del>	CPICH RSCP
- CHOICE mode	FDD
<del>Sintrasearch</del>	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10.5 (gives actual value of 120 dB)
- Qhyst2s	0 dB
<del>Treselections</del>	0 seconds
- HCS Serving cell information	
- HCS Priority	6
- Q HCS	4039 (results in actual value of -756)
- TcrMax	Not Present

## Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
<del>- Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>- Mapping Info</del>	Not present
<del>- Cell_selection_and_reselection_quality_measure</del>	(no data)
- CHOICE mode	TDD
<del>- Sintrasearch</del>	<del>10 dB</del>
<del>- Sintersearch</del>	<del>10 dB</del>
- SsearchHCS	47 dB
<del>- RAT List</del>	<del>This parameter is configurable</del>
<del>- RAT identifier</del>	<del>GSM</del>
<del>- Ssearch,RAT</del>	<del>-32 dB</del>
<del>- SHCS,RAT</del>	<del>Not Present</del>
<del>- Slimit,SearchRAT</del>	<del>Not Present</del>
<del>- Qqualmin</del>	<del>-20 dB</del>
<del>- Qrxlevmin</del>	<del>-103 dBm</del>
- Qhyst1s	10 5 (gives actual value of 20-10 dB)
<del>- Tresolections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	6
- Q HCS	39 40 (results in actual value of -75e)
- TcrMax	Not Present



## Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	24
- Cell info	
<del>- Cell individual offset</del>	<del>0dB</del>
<del>- Reference time difference to cell</del>	<del>Not Present</del>
<del>- Read SFN indicator</del>	<del>TRUE</del>
<del>- CHOICE mode</del>	<del>FDD</del>
<del>- Primary CPICH info</del>	
<del>- Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1</del>
<del>- Primary CPICH TX power</del>	<del>Not Present</del>
<del>- TX Diversity indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39-40 (results in actual value of -75e)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	40inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	32
- Cell info	
<del>- Cell individual offset</del>	<del>0dB</del>
<del>- Reference time difference to cell</del>	<del>Not Present</del>
<del>- Read SFN indicator</del>	<del>TRUE</del>
<del>- CHOICE mode</del>	<del>FDD</del>
<del>- Primary CPICH info</del>	
<del>- Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>- Primary CPICH TX power</del>	<del>Not Present</del>
<del>- TX Diversity indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	39-40 (results in actual value of -765)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	40inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

## Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	(no data)
<del>- Cell_selection_and_reselection_quality_measure</del>	
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
- Intra-frequency cell info list	Remove no intra-frequency cells
<del>- CHOICE intra-frequency cell removal</del>	
- New intra-frequency cells	
- Intra-frequency cell id	24
- 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	
- Qoffset1s,n	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39-40 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	40inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	32
- 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	
- Qoffset1s,n	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	39-40 (results in actual value of -756)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	40inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

## Contents of System Information Block type 12 in connected mode (FDD) (Cell 1)

Information Element	Value/remark
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	used
<del>- Cell_selection_and_reselection_quality_measure</del>	CPICH RSCP
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
<del>- Intra-frequency cell info list</del>	

→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## Test Procedure

Table 8.3.1.23-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-70
H* (After PenaltyTime)		-46	-46	-46	-4	-4	6	-4	6	4
P-CCPCH RSCP (TDD)	dBm	-60 <del>4</del>	-60 <del>4</del>	-60 <del>4</del>	-80	-80	-67 <del>0</del>	-80	-70 <del>3</del>	-70 <del>3</del>
H* (During penalty time)		15	15	5	-inf	-inf	5	-inf	-inf	5
H* (After PenaltyTime)		15	15	15	-54	-54	95	-45	35	35
R* (During PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-60
R* (After PenaltyTime)		n.a.-44	n.a.-44	n.a.-44	n.a.-60	n.a.-60	504	n.a.-60	n.a.-53	605

\* 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 "T0" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.23-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After the SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL\_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL\_FACH state. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.23-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after 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 8.3.1.234-1. 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 8.3.1.234-1. 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 8.3.1.234-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8		→	CELL UPDATE	Received in Cell 2
9		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

## Specific Message Contents

[The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:](#)

## Contents of System Information Block type 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)
TerMax	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)
TerMax	Not Present

## Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
<del>- Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>- Mapping Info</del>	<del>Not present</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- CHOICE mode	FDD
<del>- Sintrasearch</del>	<del>16 dB</del>
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
<del>- RAT identifier</del>	<del>GSM</del>
<del>- Ssearch,RAT</del>	<del>-32 dB</del>
<del>- SHCS,RAT</del>	<del>Not Present</del>
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	<b>10 5 (gives actual value of 20-10 dB)</b>
- Qhyst2s	0 dB
<del>- Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	7
- Q HCS	<b>39 40 (results in actual value of -756)</b>
- 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
<del>- Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>- Mapping Info</del>	<del>Not present</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
- CHOICE mode	TDD
<del>- Sintrasearch</del>	<del>10 dB</del>
<del>- Sintersearch</del>	<del>10 dB</del>
- SsearchHCS	47 dB
<del>- RAT List</del>	<del>This parameter is configurable</del>
<del>- RAT identifier</del>	<del>GSM</del>
<del>- Ssearch,RAT</del>	<del>-32 dB</del>
<del>- SHCS,RAT</del>	<del>Not Present</del>
<del>- Slimit,SearchRAT</del>	<del>Not Present</del>
<del>- Qqualmin</del>	<del>-20 dB</del>
<del>- Qrxlevmin</del>	<del>-103 dBm</del>
- Qhyst1s	<b>10 5 (gives actual value of 20-10 dB)</b>
<del>- Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	7
- Q HCS	<b>39 40 (results in actual value of -756)</b>
- TcrMax	Not Present



## Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	<a href="#">FALSE</a>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE_intra-frequency_cell_removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">67</a>
- Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-756</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<a href="#">inf</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	<a href="#">32</a>
- Cell info	
<del>- Cell_individual_offset</del>	<del>-20dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">76</a>
- Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-756</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

## Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	67
- Q_HCS	39 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf40
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	32
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	76
- Q_HCS	3940 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf40
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

## Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	<del>used</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
<del>- Intra-frequency cell info list</del>	

→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-6
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	<a href="#">FALSE</a>
- Measurement control system information	used
- Use of HCS	CPICH RSCP
<del>- Cell_selection_and_reselection_quality_measure</del>	
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	4
- Intra-frequency cell info list	
<del>- CHOICE_intra-frequency_cell_removal</del>	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	<a href="#">24</a>
- Cell info	
<del>- Cell_individual_offset</del>	0dB
<del>- Reference_time_difference_to_cell</del>	Not Present
<del>- Read_SFN_indicator</del>	TRUE
<del>- CHOICE_mode</del>	FDD
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
<del>- Primary_CPICH_TX_power</del>	Not Present
<del>- TX_Diversity_indicator</del>	FALSE
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">76</a>
-Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-7675</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
<del>- Qqualmin</del>	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	<a href="#">12</a>
- Cell info	
<del>- Cell_individual_offset</del>	0dB
<del>- Reference_time_difference_to_cell</del>	Not Present
<del>- Read_SFN_indicator</del>	TRUE
<del>- CHOICE_mode</del>	FDD
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1
<del>- Primary_CPICH_TX_power</del>	Not Present
<del>- TX_Diversity_indicator</del>	FALSE
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">67</a>
-Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-7675</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

## Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	<u>3940</u> (results in actual value of <u>-7675</u> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<u>inf40</u>
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	<u>3940</u> (results in actual value of <u>-7675</u> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<u>inf40</u>
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

## Contents of System Information Block type 12 in connected mode (FDD) (Cell 3)

Information Element	Value/remark
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	<del>used</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
<del>- Intra-frequency cell info list</del>	

→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1 <sub>s,n</sub>	-20 dB
→ Qoffset2 <sub>s,n</sub>	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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1 <sub>s,n</sub>	-20 dB
→ Qoffset2 <sub>s,n</sub>	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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-6
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## CELL UPDATE

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

Information Element	Value/remark
<del>U-RNTI</del>	
<del>SRNC Identity</del>	Check to see if set to '0000-0000-0001'
<del>S-RNTI</del>	In step 4 and 8
Cell Update Cause	Check to see if set to 'Cell Re-selection'



## CELL UPDATE CONFIRM (Step 5 and 9)

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

Information Element	Value/remark
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

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Q_{hcs_s}$$

$$H_n = Q_{meas,n} - Q_{hcs_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Q_{hyst_s}$$

$$R_n = Q_{meas,n} - Q_{offset_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP\_OFFSET_n * W(PENALTY\_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS\_PRIO_n = HCS\_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS\_PRIO_n \neq HCS\_PRIO_s$$

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

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

TEMP\_OFFSET<sub>n</sub> applies an offset to the H and R criteria for the duration of PENALTY\_TIME<sub>n</sub> after a timer T<sub>n</sub> has started for that neighbouring cell.

The timer T<sub>n</sub> is implemented for each neighbouring cell. T<sub>n</sub> shall be started from zero when one of the following conditions becomes true:

- if HCS\_PRIO<sub>n</sub> <> HCS\_PRIO<sub>s</sub> and

$$Q_{meas,n} \geq Q_{hcsn}$$

Or

- if HCS\_PRIO<sub>n</sub> = HCS\_PRIO<sub>s</sub> and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1,s,n}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset2,s,n}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1,s,n}$$

T<sub>n</sub> for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO<sub>n</sub> is valid only if the associated timer T<sub>n</sub> is still running else TO<sub>n</sub> shall be set to zero.

At cell-reselection, a timer T<sub>n</sub> is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T<sub>n</sub> for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T<sub>n</sub> shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells:	Srxlev > 0 AND Squal > 0
for TDD cells:	Srxlev > 0
for GSM cells:	Srxlev > 0

Where :

$$S_{qual} = Q_{qualmeas} - Q_{qualmin}$$

$$S_{rxlev} = Q_{rxlevmeas} - Q_{rxlevmin} - P_{compensation}$$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ . Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion  $H \geq 0$ . This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval  $T_{reselection}$ .
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The cell reselection process in Connected Mode is the same as cell reselection evaluation process used for idle mode, described in subclause 5.2.6 of 25.304.

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

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:
- 3> if the UE is in CELL\_FACH or CELL\_PCH state and the UE performs cell re-selection; or
- 3> if the UE is in CELL\_FACH state and the variable C\_RNTI is empty:

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

#### Reference

~~3GPP TS 25.331 clause 8.3.1.~~

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

[3GPP TS 25.331 clause 8.3.1](#)

#### 8.3.1.24.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters [in CELL\\_PCH state](#).
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell [in CELL\\_PCH state](#).
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

#### 8.3.1.24.4 Method of test

##### Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in table 8.3.1.24.1. Cell 2 and 3 are switched off.

UE: CELL\_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

##### Specific Message Content

For system information blocks ~~3, 4,~~ [and 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
<del>SIB4 indicator</del>	TRUE
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping info</del>	Not Present
<del>Cell selection_and_reselection_quality_measure</del>	CPICH-RSCP
<del>CHOICE mode</del>	FDD
<del>Sintrasearch</del>	16 dB
<del>Sintersearch</del>	0 dB
<del>SsearchHCS</del>	35 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qqualmin</del>	-20 dB
<del>Qrxlevmin</del>	-115 dBm
<del>Qhyst1s</del>	10 (gives actual value of 20 dB)
<del>Qhyst2s</del>	0 dB
<del>Treselections</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-6
<del>Q-HCS</del>	39 (results in actual value of -76)
<del>TerMax</del>	Not Present

## Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
<del>SIB4 indicator</del>	TRUE
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping info</del>	Not Present
<del>Cell selection_and_reselection_quality_measure</del>	(no data)
<del>CHOICE mode</del>	TDD
<del>Sintrasearch</del>	10 dB
<del>Sintersearch</del>	10 dB
<del>SsearchHCS</del>	47 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qrxlevmin</del>	-103 dBm
<del>Qhyst1s</del>	10 (gives actual value of 20 dB)
<del>Treselections</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-6
<del>Q-HCS</del>	39 (results in actual value of -76)
<del>TerMax</del>	Not Present

## Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
<del>- Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>- Mapping Info</del>	<del>Not present</del>
<del>- Cell selection and reselection quality measure</del>	<del>CPICH RSCP</del>
- CHOICE mode	FDD
<del>- Sintrasearch</del>	<del>16 dB</del>
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
<del>- RAT identifier</del>	<del>GSM</del>
<del>- Ssearch,RAT</del>	<del>-32 dB</del>
<del>- SHCS,RAT</del>	<del>Not Present</del>
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10.5 (gives actual value of 20.10 dB)
- Qhyst2s	0 dB
<del>- Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	6
- Q HCS	3940 (results in actual value of -7675)
- TcrMax	Not Present

## Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
<del>- SIB4 indicator</del>	<del>TRUE</del>
<del>- Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>- Mapping info</del>	<del>Not Present</del>
<del>- Cell selection and reselection quality measure</del>	<del>(no data)</del>
- CHOICE mode	TDD
<del>- Sintrasearch</del>	<del>10 dB</del>
<del>- Sintersearch</del>	<del>10 dB</del>
- SsearchHCS	47 dB
<del>- RAT List</del>	<del>This parameter is configurable</del>
<del>- RAT identifier</del>	<del>GSM</del>
<del>- Ssearch,RAT</del>	<del>-32 dB</del>
<del>- SHCS,RAT</del>	<del>Not Present</del>
<del>- Slimit,SearchRAT</del>	<del>Not Present</del>
<del>- Qrxlevmin</del>	<del>-103 dBm</del>
- Qhyst1s	10.5 (gives actual value of 20.1 dB)
<del>- Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	6
- Q HCS	3940 (results in actual value of -7675)
- TcrMax	Not Present

## Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	<a href="#">FALSE</a>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE_intra-frequency_cell_removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	<a href="#">24</a>
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-7675</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	<a href="#">32</a>
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-7675</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

## Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	<u>24</u>
- 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 <sub>s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	<u>3940</u> (results in actual value of <u>-7675</u> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<u>inf40</u>
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	<u>32</u>
- 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 <sub>s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	<u>3940</u> (results in actual value of <u>-7675</u> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<u>inf40</u>
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

## Contents of System Information Block type 12 in connected mode (FDD) (Cell 1)

Information Element	Value/remark
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	<del>used</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
<del>- Intra-frequency cell info list</del>	



→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## Test Procedure

Table 8.3.1.24-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm/ 3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-70
H* (After Penalty Time)		16	16	16	-4	-4	6	-4	6	4
R* (After Penalty Time)		-44	-44	-44	-60	-60	-47	-60	-53	-53
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (During penalty time)		15	15	5	-inf	-inf	5	-inf	-inf	5
H* (After Penalty Time)		15	15	15	-54	-54	59	-54	53	53
R* (During Penalty Time)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-60
R* (After Penalty Time)		n.a.-44	n.a.-44	n.a.-44	n.a.-60	n.a.-60	-50-47	n.a.-60	n.a.-53	-60-53

\* 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 "T0" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.24-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL\_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL\_PCH", to the UE on the downlink 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 8.3.1.24-1. 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 8.3.1.244-1. 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 8.3.1.244-1. 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	<a href="#">Message sent on CCCH with IE "RRC State Indicator"</a> is set to "CELL_PCH".
7				SS changes the power levels as per column 'T2' in the table 8.3.1.244-1. 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	<a href="#">Message sent on DCCH with IE "RRC State Indicator"</a> is set to "CELL_PCH".

## Specific Message Contents

[The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:](#)

## Contents of System Information Block type 3 (FDD) (Cell 2 and 3)

Information Element	Value/remark
<del>SIB4 indicator</del>	TRUE
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping info</del>	Not Present
<del>Cell selection_and_reselection_quality_measure</del>	CPICH RSCP
<del>CHOICE mode</del>	FDD
<del>Sintrasearch</del>	16 dB
<del>Sintersearch</del>	0 dB
<del>SsearchHCS</del>	35 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qqualmin</del>	-20 dB
<del>Qrxlevmin</del>	-115 dBm
<del>Qhyst1s</del>	10 (gives actual value of 20 dB)
<del>Qhyst2s</del>	0 dB
<del>Treselections</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-7
<del>Q-HCS</del>	39 (results in actual value of -76)
<del>TerMax</del>	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
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping Info</del>	Not present
<del>Cell selection_and_reselection_quality_measure</del>	(no data)
<del>CHOICE mode</del>	TDD
<del>Sintrasearch</del>	10 dB
<del>Sintersearch</del>	10 dB
<del>SsearchHCS</del>	47 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qqualmin</del>	-20 dB
<del>Qrxlevmin</del>	-103 dBm
<del>Qhyst1s</del>	10 (gives actual value of 20 dB)
<del>Treselections</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-7
<del>Q-HCS</del>	39 (results in actual value of -76)
<del>TerMax</del>	Not Present

## Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
<del>Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>Mapping Info</del>	Not present
<del>Cell selection and reselection quality measure</del>	CPICH RSCP
- CHOICE mode	FDD
<del>Sintrasearch</del>	<del>16 dB</del>
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
<del>RAT identifier</del>	<del>GSM</del>
<del>Ssearch,RAT</del>	<del>-32 dB</del>
<del>SHCS,RAT</del>	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	<b>10.5</b> (gives actual value of <b>20-10</b> dB)
- Qhyst2s	0 dB
<del>Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	7
- Q HCS	<b>3940</b> (results in actual value of <b>-7675</b> )
- 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
<del>Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>Mapping Info</del>	Not present
<del>Cell selection and reselection quality measure</del>	(no data)
- CHOICE mode	TDD
<del>Sintrasearch</del>	<del>10 dB</del>
<del>Sintersearch</del>	<del>10 dB</del>
- SsearchHCS	47 dB
<del>RAT List</del>	<del>This parameter is configurable</del>
<del>RAT identifier</del>	<del>GSM</del>
<del>Ssearch,RAT</del>	<del>-32 dB</del>
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qqualmin</del>	<del>-20 dB</del>
<del>Qrxlevmin</del>	<del>-103 dBm</del>
- Qhyst1s	<b>10.5</b> (gives actual value of <b>20-10</b> dB)
<del>Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	7
- Q HCS	<b>3940</b> (results in actual value of <b>-7675</b> )
- TcrMax	Not Present

## Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	<a href="#">FALSE</a>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE_intra-frequency_cell_removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">67</a>
- Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-7675</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	<a href="#">32</a>
- Cell info	
<del>- Cell_individual_offset</del>	<del>-20dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">76</a>
- Q_HCS	<a href="#">3940</a> (results in actual value of <a href="#">-7675</a> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<a href="#">inf40</a>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

## Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- 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 <sub>s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	67
- Q_HCS	3940 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf40
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	32
- 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 <sub>s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	76
- Q_HCS	3940 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf40
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

## Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)

Information Element	Value/remark
- Measurement control system information	
- Use of HCS	used
- Cell_selection_and_reselection_quality_measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	



- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
-Q_HCS	3940 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf40
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
-Q_HCS	3940 (results in actual value of -7675)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf40
- 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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-6
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE_intra-frequency_cell_removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	<u>24</u>
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<u>76</u>
-Q_HCS	<u>3940</u> (results in actual value of <b>-7675</b> )
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	<u>inf40</u>
- CHOICE mode	FDD
<del>- Qqualmin</del>	<del>-20 dB</del>
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	<u>12</u>
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<u>67</u>
-Q_HCS	<u>3940</u> (results in actual value of <b>-7675</b> )
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	<u>inf40</u>
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

## Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	used
- Use of HCS	(no data)
<del>- Cell_selection_and_reselection_quality_measure</del>	
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	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 <sub>s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	<u>3940</u> (results in actual value of <u>-7675</u> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<u>inf40</u>
- 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 <sub>s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	<u>3940</u> (results in actual value of <u>-7675</u> )
-HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	<u>inf40</u>
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

## Contents of System Information Block type 12 in connected mode (FDD) (Cell 3)

Information Element	Value/remark
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	used
<del>- Cell_selection_and_reselection_quality_measure</del>	CPICH RSCP
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
<del>- Intra-frequency cell info list</del>	

→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1 <sub>s,n</sub>	-20 dB
→ Qoffset2 <sub>s,n</sub>	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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1 <sub>s,n</sub>	-20 dB
→ Qoffset2 <sub>s,n</sub>	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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-6
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## CELL UPDATE

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

Information Element	Value/remark
<del>U-RNTI</del>	
<del>SRNC Identity</del>	Check to see if set to '0000-0000-0001'
<del>S-RNTI</del>	In step 4 and 7
Cell Update Cause	Check to see if set to 'Cell Re-selection'

## CELL UPDATE CONFIRM (Step 5 and 8)

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

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

## 8.3.1.24.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 6 the UE shall reselect to cell 2 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

**<End of modified section>**

## &lt;Start of next modified section&gt;

## 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" [TS 22.011](#)
  - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
3. The Mobile Equipment shall store a list of "equivalent PLMNs". This list is replaced or deleted at the end of each location update procedure, routing area update procedure and GPRS attach procedure. The stored list consists of a list of equivalent PLMNs as downloaded by the network plus the PLMN code of the network that downloaded the list. The stored list shall not be deleted when the MS is switched off. The stored list shall be deleted if the SIM is removed. The maximum number of possible entries in the stored list is six.

## Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

## 8.3.2.11.3 Test purpose

1. To confirm that the UE executes a URA update procedure after a successful reselection of another UTRA cell with a URA identity that is not the URA of the UE and with a PLMN identity different from the original cell but with a PLMN that is part of the equivalent PLMN list in the UE. ~~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 EcRSCP (FDD)	dBm m/3.8 4MHz	-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				<del>At T0-</del> UE is in URA_PCH state, camped on Cell 1 and registered to PLMN1. SS applies downlink transmission power settings according to values in column "T0" of table 8.3.2.11-1.
<u>1a</u>				SS applies downlink transmission power settings according to values in column "T1" of table 8.3.2.11-1.
2		→	URA UPDATE	<del>At T1-</del> The UE moves to CELL_FACH state and transmits this message <del>Sent</del> in Cell 2. The value "change of URA" shall be set in IE "URA update cause".
3		←	URA UPDATE CONFIRM	The value "URA_PCH" set in IE "RRC State Indicator".
<u>4</u>				SS applies downlink transmission power settings according to values in column "T2" of table 8.3.2.11-1.
<u>5</u>				SS monitors that the UE does not send a URA UPDATE message or any other message.
<del>4</del>		→	<del>UTRAN MOBILITY INFORMATION CONFIRM</del>	

Specific Message Contents

~~FPS~~

URA UPDATE (Step 2)

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

Information Element	Value/remark
URA Update Cause	Check to see if set to 'change of URA'

URA UPDATE CONFIRM (Step 3)

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

Information Element	Value/remark
URA identity	URA-ID 2

8.3.2.11.5 Test requirement

After Step 1 ~~t~~The UE shall send a URA UPATE message

~~after~~ After Step 4 the UE shall ~~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" [in TS 22.011](#).
  - The cell selection criteria are fulfilled, see clause 5.2.3.1.2 in TS 25.304.
3. The Mobile Equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". These lists shall be erased when the MS is switched off or when the SIM is removed, and periodically (with period in the range 12 to 24 hours). The location area identification received on the BCCH that triggered the location updating request shall be added to the suitable list whenever a location update reject message is received with the cause "Roaming not allowed in this location area" or with the cause "Location Area not allowed". The lists shall accommodate each 10 or more location area identifications. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

### Reference

3GPP TS 25.331 clause 8.3.1.2.

3GPP TS 25.304 clause 4.3.

3GPP TS 24.008 clause 4.4.1.

### 8.3.2.12.3 Test purpose

1. To confirm that the UE refrains from selecting a UTRA cell and performs a URA update if that cell has a LA identity that is part of the list of LAs stored in the UE as "forbidden location areas for roaming".

NOTE: Test case in 8.3.2.1 is a test where the UE reselects to a cell with the same LA identity as the LA identity in the original cell.

### 8.3.2.12.4 Method of test

### Initial Condition

System Simulator: 2 cells - Cell 1 is active, with the downlink transmission power shown in column marked "T0" in table 8.3.2.12-1, while cell 2 is inactive.

UE: URA\_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

UE: Shall have stored LA-ID 2 into the list of "forbidden location areas for roaming". The UE shall also have stored the URA identity URA-ID 1 from the list of URA-IDs in cell 1.

### Test Procedure

**Table 8.3.2.12-1**

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
URA identity		URA-ID 1		URA-ID 2	
LA identity		LA-ID 1		LA-ID 2	
CPICH EcRSCP (FDD)	DBm/ 3.84 MHz	-73	-79	Cell 2 is switched off	-73
P-CCPCH RSCP (TDD)	dBm	-62	-68	Cell 2 is switched off	-62

Table 8.3.2.12-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while 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.

b) [SS calls for generic procedure C.5 to check that UE is in URA\\_PCH state in cell 1.](#)

### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in URA_PCH state, camped on Cell 1 and registered to PLMN1. SS applies downlink transmission power settings according to values in column "T0" of table 8.3.2.12-1.
2				SS applies downlink transmission power settings according to values in column "T1" of table 8.3.2.12-1.
3				SS monitors that the UE does not send a URA UPDATE message or any other message.
4		↔	<a href="#">CALL C.5</a>	If the test result of C.5 indicates that UE is in URA_PCH state in cell 1, the test passes, otherwise it fails.

### Specific Message Contents

#### 8.3.2.12.5 Test requirement

[After Step 2](#) the UE shall ~~not send~~ [refrain from sending](#) 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

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{\text{meas},s} - Q_{\text{hcs}_s}$$

$$H_n = Q_{\text{meas},n} - Q_{\text{hcs}_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{\text{meas},s} + Q_{\text{hyst}_s}$$

$$R_n = Q_{\text{meas},n} - Q_{\text{offset}_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = \text{TEMP\_OFFSET}_n * W(\text{PENALTY\_TIME}_n - T_n)$$

$$L_n = 0 \quad \text{if } \text{HCS\_PRIO}_n = \text{HCS\_PRIO}_s$$

$$L_n = 1 \quad \text{if } \text{HCS\_PRIO}_n <> \text{HCS\_PRIO}_s$$

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

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

TEMP\_OFFSET<sub>n</sub> applies an offset to the H and R criteria for the duration of PENALTY\_TIME<sub>n</sub> after a timer T<sub>n</sub> has started for that neighbouring cell.

The timer T<sub>n</sub> is implemented for each neighbouring cell. T<sub>n</sub> shall be started from zero when one of the following conditions becomes true:

- if HCS\_PRIO<sub>n</sub> <> HCS\_PRIO<sub>s</sub> and

$$Q_{\text{meas},n} \geq Q_{\text{hcs}_n}$$

Or

- if HCS\_PRIO<sub>n</sub> = HCS\_PRIO<sub>s</sub> and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{\text{meas},n} > Q_{\text{meas},s} + Q_{\text{offset}1_{s,n}}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{\text{meas},n} > Q_{\text{meas},s} + Q_{\text{offset}2_{s,n}}$$

- for all other serving and neighbour cells:

$$Q_{\text{meas},n} > Q_{\text{meas},s} + Q_{\text{offset}1_{s,n}}$$

$T_n$  for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for  $TO_n$  is valid only if the associated timer  $T_n$  is still running else  $TO_n$  shall be set to zero.

At cell-reselection, a timer  $T_n$  is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer  $T_n$  for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer  $T_n$  shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells:	$S_{rxlev} > 0$ AND $S_{qual} > 0$
for TDD cells:	$S_{rxlev} > 0$
for GSM cells:	$S_{rxlev} > 0$

Where :

$S_{qual} = Q_{\text{qualmeas}} - Q_{\text{qualmin}}$
$S_{rxlev} = Q_{\text{rxlevmeas}} - Q_{\text{rxlevmin}} - P_{\text{compensation}}$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS\_PRIO among those cells that fulfil the criterion  $H \geq 0$ . Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion  $H \geq 0$ . This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval  $T_{\text{reselection}}$ .

- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The cell reselection process in Connected Mode is the same as cell reselection evaluation process used for idle mode, described in subclause 5.2.6 of 25.304.

7. A UE in URA\_PCH state shall initiate the URA update procedure in the following cases:

1> URA reselection:

- 2> if the UE detects that the current URA assigned to the UE, stored in the variable URA\_IDENTITY, is not present in the list of URA identities in system information block type 2; or

...

- 3> perform URA update using the cause "change of URA".

## Reference

~~3GPP TS 25.331 clause 8.3.1.~~

3GPP TS 25.304 clause 5.2.6.1.4.

3GPP TS 25.304 clause 5.4.3.

3GPP TS 25.331 clause 8.3.1

### 8.3.2.13.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in URA\_PCH state.
2. To confirm that the UE executes an URA update procedure after the successful change of URA due to HCS Cell Reselection in URA\_PCH state.
3. To confirm UE responds correctly when it re-selects to a new cell while waiting from URA UPDATE CONFIRM message from SS.

### 8.3.2.13.4 Method of test

#### Initial Condition

System Simulator: 3 cells - Cell 1 is active with URA-ID 1 and downlink transmission power shown in column marked "T0" in table 8.3.2.13~~4~~-1. Cell2 with URA-ID 1 and Cell 3 with URA-ID 2 are switched off

UE: URA\_PCH (state 6-13) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE, with URA-ID 1 from the list of URA-ID in cell 1

#### Specific Message Content

For system information blocks ~~3, 4, and 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)
→ TerMax	Not Present



## Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
<del>SIB4 indicator</del>	TRUE
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
<del>Cell selection and re-selection info</del>	
<del>Mapping info</del>	Not Present
<del>Cell selection_and_reselection_quality_measure</del>	(no data)
<del>CHOICE mode</del>	TDD
<del>Sintrasearch</del>	10 dB
<del>Sintersearch</del>	10 dB
<del>SsearchHCS</del>	47 dB
<del>RAT List</del>	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qrxlevmin</del>	-103 dBm
<del>Qhyst1s</del>	10 (gives actual value of 20 dB)
<del>Treselections</del>	0 seconds
<del>HCS Serving cell information</del>	
<del>HCS Priority</del>	-6
<del>Q HCS</del>	39 (results in actual value of -76)
<del>TcrMax</del>	Not Present

## Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
<del>Cell identity</del>	0000-0000-0000-0000-0000-0000-0001B
- Cell selection and re-selection info	
<del>Mapping Info</del>	Not present
<del>Cell selection_and_reselection_quality_measure</del>	CPICH RSCP
- CHOICE mode	FDD
<del>Sintrasearch</del>	16 dB
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
<del>RAT identifier</del>	GSM
<del>Ssearch,RAT</del>	-32 dB
<del>SHCS,RAT</del>	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
<del>Treselections</del>	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
<del>- Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>- Mapping Info</del>	<del>Not present</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
- CHOICE mode	TDD
<del>- Sintrasearch</del>	<del>10 dB</del>
<del>- Sintersearch</del>	<del>10 dB</del>
- SsearchHCS	47 dB
<del>- RAT List</del>	<del>This parameter is configurable</del>
<del>- RAT identifier</del>	<del>GSM</del>
<del>- Ssearch,RAT</del>	<del>-32 dB</del>
<del>- SHCS,RAT</del>	<del>Not Present</del>
<del>- Slimit,SearchRAT</del>	<del>Not Present</del>
<del>- Qqualmin</del>	<del>-20 dB</del>
<del>- Qrxlevmin</del>	<del>-103 dBm</del>
- Qhyst1s	10 (gives actual value of 20 dB)
<del>- Tresolections</del>	<del>0 seconds</del>
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

## Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	<a href="#">FALSE</a>
- Measurement control system information	
- Use of HCS	used
<del>- Cell selection and reselection quality measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	<a href="#">24</a>
- Cell info	
<del>- Cell individual offset</del>	<del>0dB</del>
<del>- Reference time difference to cell</del>	<del>Not Present</del>
<del>- Read SFN indicator</del>	<del>TRUE</del>
<del>- CHOICE mode</del>	<del>FDD</del>
<del>- Primary CPICH info</del>	
<del>- Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1</del>
<del>- Primary CPICH TX power</del>	<del>Not Present</del>
<del>- TX Diversity indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- 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	<a href="#">32</a>
- Cell info	
<del>- Cell individual offset</del>	<del>0dB</del>
<del>- Reference time difference to cell</del>	<del>Not Present</del>
<del>- Read SFN indicator</del>	<del>TRUE</del>
<del>- CHOICE mode</del>	<del>FDD</del>
<del>- Primary CPICH info</del>	
<del>- Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>- Primary CPICH TX power</del>	<del>Not Present</del>
<del>- TX Diversity indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- 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
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	<u>24</u>
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	<u>32</u>
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	<del>used</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
<del>- Intra-frequency cell info list</del>	

<del>CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell-id</del>	<del>4</del>
<del>Cell info</del>	
<del>Cell individual offset</del>	<del>0dB</del>
<del>Reference time difference to cell</del>	<del>Not Present</del>
<del>Read SFN indicator</del>	<del>TRUE</del>
<del>CHOICE mode</del>	<del>FDD</del>
<del>Primary CPICH info</del>	
<del>Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1</del>
<del>Primary CPICH TX power</del>	<del>Not Present</del>
<del>TX Diversity indicator</del>	<del>FALSE</del>
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1s,n</del>	<del>-20 dB</del>
<del>Qoffset2s,n</del>	<del>Not Present</del>
<del>Maximum allowed UL TX power</del>	<del>33 dBm</del>
<del>HCS neighbouring cell information</del>	<del>Present</del>
<del>HCS Priority</del>	<del>-7</del>
<del>Q_HCS</del>	<del>-39 (results in actual value of -76)</del>
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	<del>40</del>
<del>Temporary Offset</del>	<del>-10</del>
<del>CHOICE mode</del>	<del>FDD</del>
<del>Qqualmin</del>	<del>-20 dB</del>
<del>Qrxlevmin</del>	<del>-115 dBm</del>
<del>Intra-frequency cell-id</del>	<del>2</del>
<del>Cell info</del>	
<del>Cell individual offset</del>	<del>0dB</del>
<del>Reference time difference to cell</del>	<del>Not Present</del>
<del>Read SFN indicator</del>	<del>TRUE</del>
<del>Primary CPICH info</del>	
<del>Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>Primary CPICH TX power</del>	<del>Not Present</del>
<del>TX Diversity indicator</del>	<del>FALSE</del>
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1s,n</del>	<del>-20 dB</del>
<del>Qoffset2s,n</del>	<del>Not Present</del>
<del>Maximum allowed UL TX power</del>	<del>33 dBm</del>
<del>HCS neighbouring cell information</del>	<del>Present</del>
<del>HCS Priority</del>	<del>-7</del>
<del>Q_HCS</del>	<del>39 (results in actual value of -76)</del>
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	<del>-40</del>
<del>Temporary Offset</del>	<del>-10</del>
<del>CHOICE mode</del>	<del>FDD</del>
<del>Qqualmin</del>	<del>-20 dB</del>
<del>Qrxlevmin</del>	<del>-115 dBm</del>

## Contents of System Information Block type 12 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-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
<a href="#">Cell id in system information</a>		<a href="#">1</a>			<a href="#">2</a>			<a href="#">3</a>		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm <a href="#">/3.8</a> <a href="#">4</a> <a href="#">MHz</a>	-60	-60	-60	-80	-80	-70	-80	-70	- <a href="#">73</a> <a href="#">5</a>
<a href="#">H* (During penalty time)</a>		<a href="#">16</a>	<a href="#">16</a>	<a href="#">6</a>	<a href="#">-14</a>	<a href="#">-14</a>	<a href="#">6</a>	<a href="#">-14</a>	<a href="#">-4</a>	<a href="#">3</a>
H* (After PenaltyTime)		16	16	16	-4	-4	6	-4	6	<a href="#">3</a> <a href="#">4</a>
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (After PenaltyTime)		15	15	15	-4	-4	9	-4	3	3
R* (After PenaltyTime)		-41	-41	-41	-60	-60	-47	-60	-53	-53

\* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the URA\_PCH state and assigned with only 1 URA identity in cell 1: URA-ID 1. SS configures Cell 2 and 3 with power level given in column "T0", and URA-Id 1 and 2 respectively and starts broadcast of BCCH on the primary CCPCH in cells 2 and 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.2.13-1. SS then adjusts the transmission power again according to 'T1' column. This is expected to cause the UE to perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. UE on performing cell reselection to cell 3 finds that its current URA-ID 1 is not in the new broadcasted list of URA-IDs, it moves to CELL\_FACH state and transmits a URA UPDATE message on the uplink CCCH. After the SS receives this message, it transmits URA UPDATE CONFIRM message which includes the IEs "RRC State Indicator" and "URA-ID" to the UE on the downlink ~~DCCH~~CCCH. The "RRC State Indicator" is set to "URA\_PCH". UE returns to URA\_PCH state in cell 3 without sending a uplink response message. Next SS adjusts the transmission power according to 'T2' column. UE shall re-select to cell 2 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 on the downlink DCCH. UE shall return to URA\_PCH state in Cell 1 and will not transmit anything on PRACH.

## 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	<a href="#">Message sent on CCCH.</a> Message comprises IE "RRC State Indicator" set "URA_PCH", and also IE "URA Identity" equals to "URA-ID 2".
7				SS set the power transmission of all cells according to column 'T2' of table 8.3.2.13-1.
8		→	URA UPDATE	In Cell 2
9				SS do not respond to the URA UPDATE message from UE and set the power transmission of all cells according to column 'T0' of table 8.3.2.13-1.
10		→	URA UPDATE	In Cell 1
11		←	URA UPDATE CONFIRM	<a href="#">Message sent on DCCH.</a> <a href="#">Message comprises IE "RRC State Indicator" set "URA_PCH", and also IE "URA Identity" equals to "URA-ID 1".</a>

## Specific Message Contents

[The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:](#)



## Contents of System Information Block type 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)
TerMax	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)
TerMax	Not Present

## Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
<del>Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>Mapping Info</del>	Not present
<del>Cell selection and reselection quality measure</del>	CPICH RSCP
- CHOICE mode	FDD
<del>Sintrasearch</del>	<del>16 dB</del>
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
<del>RAT identifier</del>	<del>GSM</del>
<del>Ssearch,RAT</del>	<del>-32 dB</del>
<del>SHCS,RAT</del>	Not Present
- Slimit,SearchRAT	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	10 (gives actual value of 20 dB)
- Qhyst2s	0 dB
<del>Treselections</del>	<del>0 seconds</del>
- 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
<del>Cell identity</del>	<del>0000 0000 0000 0000 0000 0000 0001B</del>
- Cell selection and re-selection info	
<del>Mapping Info</del>	Not present
<del>Cell selection and reselection quality measure</del>	(no data)
- CHOICE mode	TDD
<del>Sintrasearch</del>	<del>10 dB</del>
<del>Sintersearch</del>	<del>10 dB</del>
- SsearchHCS	47 dB
<del>RAT List</del>	<del>This parameter is configurable</del>
<del>RAT identifier</del>	<del>GSM</del>
<del>Ssearch,RAT</del>	<del>-32 dB</del>
<del>SHCS,RAT</del>	Not Present
<del>Slimit,SearchRAT</del>	Not Present
<del>Qqualmin</del>	<del>-20 dB</del>
<del>Qrxlevmin</del>	<del>-103 dBm</del>
- Qhyst1s	10 (gives actual value of 20 dB)
<del>Treselections</del>	<del>0 seconds</del>
- HCS Serving cell information	
- HCS Priority	7
- Q HCS	39 (results in actual value of -76)
- TcrMax	Not Present

## Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	<a href="#">FALSE</a>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE_intra-frequency_cell_removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
<del>- Cell_individual_offset</del>	<del>0dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">67</a>
-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	<a href="#">32</a>
- Cell info	
<del>- Cell_individual_offset</del>	<del>-20dB</del>
<del>- Reference_time_difference_to_cell</del>	<del>Not Present</del>
<del>- Read_SFN_indicator</del>	<del>TRUE</del>
<del>- CHOICE_mode</del>	<del>FDD</del>
<del>- Primary_CPICH_info</del>	
<del>- Primary_scrambling_code</del>	<del>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1</del>
<del>- Primary_CPICH_TX_power</del>	<del>Not Present</del>
<del>- TX_Diversity_indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1s,n	-20 dB
<del>- Qoffset2s,n</del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">76</a>
-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
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	used
- Use of HCS	(no data)
<del>- Cell_selection_and_reselection_quality_measure</del>	
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	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	
- Qoffset <sub>1s,n</sub>	-20 dB
- HCS neighbouring cell information	Present
- HCS_Priority	<u>6</u> 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	<u>3</u> 2
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-20dB
- HCS neighbouring cell information	Present
- HCS_Priority	<u>7</u> 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
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	used
<del>- Cell_selection_and_reselection_quality_measure</del>	CPICH RSCP
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
<del>- Intra-frequency cell info list</del>	

→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	used
<del>- Cell_selection_and_reselection_quality_measure</del>	(no data)
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	4
<del>- Intra-frequency cell info list</del>	
<del>- CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>- New intra-frequency cells</del>	
<del>- Intra-frequency cell id</del>	4
<del>- Cell info</del>	
<del>- Cell individual offset</del>	0dB
<del>- Reference time difference to cell</del>	Not Present
<del>- CHOICE mode</del>	TDD
<del>- Primary CCPCH info</del>	
<del>- Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>- Primary CCPCH TX power</del>	Not Present
<del>- Timeslot list</del>	Not Present
<del>- Burst type</del>	Not Present
<del>- Cell Selection and Re-selection info</del>	
<del>- Qoffset1<sub>s,n</sub></del>	-20 dB
<del>- HCS neighbouring cell information</del>	Present
<del>- HCS_Priority</del>	-7
<del>- Q_HCS</del>	-39 (results in actual value of -76)
<del>- HCS Cell Reselection Information</del>	
<del>- Penalty Time</del>	40
<del>- Temporary Offset</del>	-40
<del>- CHOICE mode</del>	TDD
<del>- Qrxlevmin</del>	-103 dBm
<del>- Intra-frequency cell id</del>	2
<del>- Cell info</del>	
<del>- Cell individual offset</del>	0dB
<del>- Reference time difference to cell</del>	Not Present
<del>- CHOICE mode</del>	TDD
<del>- Primary CCPCH info</del>	
<del>- Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>- Primary CCPCH TX power</del>	Not Present
<del>- Timeslot list</del>	Not Present
<del>- Burst type</del>	Not Present
<del>- Cell Selection and Re-selection info</del>	
<del>- Qoffset1<sub>s,n</sub></del>	-20dB
<del>- HCS neighbouring cell information</del>	Present
<del>- HCS_Priority</del>	-6
<del>- Q_HCS</del>	-39 (results in actual value of -76)
<del>- HCS Cell Reselection Information</del>	
<del>- Penalty Time</del>	-40
<del>- Temporary Offset</del>	-40
<del>- CHOICE mode</del>	TDD
<del>- Qrxlevmin</del>	-103 dBm

## Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
<del>- SIB 12 indicator</del>	<del>FALSE</del>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH_RSCP</del>
- Intra-frequency measurement system information	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>

- New intra-frequency cells	
- Intra-frequency cell id	<a href="#">24</a>
- Cell info	
<del>- Cell individual offset</del>	<del>0dB</del>
<del>- Reference time difference to cell</del>	<del>Not Present</del>
<del>- Read SFN indicator</del>	<del>TRUE</del>
<del>- CHOICE mode</del>	<del>FDD</del>
<del>- Primary CPICH info</del>	
<del>- Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1</del>
<del>- Primary CPICH TX power</del>	<del>Not Present</del>
<del>- TX Diversity indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
<del>- Qoffset2<sub>s,n</sub></del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">76</a>
-Q_HCS	39 (results in actual value of -76)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	10
- CHOICE mode	FDD
<del>- Qqualmin</del>	<del>-20 dB</del>
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	<a href="#">12</a>
- Cell info	
<del>- Cell individual offset</del>	<del>0dB</del>
<del>- Reference time difference to cell</del>	<del>Not Present</del>
<del>- Read SFN indicator</del>	<del>TRUE</del>
<del>- CHOICE mode</del>	<del>FDD</del>
<del>- Primary CPICH info</del>	
<del>- Primary scrambling code</del>	<del>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1</del>
<del>- Primary CPICH TX power</del>	<del>Not Present</del>
<del>- TX Diversity indicator</del>	<del>FALSE</del>
- Cell Selection and Re-selection info	
- Qoffset1 <sub>s,n</sub>	-20 dB
<del>- Qoffset2<sub>s,n</sub></del>	<del>Not Present</del>
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	<a href="#">67</a>
-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
- SIB 12 indicator	<u>FALSE</u>
- Measurement control system information	
- Use of HCS	used
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>(no data)</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
- Intra-frequency cell info list	
<del>- CHOICE intra-frequency cell removal</del>	<del>Remove no intra-frequency cells</del>
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset <sub>1s,n</sub>	-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	
- Qoffset <sub>1s,n</sub>	-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
<del>- Measurement control system information</del>	
<del>- Use of HCS</del>	<del>used</del>
<del>- Cell_selection_and_reselection_quality_measure</del>	<del>CPICH RSCP</del>
<del>- Intra-frequency measurement system information</del>	
<del>- Intra-frequency measurement identity</del>	<del>4</del>
<del>- Intra-frequency cell info list</del>	



→ CHOICE intra-frequency cell removal	Remove no intra-frequency cells
→ New intra-frequency cells	
→ Intra-frequency cell-id	4
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
→ 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
→ Primary CPICH TX power	Not Present
→ TX Diversity indicator	FALSE
→ Cell Selection and Re-selection info	
→ Qoffset1s,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
<del>Measurement control system information</del>	
<del>Use of HCS</del>	used
<del>Cell selection and reselection quality measure</del>	(no data)
<del>Intra-frequency measurement system information</del>	
<del>Intra-frequency measurement identity</del>	4
<del>Intra-frequency cell info list</del>	
<del>CHOICE intra-frequency cell removal</del>	Remove no intra-frequency cells
<del>New intra-frequency cells</del>	
<del>Intra-frequency cell id</del>	4
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20 dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-6
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm
<del>Intra-frequency cell id</del>	2
<del>Cell info</del>	
<del>Cell individual offset</del>	0dB
<del>Reference time difference to cell</del>	Not Present
<del>CHOICE mode</del>	TDD
<del>Primary CCPCH info</del>	
<del>Cell parameters ID</del>	Reference clause 6.1 Default settings for cell
<del>Primary CCPCH TX power</del>	Not Present
<del>Timeslot list</del>	Not Present
<del>Burst type</del>	Not Present
<del>Cell Selection and Re-selection info</del>	
<del>Qoffset1<sub>s,n</sub></del>	-20dB
<del>HCS neighbouring cell information</del>	Present
<del>HCS_Priority</del>	-7
<del>Q_HCS</del>	-39 (results in actual value of -76)
<del>HCS Cell Reselection Information</del>	
<del>Penalty Time</del>	-40
<del>Temporary Offset</del>	-40
<del>CHOICE mode</del>	TDD
<del>Qrxlevmin</del>	-103 dBm

## URA UPDATE (Step 5, 8 and 10)

Information Element	Value/remark
<del>U-RNTI</del>	
<del>SRNC Identity</del>	Check to see if set to '0000-0000-0001'
<del>S-RNTI</del>	Check to see if set to '0000-0000-0000-0000-0001'
URA Update Cause	Check to see if set to 'change of URA'

## URA UPDATE CONFIRM (Step 6)

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

Information Element	Value/remark
URA identity	URA-ID 2

#### URA UPDATE CONFIRM (Step 11)

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

Information Element	Value/remark
URA identity	URA-ID 1

#### 8.3.2.13.5 Test requirement

After step 4 the UE shall find that URA-ID 2 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL\_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

After step 7 the UE shall find that URA-ID 1 is not in its maintained list of URA-IDs. After cell reselection, the UE shall move to CELL\_FACH state and transmit URA UPDATE message setting value "change of URA" into IE "URA update cause".

**<End of modified section>**

CR-Form-v7

## CHANGE REQUEST

⌘ **TS 34.123-1 CR 363** ⌘ rev **-** ⌘ Current version: **5.1.1** ⌘

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

<b>Title:</b>	⌘ CR to TS34.123-1 REL-5; Corrections to package 3 Inter-RAT measurement test cases		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 28/10/2002</span>		
<b>Category:</b>	⌘ <b>F</b> <span style="float: right;"><b>Release:</b> ⌘ REL-5</span>		
	<table border="0"> <tr> <td style="vertical-align: top;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </td> <td style="vertical-align: top;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> </td> </tr> </table>	<p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p>
<p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p>		

**Reason for change:** ⌘ The following incorrections were identified:

General:

- In several TC's the inaccuracy in UE measurements and SS settings are not taken into account correctly;
- In several TC's there is a statement regarding how quickly after a certain change in signal level the UE shall trigger an event. These "after about" statements only take into account the time to trigger, but do not consider the measurement period (see 25.133, last paragraph in 8.1.2.5.4);
- Not all TC's have the CM parameters aligned to the default CM configurations specified in 34.108;
- Some TC's use a value for N-Identify-Abort which is smaller than the default value indicated in 25.133. This would mean that the UE would typically not be able to see the BSIC;
- In several TC's, the cells reported in the measured results shall be ordered in descending order of the measurement quantity (see 25.331 section 8.6.7.9)
- In several TC's, the TGPS reconfiguration CFN is not specified when starting compressed mode.
- Many editorial errors exist;

8.4.1.31:

- It may take the UE up to  $2 \times 5.28$ s (see table 8.7 in 25.133) to initially verify the BSIC of two GSM cells. The currently used reporting interval does not guarantee that the UE will be able to verify these BSIC's.
- The TC assumes that CM is always needed for performing the indicated measurements. However, there are UE capabilities regarding the need UL and /or DL compressed mode for performing Inter-RAT measurements on each RAT and per frequency band. Therefore the configuration of the compressed mode should depend on the UE capabilities.

8.4.1.33:

- UE behaviour is not specified for the Observed time difference to GSM cell measurement in R99 (CR1694 on 25.331);
- The SS setting is indicated as Ec/No;

8.4.1.34:

- In one of the MEASUREMENT CONTROL messages which is only used to update the cell info list, unnecessary event information is included. It is considered important that a UE is able to update the cell info list without receiving the details of the event configuration again.

8.4.1.35: no specific comments.

8.4.1.36: no specific comments.

8.4.1.40:

- Since this TC is testing the UE measurement capabilities to its extreme given a certain CM pattern, this TC is not useful for UE's which do not require CM for performing these measurements. These UE's would also have different response times for the measurement.
- It is assumed that this test case is intended to test the indicated GSM carrier RSSI measurement at its limit. However 12 GSM cells does not correspond to the limit of this measurement.

**Summary of change:** ¶ This CR proposes the following changes:

General;

- The following accuracies are taken into account:
  - o UE Ec/N0 and RSCP measurements in accordance to the absolute accuracy requirements stated in subclause 9.1.2 in 25.133;
  - o SS accuracy in setting CPICH Ec or +/-2dB;
  - o UE GSM RSSI measurement accuracy of +/- 4dB (see subclause 8.1.2 in 05.08);
  - o SS accuracy in setting GSM RF signal level of +/- 2dB;
- To the "after about" statements, a time of roughly  $1.5 \times$  relevant measurement period is added. This means  $1.5 \times 480 = 720$ ms for all TC's except for 8.4.1.40, where  $1.5 \times 480 \times 2$  is added since all cells are only visited once every 960ms (once every 2 measurement periods); In addition, these statements are removed from the test requirement section since they are considered to inaccurately state the possibility to test reliably.
- CM parameters are aligned to the default CM configurations specified in 34.108, except for TC 8.4.1.33 for which it was agreed at the last meeting to use RPP mode 1;
- For TC's that use a value for N-Identify-Abort that is smaller than the default value indicated in 25.133, the value is updated to the default of "66", in accordance with 25.133 table 8.7;
- In several TC's, the cells reported in the measured results are ordered in descending order of the measurement quantity (see 25.331 section 8.6.7.9). An uncertainty in the order should only be remaining if the difference in signal level (not considering CIO) is smaller or equal to the combined

- uncertainties of UE measurement and SS setting.
- A suitable TGPS reconfiguration CFN is specified.
- Many editorial corrections are made;

8.4.1.31:

- It is proposed to increase the reporting interval in the BSIC verification case to 12000ms (>2\*5.28s).
- CM is only initiated when required;
- BCCH ARFCN is changed to correct value for cell1;
- The difference in RF signal level between the 2 GSM cells is increased in order to ensure the fixed ordering in the reporting;

8.4.1.33:

- Observed time difference to GSM cell reporting is removed;
- The SS setting is expressed in Ec and the UE measurement is changed to RSCP. Thus it should be clear what power levels the SS shall use (problem with size of No is avoided);

8.4.1.34:

- Unnecessary event information is removed;

8.4.1.40:

- Since this TC is testing the UE measurement capabilities to its extreme given a certain CM pattern, this testcase is not usefull for UE's which do not require CM for performing GSM measurements.
- In a 7 slot gap, the UE should be able to take 6 samples in each gap (see Table 8.4. in 25.133). In two measurement periods (=960ms), there are 8 gaps (TGPL1=12). This means that the UE can take 48 samples. With 3 samples per GSM carrier, this should result in a maximum support for 16 GSM cells. Therefore the number of GSM cells in this measurement has been increased to 16. The UE should not require more than 2 measurement periods to determine the RSSI of all these 16 cells.

**Consequences if not approved:**

⌘ If this CR is not approved, the errors indicated above will remain in the test specification.

**Clauses affected:**

⌘ 8.4.1.31; 8.4.1.33; 8.4.1.34; 8.4.1.35; 8.4.1.36; 8.4.1.40

**Other specs affected:**

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

**Other comments:**

⌘ Affects R99, Rel-4 and Rel-5 UEs.

**How to create CRs using this form:**

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

### 8.4.1.31 Measurement Control and Report: Inter-RAT measurement in CELL\_DCH state.

#### 8.4.1.31.1 Definition

#### 8.4.1.31.2 Conformance requirement

A UE supporting both FDD and GSM shall be able to perform the GSM RSSI measurement and the GSM Initial BSIC identification measurement.

If, according to its capabilities, the UE requires compressed mode to perform GSM RSSI measurements, ~~t~~he UE shall perform GSM RSSI measurements in the gaps of a compressed mode pattern sequence specified for GSM RSSI measurement purpose.

If, according to its capabilities, the UE requires compressed mode to perform GSM Initial BSIC identification measurements, ~~t~~he UE shall perform GSM Initial BSIC identification in a compressed mode pattern sequence specified for Initial BSIC identification measurement purpose.

#### Reference

3GPP TS 25.133, clause 8.1.2.5; 3GPP TS 25.331, clauses 8.6.7.6, 14.3.2.

#### 8.4.1.31.3 Test Purpose

Purpose of this test is to verify that UE is capable to perform GSM RSSI and GSM Initial BSIC identification measurements ~~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	<del>-78</del> 0	-85
BCCH ARFCN	#	1	7
CELL identity	#	0	1
BSIC	#	BSIC1	BSIC2

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

System Information Block type 11 nor 12 does not include Inter-RAT measurement system information.

#### Related ICS/IXIT statements

- Compressed mode required yes/no

#### Test Procedure

The UE is brought to the CELL\_DCH state after a successful outgoing call attempt. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the SS provides compressed mode pattern sequence parameters, to UE. Two compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message, by using physical channel reconfiguration procedure. Depending on UE's measurement capability uplink and/or downlink compressed mode is

requested. If required compressed mode method is SF/2 with 7 slot gap in single frame. Two normal frames is between gapped frames.

The first RRC: MEASUREMENT CONTROL message is used to provide measurement control parameters (GSM RSSI) to the UE and to start compressed mode for the measurement if required according to the UE capabilities. The UE replies according to request by sending RRC: MEASUREMENT REPORT messages periodically to SS. Reporting period is 1000 ms.

After two RRC: MEASUREMENT REPORT messages, the SS sends a second RRC: MEASUREMENT CONTROL message to start GSM Initial BSIC identification measurement. The UE replies similarly as in GSM RSSI measurement case but now with a period of 12000ms.

The SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. <a href="#">If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.</a>
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 Initial BSIC identification measurement is started.
8		→	MEASUREMENT REPORT	UE reports measurement results of GSM Initial BSIC identification measurement to SS.
9		→	MEASUREMENT REPORT	Next periodical measurement report.
10		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.



## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type [as](#) in [34.108 Annex A](#) titled "Speech in CS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links - DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- 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	12
- TGPL2	Not present
- RPP	Mode <u>04</u>
- ITP	Mode <u>04</u>
CHOICE UL/DL Mode	<del>UL and DL</del> <u>UL&amp;DL or UL-only or DL-only</u> (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Initial BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode <u>04</u>
- ITP	Mode <u>04</u>
CHOICE UL/DL Mode	<del>UL and DL</del> <u>UL&amp;DL or UL-only or DL-only</u> (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	
CHOICE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	Infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	DeaActivate
- TGCFN	Not present

## MEASUREMENT REPORT (Step 5 and step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	

- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check to see if present
- GSM carrier RSSI	Non verified BSIC
CHOICE BSIC	Check that is set to "10"
- BCCH ARFCN	Check that not present
- Observed time difference to GSM cell	Check that measurement result is reasonable
- GSM carrier RSSI	Non verified BSIC
CHOICE BSIC	Check that is set to "7"
- BCCH ARFCN	Check that not present
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	12000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

## MEASUREMENT REPORT (Step 8 and step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "1"
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

## 8.4.1.31.5 Test Requirement

In step 5 and step 6 UE reports correctly GSM RSSI values.

In step 8 and step 9 UE reports correctly BSIC values.

Reporting period is the requested one.

### 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 "activate" 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 identified 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 MEASUREMENT 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.

##### Related ICS/IXIT statements

- Compressed mode required            yes/no

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					39				
CELL identity	#	04					12					23				
BSIC	#	BSIC 1					BSIC 2					BSIC 3				
RF Signal Level	DB m	-85	-85	-70	<del>768</del> 2	-70	-85	-85	-85	<del>847</del> 7	<del>847</del> 7	-90	-90	-90	-90	-90

Table 8.4.1.33.4-2

Parameter	Unit	Cell 1 (UTRA)				
		T0	T1	T2	T3	T4
UTRA RF Channel Number		Ch.1				
CPICH Ec/No	<del>dBm</del> /3.84 Mhz	-5 60	-2 80	-2 80	-2 80	-5 60

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", "T3" and "T4" 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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), 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 but remains below the threshold for the other system for event 3a. During that time, the RF signal strength for GSM cell 1 decreases ~~has dropped above the threshold for the other system for event 3a~~, but remains above the releasing condition ~~threshold hysteresis~~ for event 3a.

At instant T4, the RF signal strength for GSM cell 1 increases above the threshold for the other system for event 3a+hysteresis. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3a in the UE. If the UE requires compressed mode (refer ICS/IXIT), 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 <del>1.4640 ms</del> 1.4640 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.
13		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.



## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	12
- TGPL2	Not present
- RPP	Mode <del>10</del>
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability))
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
<del>- DPCH compressed mode info</del>	
- TGPSI	2
- TGPS Status Flag	Deactivate
- 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 <del>10</del>
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability))
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	<del>1266</del>
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC re-confirmation

- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 10
- ITP	Mode 0
CHOICE UL/DL Mode	<a href="#">UL and DL</a> <a href="#">UL&amp;DL or UL-only or DL-only (depends on UE's Measurement capability)</a>
- 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	<a href="#">CPICH RSCP</a> <a href="#">E<sub>c</sub>/N<sub>0</sub></a>
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI

<ul style="list-style-type: none"> <li>- Filter coefficient</li> <li>- BSIC verification required</li> <li>- inter-RAT reporting quantity</li> <li>CHOICE system <ul style="list-style-type: none"> <li>- Observed time difference to to GSM cell</li> </ul> </li> </ul>	0 required
reporting indicator <ul style="list-style-type: none"> <li>- GSM carrier RSSI reporting indicator</li> </ul>	GSM <del>FALSE</del> TRUE
CHOICE report criteria <ul style="list-style-type: none"> <li>- Inter-RAT measurements reporting criteria <ul style="list-style-type: none"> <li>- Parameters required for each event (1 to&lt;maxMeasEvent&gt;)</li> <li>- Inter-RAT event identity</li> <li>- Threshold own system</li> <li>- W</li> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li> </ul> </li> <li>- Maximum number of reported cells</li> </ul>	TRUE
Physical channel information elements <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li> </ul>	<MaxMeasEvent>=1 3a <del>-66</del> 42 0 -80 5 640 ms Report cells within active set or within virtual active set or of the other RAT 2 cells
<ul style="list-style-type: none"> <li>- TGPS reconfiguration CFN</li> </ul>	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present. <del>(Current CFN + (250 – TTI/10msec))mod 256</del> Not present
<ul style="list-style-type: none"> <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;)</li> </ul>	<MaxTGPS>=3
<ul style="list-style-type: none"> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul>	1 Activate (Current CFN + (252 – TTI/10msec))mod 256 2 Activate (Current CFN + (254 – TTI/10msec))mod 256 3 Activate (Current CFN + (250 – TTI/10msec))mod 256

## MEASUREMENT REPORT (Step 8)

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 <del>either 0 or 1.</del>
- Observed time difference to GSM cell	Check that <del>not present</del> 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 <del>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).</del>
- Observed time difference to GSM cell	Check that <del>not present</del> 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

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";

When event 3b is configured in the UE within a measurement, the UE shall:

- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "required":
  - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several GSM cells that match any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement:
    - 3> if the inter-RAT cell id of any of those GSM cell is not stored in the variable TRIGGERED\_3B\_EVENT:
      - 4> store the inter-RAT cell ids of the GSM cells that triggered the event and that were not previously stored in the variable TRIGGERED\_3B\_EVENT into that variable;
      - 4> send a measurement report with IEs set as below:
        - 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3b", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cells that triggered the event (worst one first);
        - 5> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2. not taking into account the cell individual offset;
    - 2> if equation 2 below is fulfilled for a GSM cell whose inter-RAT cell id is stored in the variable TRIGGERED\_3B\_EVENT:
      - 3> remove the inter-RAT cell id of that GSM cell from the variable TRIGGERED\_3B\_EVENT.
  - 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "not required":
    - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several of the BCCH ARFCNs considered in that inter-RAT measurement:

- 3> if any of those BCCH ARFCN is not stored into the variable TRIGGERED\_3B\_EVENT:
- 4> store the BCCH ARFCNs that triggered the event and that were not previously stored in the variable TRIGGERED\_3B\_EVENT into that variable;
- 4> send a measurement report with IEs set as below:
- 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3b", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to BCCH ARFCNs that triggered the event (worst one first);
- 5> set the IE "measured results" and the IE "additional measured results" according to 8.4.2. [not taking into account the cell individual offset](#);
- 2> if equation 2 below is fulfilled for a BCCH ARFCN that is stored in the variable TRIGGERED\_3B\_EVENT:
- 3> remove that BCCH ARFCN from the variable TRIGGERED\_3B\_EVENT.

Triggering condition:

Equation 1:

$$M_{Other\ RAT} + CIO_{Other\ RAT} \leq T_{Other\ RAT} - H_{3b} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3b}$  is the hysteresis parameter for event 3b.

Leaving triggered state condition:

Equation 2:

$$M_{Other\ RAT} + CIO_{Other\ RAT} > T_{Other\ RAT} + H_{3b} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.  $M_{Other\ RAT}$  is expressed in dBm.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3b}$  is the hysteresis parameter for event 3b.

## 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.

## Related ICS/IXIT statements

- Compressed mode required      yes/no

## 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		39	
CELL identity	#	04		12		23	
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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3b in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in tables 8.4.1.34.4-1.
7		→	MEASUREMENT REPORT	After about <del>0.860 ms</del> , 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 <del>0.860 ms</del> , the UE sends a MEASUREMENT REPORT to SS triggered by event 3b.
10		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.



## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability))
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
<del>- DPCH compressed mode info</del>	
- TGPSI	2
- TGPS Status Flag	Deactivate
- 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 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability))
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	<del>6642</del>
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC re-confirmation

- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability))
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	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 (No Data)
- Remove all inter-RAT cells	
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 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	Report cells within active set or within virtual active set or of the other RAT
- Maximum number of reported cells	3
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	<u>(Current CFN + (250 – TTI/10msec))mod 256</u> <del>Not present</del>
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2

- TGPS status flag	Activate
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	Activate
- TGCFN	(Current CFN + (250 – TTI/10msec))mod 256

## MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to <del>either 0 or 1</del>
- 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 <u>it</u> is set to <del>1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell id was set to 1.</del>
- 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 Not Present
<del>Inter-RAT event identity</del>	<del>3b</del>
<del>Threshold own system</del>	<del>Not present</del>
<del>W</del>	<del>Not present</del>
<del>Threshold other system</del>	<del>-80</del>
<del>Hysteresis</del>	<del>2</del>
<del>Time to Trigger</del>	<del>60 ms</del>
<del>Reporting cell status</del>	<del>Not present</del>
Physical channel information elements	Not present

## MEASUREMENT REPORT (Step 9)

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 <del>either 0, 1 or 2</del>
- 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, <del>1 or 2 and that this inter-RAT cell id is different from the previous inter-RAT cell id.</del>
- 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, <del>1 or 2</del> 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 event 3c is configured in the UE within a measurement, the UE shall:

- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "required":
  - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several GSM cells that match any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement:
    - 3> if the inter-RAT cell id of any of those GSM cell is not stored in the variable TRIGGERED\_3C\_EVENT:
      - 4> store the Inter-RAT cell ids of the GSM cells that triggered the event and that were not previously stored in the variable TRIGGERED\_3C\_EVENT into that variable;
      - 4> send a measurement report with IEs set as below:
        - 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3c", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cells that triggered the event (best one first);
        - 5> set the IE "measured results" and the IE "additional measured results" according to 8.4.2, [not taking into account the cell individual offset](#);
    - 2> if equation 2 below is fulfilled for a GSM cell whose inter-RAT cell id is stored in the variable TRIGGERED\_3C\_EVENT:
      - 3> remove the inter-RAT cell id of that GSM cell from the variable TRIGGERED\_3C\_EVENT.
- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "not required":
  - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several of the BCCH ARFCNs considered in that inter-RAT measurement:
    - 3> if any of those BCCH ARFCN is not stored into the variable TRIGGERED\_3C\_EVENT:
      - 4> store the BCCH ARFCNs that triggered the event and that were not previously stored in the variable TRIGGERED\_3C\_EVENT into that variable;
      - 4> send a measurement report with IEs set as below:
        - 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3c", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to BCCH ARFCNs that triggered the event (best one first);
        - 5> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2, [not taking into account the cell individual offset](#);
    - 2> if equation 2 is fulfilled for a BCCH ARFCN that is stored in the variable TRIGGERED\_3C\_EVENT:
      - 3> remove that BCCH ARFCN from the variable TRIGGERED\_3C\_EVENT.

Triggering condition:

Equation 1:

$$M_{Other\ RAT} + CIO_{Other\ RAT} \geq T_{Other\ RAT} + H_{3c} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.  $M_{Other\ RAT}$  is expressed in dBm.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3c}$  is the hysteresis parameter for event 3c.

Leaving triggered state condition:

Equation 2:

$$M_{Other\ RAT} + CIO_{Other\ RAT} < T_{Other\ RAT} - H_{3c} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.  $M_{Other\ RAT}$  is expressed in dBm.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3c}$  is the hysteresis parameter for event 3c.

#### 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.

##### Related ICS/IXIT statements

- Compressed mode required      yes/no



Test procedure

Table 8.4.1.35.4-1

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0	T1	T2	T3
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				7			
CELL identity	#	04				12			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	<del>-75</del> 80	<del>-80</del> 90	<del>-75</del> 80	<del>-75</del> 80	<del>-75</del> 80	<del>-75</del> 80	<del>-75</del> 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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.35.4-1.

At instant T2, the RF signal strength for GSM cell 12 drops as described in table 8.4.1.35.4-1, and at instant T3, it increases again to its previous level. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3c in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.35.4-1.
7		→	MEASUREMENT REPORT	After about <del>0.9400</del> 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 table 8.4.1.35.4-1.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.35.4-1.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> <u>UL&amp;DL or UL-only or DL-only</u> (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
<del>- DPCH compressed mode info</del>	
- TGPSI	2
- TGPS Status Flag	Deactivate
- 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 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> <u>UL&amp;DL or UL-only or DL-only</u> (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	<del>66</del> 42
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC re-confirmation

- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	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	<del>-30</del>
- 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	FALSE
reporting indicator	
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to <maxMeasEvent>)	<MaxMeasEvent>=1

<ul style="list-style-type: none"> <li>- Inter-RAT event identity</li> <li>- Threshold own system</li> <li>- W</li> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li> </ul>	<p>3c Not included Not included <del>-7489</del> 5 100 ms Report cells within active set or within virtual active set or of the other RAT 2</p>
<p>Physical channel information elements</p> <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li> </ul>	<p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present. <del>(Current CFN + (250 – TTI/10msec))mod 256</del> <del>Not present</del></p>
<ul style="list-style-type: none"> <li>- TGPS reconfiguration CFN</li> </ul>	<p>&lt;MaxTGPS&gt;=3</p>
<ul style="list-style-type: none"> <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;)</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul>	<p>1 Activate (Current CFN + (252 – TTI/10msec))mod 256 2 Activate (Current CFN + (254 – TTI/10msec))mod 256 3 Activate (Current CFN + (250 – TTI/10msec))mod 256</p>

## MEASUREMENT REPORT (Step 7)

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

## 8.4.1.35.4 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 ~~-30~~ dB.

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

When event 3d is configured in the UE within a measurement, the UE shall:

- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "required":
  - 2> when the measurement is initiated or resumed:
    - 3> store in the variable BEST\_CELL\_3D\_EVENT the Inter-RAT cell id of the GSM cell that has the best measured quantity among the GSM cells that match any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement
    - 3> send a measurement report with IE set as below:
      - 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cell that is stored in the variable BEST\_CELL\_3D\_EVENT;
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2. [. not taking into account the cell individual offset;](#)
  - 2> if equation 1 has been fulfilled for a time period indicated by "time to trigger" for a GSM cell that is different from the one stored in BEST\_CELL\_3D\_EVENT and that matches any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement:
    - 3> store the Inter-RAT cell id of that GSM cell in the variable BEST\_CELL\_3D\_EVENT;
    - 3> send a measurement report with IEs set as below:
      - 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cell is now stored in BEST\_CELL\_3D\_EVENT;
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2. [. not taking into account the cell individual offset;](#)
- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "not required":
  - 2> when the measurement is initiated or resumed:
    - 3> store in the variable BEST\_CELL\_3D\_EVENT the BCCH ARFCN of the GSM cell that has the best measured quantity among the BCCH ARFCNs considered in that inter-RAT measurement;
    - 3> send a measurement report with IE set as below:
      - 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to the BCH ARFCN that is stored in the variable BEST\_CELL\_3D\_EVENT;
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2. [. not taking into account the cell individual offset;](#)
  - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one of the BCCH ARFCNs considered in that inter-RAT measurement and different from the one stored in BEST\_CELL\_3D\_EVENT:
    - 3> store the BCCH ARFCN of that GSM cell in the variable BEST\_CELL\_3D\_EVENT;
    - 3> send a measurement report with IEs set as below:

- 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to the BCCH ARFCN that is now stored in the variable BEST\_CELL\_3D\_EVENT;
- 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2. [not taking into account the cell individual offset](#);

Equation 1:

$$M_{New} \geq M_{Best} + H_{3d} / 2$$

The variables in the formula are defined as follows:

$M_{New}$  is the measurement quantity for a GSM cell that is not stored in the variable BEST\_CELL\_3D.

$M_{Best}$  is the measurement quantity for a GSM cell that is stored in the variable BEST\_CELL\_3D.

$H_{3d}$  is the hysteresis parameter for event 3d.

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.

Related ICS/IXIT statements

- Compressed mode required      yes/no

Test procedure

**Table 8.4.1.36.4-1**

Parameter	Unit	Cell 1 (GSM)		Cell 2 (GSM)	
		T0	T1 <del>2</del>	T0	T1
Test Channel	#	GSM Ch.1		GSM Ch.2	
BCCH ARFCN	#	1		7	
CELL identity	#	0 <del>4</del>		1 <del>2</del>	
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~~" 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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3d in the UE. If the UE requires compressed mode (refer ICS/IXIT), 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 <del>1200 ms</del> , the UE sends a MEASUREMENT REPORT to SS triggered by event 3b.
8		←	MEASUREMENT CONTROL	SS releases the inter-RAT measurements, and, if the UE requires compressed mode (refer ICS/IXIT), deactivates compressed mode.
9				If the UE requires compressed mode (refer ICS/IXIT), SS checks that the UE has deactivated compressed mode.
10		←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> <a href="#">UL&amp;DL or UL-only or DL-only</a> (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
<del>- DPCH compressed mode info</del>	
- TGPSI	2
- TGPS Status Flag	Deactivate
- 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 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> <a href="#">UL&amp;DL or UL-only or DL-only</a> (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	<del>6642</del>
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC re-confirmation

- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> (UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	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

<ul style="list-style-type: none"> <li>- Inter-RAT event identity</li> <li>- Threshold own system</li> <li>- W</li> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li>   <li>- Maximum number of reported cells</li> </ul> <p>Physical channel information elements</p> <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li>    <li>- TGPS reconfiguration CFN</li>   <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;)</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul>	<p>3d</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>5</p> <p>200 ms</p> <p>Report cells within active set or within virtual active set or of the other RAT</p> <p>2</p> <p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.</p> <p><del>(Current CFN + (250 – TTI/10msec))mod 256</del>Not present</p> <p>&lt;MaxTGPS&gt;=3</p> <p>1</p> <p>Activate</p> <p>(Current CFN + (252 – TTI/10msec))mod 256</p> <p>2</p> <p>Activate</p> <p>(Current CFN + (254 – TTI/10msec))mod 256</p> <p>3</p> <p>Activate</p> <p>(Current CFN + (250 – TTI/10msec))mod 256</p>
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MEASUREMENT REPORT (Step 5)

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 <del>either 0 or 1</del>
- 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 <u>it</u> is set to 1 <del>if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell id was set to 1.</del>
- 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/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 <del>either 0 or 1</del>
- 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 <u>it</u> is set to <del>1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell id was set to 1.</del>
- 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	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present. (Current CFN + (256 – TTI/10msec))mod 256 <MaxTGPS>=3
- TGPS reconfiguration CFN	
- Transmission gap pattern sequence (1 to <MaxTGPS>)	
- TGPSI	1
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	3
- TGPS status flag	Deactivate
- TGCFN	Not present

## 8.4.1.36.5 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.

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

##### 8.4.1.40.1 Definition

##### 8.4.1.40.2 Conformance requirement

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

The UE shall:

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

##### Reference

3GPP TS 25.331 clause 8.4.1.3, 14.3.1.3.

##### 8.4.1.40.3 Test Purpose

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

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

## 8.4.1.40.4 Method of test

**Table 8.4.1.40.4.1 Sparse compressed mode pattern for Inter.RAT measurement**

TGMP	TGCFN	TGPRC	TGSN	TGL1	TGL2	TGD	TGPL1	TGPL2	Comment
GSM carrier RSSI measurement	Note 1	Inf.	4	7	Not sent	0	12		Set-up to monitor <del>16</del> 2 GSM neighbours every second measurement period, i.e. every second 480ms period.
GSM Initial BSIC identification	Note 1	Inf.	4	7	Not sent	0	8		Equal to Pattern 6 in TS 25.133 table 8.7.
GSM BSIC re-confirmation	Note 1	Inf.	4	7	Not sent	0	8		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.

## Related ICS/IXIT statements

- Compressed mode required                      yes/no

## Test procedure

**Table 8.4.1.40.4.2 Inter-RAT cell specific data**

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0	T1	T2	T3
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				7			
CELL identity	#	<del>04</del>				<del>12</del>			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	<del>-75</del> 80	<del>-80</del> 90	<del>-75</del> 80	<del>-75</del> 80	<del>-75</del> 80	<del>-75</del> 80	<del>-75</del> 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. ~~If the UE requires compressed mode (refer ICS/IXIT), t~~The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements on ~~16~~2 GSM cells. Event 3c is set up in this message, and if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.40.4.2, since the cell individual offset for GSM cell 1 is 10 dB, event 3c shall be triggered in the UE. A MEASUREMENT REPORT shall be sent to the

SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is ~~-30~~ dB.

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

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. <del>If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.</del>
2		←	PHYSICAL CHANNEL RECONFIGURATION	If the UE requires compressed mode (refer ICS/IXIT), compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3c in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.40.4.2.
7		→	MEASUREMENT REPORT	After about <del>1.62</del> s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3c.
8				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.40.4.2.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.40.4.2.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.



## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<a href="#">UL and DL</a> <a href="#">UL&amp;DL</a> or <a href="#">UL-only</a> or <a href="#">DL-only</a> (depends on <a href="#">UE's Measurement capability</a> )
- 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
<del>- DPCH compressed mode info</del>	
- TGPSI	2
- TGPS Status Flag	Deactivate
- 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 0
- ITP	Mode 0
CHOICE UL/DL Mode	<a href="#">UL and DL</a> <a href="#">UL&amp;DL</a> or <a href="#">UL-only</a> or <a href="#">DL-only</a> (depends on <a href="#">UE's Measurement capability</a> )
- 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	<del>66</del> 24
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM BSIC re-confirmation

- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	<del>UL and DL</del> <a href="#">UL&amp;DL or UL-only or DL-only (depends on UE's Measurement capability)</a>
- 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 (No Data)
- Remove all inter-RAT cells	MaxCellMeas=162
New inter-RAT cells (1 to <MaxCellMeas>)	
- 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	-30
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	3
<del>- inter-RAT cell id</del>	<del>4</del>
<del>CHOICE Radio Access Technology</del>	<del>GSM</del>
<del>- Cell individual offset</del>	<del>0</del>
<del>- Cell selection and re-selection info</del>	<del>Not present</del>
<del>- BSIC</del>	<del>BSIC2</del>
<del>- Band indicator</del>	<del>DCS 1800 band used</del>
<del>- BCCH ARFCN</del>	<del>7</del>
- inter-RAT cell id	2
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC3
- Band indicator	DCS 1800 band used
- BCCH ARFCN	5
- inter-RAT cell id	3
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC4
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	4
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC5
- Band indicator	DCS 1800 band used
- BCCH ARFCN	9
- inter-RAT cell id	5
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC6
- Band indicator	DCS 1800 band used
- BCCH ARFCN	11
- inter-RAT cell id	6
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC7
- Band indicator	DCS 1800 band used

- BCCH ARFCN	13
- inter-RAT cell id	7
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC8
- Band indicator	DCS 1800 band used
- BCCH ARFCN	15
- inter-RAT cell id	8
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC9
- Band indicator	DCS 1800 band used
- BCCH ARFCN	17
- inter-RAT cell id	9
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC10
- Band indicator	DCS 1800 band used
- BCCH ARFCN	19
- inter-RAT cell id	10
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC11
- Band indicator	DCS 1800 band used
- BCCH ARFCN	21
- inter-RAT cell id	11
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC12
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- inter-RAT cell id	12
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC13
- Band indicator	DCS 1800 band used
- BCCH ARFCN	9
- inter-RAT cell id	13
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC14
- Band indicator	DCS 1800 band used
- BCCH ARFCN	11
- inter-RAT cell id	14
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC15
- Band indicator	DCS 1800 band used
- BCCH ARFCN	13
- inter-RAT cell id	15
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC16
- Band indicator	DCS 1800 band used
- BCCH ARFCN	15
- Cell for measurement	Not present
- inter-RAT measurement quantity	Not included
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM

<ul style="list-style-type: none"> <li>- Measurement quantity</li> <li>- Filter coefficient</li> <li>- BSIC verification required</li> <li>- inter-RAT reporting quantity</li> <li>CHOICE system <ul style="list-style-type: none"> <li>- Observed time difference to to GSM cell reporting indicator</li> <li>- GSM carrier RSSI reporting indicator</li> </ul> </li> <li>CHOICE report criteria <ul style="list-style-type: none"> <li>- Inter-RAT measurements reporting criteria <ul style="list-style-type: none"> <li>- Parameters required for each event (1 to&lt;maxMeasEvent&gt;) <ul style="list-style-type: none"> <li>- Inter-RAT event identity</li> <li>- Threshold own system</li> <li>- W</li> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li> </ul> </li> <li>- Maximum number of reported cells</li> </ul> </li> </ul> </li> </ul> <li>Physical channel information elements <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li> </ul> </li> <li>- TGPS reconfiguration CFN</li> <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;) <ul style="list-style-type: none"> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul> </li>	<p>GSM carrier RSSI 0 required</p> <p>GSM FALSE</p> <p>TRUE</p> <p>&lt;MaxMeasEvent&gt;=1 3c Not included Not included <del>-7480</del> 5 100 ms Report cells within active set or within virtual active set or of the other RAT 2</p> <p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present. <u>(Current CFN + (250 – TTI/10msec))mod 256</u><del>Not present</del></p> <p>&lt;MaxTGPS&gt;=3</p> <p>1 Activate (Current CFN + (252 – TTI/10msec))mod 256</p> <p>2 Activate (Current CFN + (254 – TTI/10msec))mod 256</p> <p>3 Activate (Current CFN + (250 – TTI/10msec))mod 256</p>
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## MEASUREMENT REPORT (Step 7)

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

## 8.4.1.40.5 Test Requirement

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 -30 dB.

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

<End of modified section>

3GPP TSG-T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc: T1-020826

CR-Form-v4

## CHANGE REQUEST

⌘ 34.123-1 CR 371 ⌘ ev - ⌘ Current version: 5.1.1 ⌘

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

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

<b>Title:</b>	⌘ New TDD test cases for 8.2.1 Radio Bearer Establishment and 8.2.2 Radio Bearer Reconfiguration.		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 28/10/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
	<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>

<b>Reason for change:</b>	⌘ Increasing of coverage for TDD UE Test cases
<b>Summary of change:</b>	<p>⌘ 8.2.1.22:</p> <ul style="list-style-type: none"> <li>- Values for TDD included in Table 8.2.1.22</li> </ul> <p>8.2.1.23:</p> <ul style="list-style-type: none"> <li>- Values for TDD included in Table 8.2.1.23</li> <li>- RADIO BEARER SETUP (Step 3) (TDD)</li> </ul> <p>8.2.1.24:</p> <ul style="list-style-type: none"> <li>- Reference for TS25.224 included.</li> <li>- Values for TDD included in Table 8.2.1.24</li> <li>- Text for clarification included in Test Procedure</li> <li>- RADIO BEARER SETUP (Step 3) (TDD)</li> </ul> <p>8.2.1.25</p> <ul style="list-style-type: none"> <li>- Conformance requirement, inclusion of P-CCPCH for TDD.</li> <li>- Text for clarification included in Test Procedure, Step 5</li> <li>- Values for TDD included in Table 8.2.1.25</li> </ul> <p>8.2.2.25</p> <p>Reference for TS25.224 included.</p> <p>8.2.2.26</p> <ul style="list-style-type: none"> <li>- RADIO BEARER RECONFIGURATION FAILURE (for Step 3) for FDD and TDD possible according to TS25.331.</li> </ul> <p>8.2.2.27</p> <ul style="list-style-type: none"> <li>- Reference for TS25.224 included.</li> <li>- Text for clarification included in Test Procedure</li> <li>- RADIO BEARER RECONFIGURATION (Step 3) (TDD)</li> </ul>

- 8.2.2.28
  - Conformance requirements updated for TDD
  - Values for TDD included in Table 8.2.2.28
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 5) (TDD)
- 8.2.2.29
  - Values for TDD included in Table 8.2.2.29
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 6) (TDD)
- 8.2.2.30
  - Values for TDD included in Table 8.2.2.30
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 6) (TDD)
- 8.2.2.31
  - Reference for TS25.224 included.
  - Values for TDD included in Table 8.2.2.31
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 3) (TDD)
- 8.2.2.32
 

Conformance requirements including TDD

  - Values for TDD included in Table 8.2.2.32
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 6) (TDD)
- 8.2.2.33:
  - Conformance requirements including TDD
  - Values for TDD included in Table 8.2.2.32
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 6) (TDD)
- 8.2.2.34:
  - Values for TDD included in Table 8.2.2.32
  - Text for clarification included in Test Procedure
  - RADIO BEARER RECONFIGURATION (Step 6) (TDD)

**Consequences if not approved:** ☼ TDD UEs are not tested properly.

**Clauses affected:** ☼ 8.2

**Other specs affected:** ☼  Other core specifications ☼  Test specifications  O&M Specifications

**Other comments:** ☼ Affects R99, REL-4, REL-5  
 Since the default Message Content of SIB 11 is included accordingly in 34.108, the Specific Message Content of SIB 11 added in the general setup procedure is considered as redundant, and then no needed to be specified for TDD. (see T1S-020631)



## 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 CCPCCH according to TS25.331 subclause 8.5.19;
- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> ignore that IE and stop using DRX.
- 1> if the contents of the variable C\_RNTI is empty:
  - 2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";
  - 2> when the cell update procedure completed successfully:
    - 3> if the UE is in CELL\_PCH or URA\_PCH state:
      - 4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";
      - 4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.1.22.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_FACH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

#### 8.2.1.22.4 Method of test

#### Initial Condition

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

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

#### Test Procedure

**Table 8.2.1.22**

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.1.22 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in idle mode 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 modifies the contents of System formation block 11 in cell 1, so that include IE "Inter frequency measurement system information" about cell 6. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message with no IE "Frequency info" to the UE. After the UE receives this message, it transits from CELL\_DCH in cell 1 to CELL\_FACH state in cell 6, and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.22.
1a	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←→		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.22.
3			Void	
4		←	RADIO BEARER SETUP	Not including frequency information.
5		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a common physical channel in cell 6.
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

## Specific Message Contents

## System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	Not present
- Cell info	
- Cell individual offset	FALSE
- Reference time difference to cell	FDD
- Read SFN indicator	Set to same code as used for cell 6
- CHOICE mode	
- Primary CPICH info	Not present
- Primary scrambling code	0dB
- Primary CPICH Tx power	
- Cell Selection and Re-selection Info	Not present
- Qoffset1 <sub>s,n</sub>	Reference to table 6.1.1
- Qoffset2 <sub>s,n</sub>	Not present
- Maximum allowed UL TX power	Not present
- HCS neighbouring cell information	FDD
- CHOICE mode	Reference to table 6.1.1
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

## RADIO BEARER SETUP (Step 4)

Use the message sub-type indicated as "Packet to CELL\_FACH from CELL\_DCH in PS" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info	Not Present
Downlink information for each radio link	Not Present

## CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

## CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

## UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

## 8.2.1.22.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL\_FACH state of cell 6.

## 8.2.1.23 Radio Bearer Establishment for transition from CELL\_FACH to CELL\_DCH (Frequency band modification): Success

## 8.2.1.23.1 Definition

## 8.2.1.23.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> 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
<a href="#">P-CCPCH RSCP (TDD)</a>	<a href="#">dBm</a>	<a href="#">-55</a>	<a href="#">-55</a>	<a href="#">Off</a>	<a href="#">-55</a>

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) [\(FDD\)](#)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_FACH in PS" or "Non speech from CELL\_FACH to CELL\_DCH in CS" or "Speech from CELL\_FACH to CELL\_DCH in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6  350

### RADIO BEARER SETUP (Step 3) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_FACH in PS" or "Non speech from CELL\_FACH to CELL\_DCH in CS" or "Speech from CELL\_FACH to CELL\_DCH in CS" in [9] TS 34.108 clause 9 , with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
<u>Frequency info</u> <u>- UARFCN (Nt)</u> <u>Downlink information for each radio links</u> <u>- Primary CCPCH info</u> <u>- Cell parameters ID</u>	<u>Same UARFCN as used for cell 6</u>  <u>As used for cell 6</u>

#### 8.2.1.23.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL\_DCH state of cell 6.

#### 8.2.1.24 Radio Bearer Establishment for transition from CELL\_DCH to CELL\_DCH (Frequency band modification): Success

##### 8.2.1.24.1 Definition

##### 8.2.1.24.2 Conformance requirement

If the UE receives:

- a RADIO BEARER SETUP message;

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS25.214 [for FDD and TS 25.224 for TDD](#);

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

## 8.2.1.24.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_DCH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits the RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

## 8.2.1.24.4 Method of test

## Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.  
CS-DCCH\_DCH (state 6-5) or PS\_DCCH\_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

## Test Procedure

Table 8.2.1.24

Parameter	Unit	Cell 1		Cell 6		
		T0	T1	T0	T1	
UTRA RF Channel Number		Ch. 1		Ch. 2		
CPICH (FDD)	Ec	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm		-55	-72	Off	-55

Table 8.2.1.24 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.24. For FDD, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell. For TDD, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE selects cell 6 and establish a radio access bearer after receiving this message, and then remains CELL\_DCH state. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC after completes configuration according to receiving RADIO BEARER SETUP message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.



Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.24.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.24.
3		←	RADIO BEARER SETUP	<a href="#">For FDD, including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6.</a> <a href="#">For TDD, including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set cell 6 parameters</a>
4				The UE select cell 6 and establish a radio access bearer.
5		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

[RADIO BEARER SETUP \(Step 3\) \(FDD\)](#)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_DCH in PS" or "Speech in CS" in TS34.108 clause 9 Default Message Contents, or identical the message sub-type indicated by "Non speech in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

[RADIO BEARER SETUP \(Step 3\) \(TDD\)](#)

[The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL\\_DCH from CELL\\_DCH in PS" or "Speech in CS" in TS34.108 clause 9 Default Message Contents, or identical the message sub-type indicated by "Non speech in CS" in \[9\] TS 34.108 clause 9, with the following exception:](#)

Information Element	Value/remark
<a href="#">Frequency info</a> <a href="#">- UARFCN (Nt)</a>	<a href="#">Same UARFCN as used for cell 6</a>
<a href="#">Downlink information for each radio links</a> <a href="#">- Primary CCPCH info</a> <a href="#">- Cell parameters ID</a>	<a href="#">As used for cell 6</a>

## 8.2.1.24.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

## 8.2.1.25 Radio Bearer Establishment for transition from CELL\_FACH to CELL\_FACH (Frequency band modification): Success

## 8.2.1.25.1 Definition

## 8.2.1.25.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_FACH state upon reception of the reconfiguration message and remains in CELL\_FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304 on that frequency;
  - 2> if the received reconfiguration message included the IE "Primary CPICH info" [\(for FDD\)](#) or "Primary CCPCH info" [\(for TDD\)](#), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" [\(for FDD\)](#) or "Primary CCPCH info" [\(for TDD\)](#);
  - 3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
  - 3> when the cell update procedure completed successfully:
- 4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

## 8.2.1.25.3 Test purpose

1. To confirm that the UE transits from CELL\_FACH to CELL\_FACH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

## 8.2.1.25.4 Method of test

## Initial Condition

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

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

## Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	Not present
- UARFCN downlink(Nd)	FALSE
- Cell info	FDD
- Cell individual offset	Set to same code as used for cell 6
- Reference time difference to cell	
- Read SFN indicator	Not present
- CHOICE mode	0dB
- Primary CPICH info	Not present
- Primary scrambling code	Reference to table 6.1.1
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	FDD
- Qoffset1 <sub>s,n</sub>	Reference to table 6.1.1
- Qoffset2 <sub>s,n</sub>	Reference to table 6.1.1
- Maximum allowed UL TX power	Not present
- HCS neighbouring cell information	FDD
- CHOICE mode	Reference to table 6.1.1
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

## Test Procedure

Table 8.2.1.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/ 3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.1.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings 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 8.2.1.25. SS asks operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" [for FDD and no IE "Primary CCPCH info" for TDD](#). The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE remains CELL\_FACH state. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC after completes configuration according to receiving RADIO BEARER SETUP message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.25. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.25.
5		←	RADIO BEARER SETUP	Including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" <a href="#">for FDD and no IE "Primary CCPCH info" for TDD</a> .
6		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
8		→	UTRAN MOBILITY INFORMATION CONFIRM	
9		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a common physical channel in cell 6.
10	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 5)

The contents of RADIO BEARER SETUP message in this test case are identical the message subtype indicated by "Packet to CELL\_FACH from CELL\_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	Not present
Downlink information for each radio links	Not present

## CELL UPDATE (Step 6)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

## CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

## UTRAN MOBILITY UPDATE CONFIRM (Step 8)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

## 8.2.1.25.5 Test requirement

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 7 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 9 the UE shall be in CELL\_FACH state in cell 6.

## <Next change>

### 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

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS 25.214 [for FDD](#) or [TS 25.224 for TDD](#);
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.

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.
- d) SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Initiates the transition from CELL_FACH to CELL_DCH
2		→	RADIO BEARER RECONFIGURATION 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 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	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
- 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	$(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$
- 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	$(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$
- 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	$(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$
- 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.

#### 8.2.2.27 Radio Bearer Reconfiguration for transition from CELL\_DCH to CELL\_DCH (Frequency band modification): Success

##### 8.2.2.27.1 Definition

##### 8.2.2.27.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS25.214 [for FDD](#) and [TS 25.224 for TDD](#);

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.2.27.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_DCH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits the RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

#### 8.2.2.27.4 Method of test

#### Initial Condition

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

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

#### Test Procedure

**Table 8.2.2.27**

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/ 3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.27. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and reconfigure its radio access bearer after receiving this message, and then remains in CELL\_DCH state. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after complete configuration according to receiving RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.27.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.27.
3		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters..</a>
4		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

#### RADIO BEARER RECONFIGURATION (Step 3) [\(FDD\)](#)

The contents RADIO BEARER RECONFIGURATION message in this test case is identical the message sub-type indicated by "Packet to in PS" or "Speech in CS" or "Non speech from CELL\_DCH to CELL\_DCH in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

#### [RADIO BEARER RECONFIGURATION \(Step 3\) \(TDD\)](#)

[The contents RADIO BEARER RECONFIGURATION message in this test case is identical the message sub-type indicated by "Packet to in PS" or "Speech in CS" or "Non speech from CELL\\_DCH to CELL\\_DCH in CS" in \[9\] TS 34.108 clause 9, with the following exception:](#)

<a href="#">Information Element</a>	<a href="#">Value/remark</a>
<a href="#">Frequency info</a> - <a href="#">UARFCN (Nt)</a>	<a href="#">Same UARFCN as used for cell 6</a>
<a href="#">Downlink information for each radio links</a> - <a href="#">Primary CCPCH info</a> - <a href="#">Cell parameters ID</a>	<a href="#">As used for cell 6</a>

#### 8.2.2.27.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL\_DCH state in cell 6.

## 8.2.2.28 Radio Bearer Reconfiguration for transition from CELL\_DCH to CELL\_FACH (Transport channel type switching with frequency band modification): Success

### 8.2.2.28.1 Definition

### 8.2.2.28.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters CELL\_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> if the received reconfiguration message included the IE "Primary CPICH info" [for FDD or the IE "Primary CCPCH info" for TDD](#), and the UE selects another cell than indicated by this IE:

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C\_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2.

## 8.2.2.28.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_FACH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

## 8.2.2.28.4 Method of test

## Initial Condition

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

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

## Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	Same downlink UARFCN as used for cell 6
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	0dB
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	0dB
- Qoffset1 <sub>s,n</sub>	
- Qoffset2 <sub>s,n</sub>	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

## Test Procedure

Table 8.2.2.28

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec <a href="#">(FDD)</a>	dBm/ 3.84 MHz	-55	-72	Off	-55
<a href="#">P-CCPCH RSCP (TDD)</a>	<a href="#">dBm</a>	<a href="#">-55</a>	<a href="#">-72</a>	<a href="#">Off</a>	<a href="#">-55</a>

Table 8.2.2.28 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.28. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. [For FDD mode,](#) The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. [For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters.](#) On receiving the RADIO BEARER RECONFIGURATION message, the UE shall select cell 6 and transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after complete configuration according to the RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.



## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.28. SS requests operator to make an outgoing call.
2		←→	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		←→	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		←→	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.28.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters..</a>
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE transmits this message on the common physical channel in cell 6.
8		←→	CALL C.2	f the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

## Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 5) [\(FDD\)](#)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in [9] TS 34.108 clause 9[9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio link - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

[RADIO BEARER RECONFIGURATION \(Step 5\) \(TDD\)](#)

[Use the same message sub-type titled "Packet to CELL\\_FACH from CELL\\_DCH in PS" in \[9\] TS 34.108 clause 9\[9\] TS 34.108 clause 9 with the following exception:](#)

<a href="#">Information Element</a>	<a href="#">Value/remark</a>
<a href="#">Frequency info</a> <a href="#">- UARFCN (Nt)</a>	<a href="#">Same UARFCN as used for cell 6</a>
<a href="#">Downlink information for each radio links</a> <a href="#">- Primary CCPCH info</a> <a href="#">- Cell parameters ID</a>	<a href="#">As used for cell 6</a>

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 7 the UE shall be in CELL\_FACH state.

## 8.2.2.29 Radio Bearer Reconfiguration for transition from CELL\_DCH to URA\_PCH (Frequency band modification): Success

### 8.2.2.29.1 Definition

### 8.2.2.29.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C\_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA\_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:
  - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
  - 2> when the URA update procedure is successfully completed:
    - 3> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

## 8.2.2.29.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL\_DCH to URA\_PCH according to the RADIO BEARER RECONFIGURATION message.
3. To confirm that the UE release dedicated physical channel and selects a common physical channel in a different frequency.

## 8.2.2.29.4 Method of test

## Initial Condition

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

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

## Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	
- Intra-frequency cell info list	This IE don't include information of cell 6
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	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
- 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	Set to same code as used for cell 6
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	0dB
- Qoffset2 <sub>s,n</sub>	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

## Test Procedure

Table 8.2.2.29

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.29. SS request operator to make an outgoing call. The SS and UE execute procedure P5. Next the SS and the UE execute procedure P9 and then execute procedure P13. [For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters.](#) The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter CELL\_URA state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.29. SS request operator to make an outgoing call.
2	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4	←→		SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.29.
6	←		RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters..</a>
7	→		RADIO BEARER RECONFIGURATION COMPLETE	UE transmit this message in cell 1 on the dedicated physical channel..
8				The SS waits for 5 s.
9	←→		CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

## Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) [\(FDD\)](#)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6

[RADIO BEARER RECONFIGURATION \(Step 6\) \(TDD\)](#)

[Use the same message sub-type titled "Packet to CELL\\_FACH from CELL\\_DCH in PS" in \[9\] TS 34.108 clause 9 with the following exception:](#)

<a href="#">Information Element</a>	<a href="#">Value/remark</a>
<a href="#">Frequency info</a>	
- <a href="#">UARFCN (Nt)</a>	<a href="#">Same UARFCN as used for cell 6</a>
<a href="#">Downlink information for each radio links</a>	
- <a href="#">Primary CCPCH info</a>	
- <a href="#">Cell parameters ID</a>	<a href="#">As used for cell 6</a>

## 8.2.6.29.5 Test requirement

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

## 8.2.2.30 Radio Bearer Reconfiguration for transition from CELL\_DCH to CELL\_PCH (Frequency band modification): Success

## 8.2.2.30.1 Definition

## 8.2.2.30.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C\_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9

1> if the UE enters CELL\_PCH state from CELL\_DCH state, and the received reconfiguration message included the IE "Primary CPICH info, and the UE selected another cell than indicated by this IE:

- 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
- 2> when the cell update procedure completed successfully:
  - 3> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.2.30.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL\_DCH to CELL\_PCH according to the RADIO BEARER RECONFIGURATION message.
3. To confirm that the UE releases the dedicated physical channel and selects a common physical channel in a different frequency.

#### 8.2.2.30.4 Method of test

#### Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive  
UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

#### Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	Not present
- UARFCN downlink(Nd)	FALSE
- Cell info	FDD
- Cell individual offset	Set to same code as used for cell 6
- Reference time difference to cell	
- Read SFN indicator	Not present
- CHOICE mode	0dB
- Primary CPICH info	Not Present
- Primary scrambling code	Reference to table 6.1.1
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	FDD
- Qoffset1 <sub>s,n</sub>	Reference to table 6.1.1
- Qoffset2 <sub>s,n</sub>	Reference to table 6.1.1
- Maximum allowed UL TX power	Not present
- HCS neighbouring cell information	FDD
- CHOICE mode	Reference to table 6.1.1
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

## Test Procedure

Table 8.2.2.30

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55
<a href="#">P-CCPCH RSCP (TDD)</a>	<a href="#">dBm</a>	<a href="#">-55</a>	<a href="#">-72</a>	<a href="#">Off</a>	<a href="#">-55</a>

Table 8.2.2.30 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.30. SS request operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. [For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters.](#) The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter CELL\_PCH state. Upon



completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.30. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P5 (clause 7.4.2.2.3) specified in TS 34.108.	
3	←→		SS executes procedure P9 (clause 7.4.2.4.3) specified in TS 34.108.	
4	←→		SS executes procedure P13 (clause 7.4.2.6.3) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.30.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.</a>
7		→	RADIO BEARER RECONFIGURATION COMPLETE	UE transmit this message on the dedicated physical channel in cell 1
8				The SS waits for 5 s.
9			Call C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

#### Specific Message Contents

##### RADIO BEARER RECONFIGURATION (Step 6) [\(FDD\)](#)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6

##### [RADIO BEARER RECONFIGURATION \(Step 6\) \(TDD\)](#)

[Use the same message sub-type titled "Packet to CELL\\_FACH from CELL\\_DCH in PS" in \[9\] TS 34.108 clause 9 with following exceptions:](#)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>CELL_PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>3</u>
<u>Frequency info</u> - <u>UARFCN (Nt)</u>	<u>Same UARFCN as used for cell 6</u>
<u>Downlink information for each radio links</u> - <u>Primary CCPCH info</u> - <u>Cell parameters ID</u>	<u>As used for cell 6</u>

#### 8.2.2.30.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

#### 8.2.2.31 Radio Bearer Reconfiguration for transition from CELL\_FACH to CELL\_DCH (Frequency band modification): Success

##### 8.2.2.31.1 Definition

##### 8.2.2.31.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS25.214 for FDD and TS 25.224 for TDD;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters CELL\_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the C\_RNTI.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

##### 8.2.2.31.3 Test purpose

1. To confirm that the UE transits from CELL\_FACH to CELL\_DCH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

## 8.2.2.31.4 Method of test

## Initial Condition

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

UE: PS\_DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

## Test Procedure

Table 8.2.2.31

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	Off	-60
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.31 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in CELL\_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and then enter CELL\_DCH state according to receiving RADIO BEARER RECONFIGURATION message. Finally the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.31.
3		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters..</a>
4		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔	Call C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 3)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

[RADIO BEARER RECONFIGURATION \(Step 3\)](#)

[The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL\\_DCH from CELL\\_FACH in PS" in \[9\] TS 34.108 clause 9, with the following exception:](#)

Information Element	Value/remark
<a href="#">Frequency info</a> <a href="#">- UARFCN (Nt)</a>	<a href="#">Same UARFCN as used for cell 6</a>
<a href="#">Downlink information for each radio links</a> <a href="#">- Primary CCPCH info</a> <a href="#">- Cell parameters ID</a>	<a href="#">As used for cell 6</a>

8.2.2.31.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL\_DCH state in cell 6.

### 8.2.2.32 Radio Bearer Reconfiguration for transition from CELL\_FACH to CELL\_FACH (Frequency band modification): Success

#### 8.2.2.32.1 Definition

#### 8.2.2.32.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

If the UE was in CELL\_FACH state upon reception of the reconfiguration message and remains in CELL\_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD);

:

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.2.32.3 Test purpose

1. To confirm that the UE transits from CELL\_FACH to CELL\_FACH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

## 8.2.2.32.4

## Method of test

## Initial Condition

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

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

## Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include any information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	Not present
- UARFCN downlink(Nd)	FALSE
- Cell info	FDD
- Cell individual offset	Set to same code as used for cell 6
- Reference time difference to cell	Not present
- Read SFN indicator	Not present
- CHOICE mode	FDD
- Primary CPICH info	0dB
- Primary scrambling code	Not present
- Primary CPICH Tx power	Reference to table 6.1.1
- Cell Selection and Re-selection Info	Not present
- Qoffset1s,n	FDD
- Qoffset2s,n	Reference to table 6.1.1
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

## Test Procedure

Table 8.2.2.32

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/ 3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.32 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.32. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. [For FDD mode,](#) the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. [For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters.](#) The UE shall select cell 6 and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after it completes configuration according to the received RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.32. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.3) specified in TS 34.108.	
3		↔	SS executes procedure P9 (clause 7.4.2.4.3) specified in TS 34.108.	
4		↔	SS executes procedure P13 (clause 7.4.2.6.3) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.32.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.</a>
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a common physical channel in cell 6.
8		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) [\(FDD\)](#)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL\_FACH from CELL\_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info <ul style="list-style-type: none"> <li>- UARFCN uplink(Nu)</li> <li>- UARFCN downlink(Nd)</li> </ul>	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links <ul style="list-style-type: none"> <li>- Primary CPICH info</li> <li>- Primary Scrambling Code</li> </ul>	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL\_FACH from CELL\_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

<u>Information Element</u>	<u>Value/remark</u>
<u>Frequency info</u> - <u>UARFCN (Nt)</u>	<u>Same UARFCN as used for cell 6</u>
<u>Downlink information for each radio links</u> - <u>Primary CCPCH info</u> - <u>Cell parameters ID</u>	<u>As used for cell 6</u>

## 8.2.2.32.5 Test requirement

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall be in CELL\_FACH state of cell 6.

## 8.2.2.33 Radio Bearer Reconfiguration for transition from CELL\_FACH to CELL\_PCH (Frequency band modification): Success

## 8.2.2.33.1 Definition

## 8.2.2.33.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C\_RNTI;



- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters CELL\_PCH state from CELL\_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" [for FDD or IE"Primary CCPCH info" for TDD](#) and the UE selected another cell than indicated by this IE:
  - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
  - 2> when the cell update procedure is successfully completed:
    - 3> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.2.33.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL\_FACH to CELL\_PCH according to the RADIO BEARER RECONFIGURATION message.
3. To confirm that the UE selects a common physical channel in a different frequency.

#### 8.2.2.33.4 Method of test

#### Initial Condition

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

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

#### Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include any information of cell 5 and cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	Not present
- Cell info	
- Cell individual offset	FALSE
- Reference time difference to cell	
- Read SFN indicator	FDD
- CHOICE mode	
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	0dB
- Qoffset2 <sub>s,n</sub>	
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Inter frequency cell id	2
- Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- UARFCN downlink(Nd)	
- Cell info	0dB
- Cell individual offset	
- Reference time difference to cell	Not present
- Read SFN indicator	
- CHOICE mode	FALSE
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6
- Primary CPICH Tx power	
- Cell Selection and Re-selection Info	Not present
- Qoffset1 <sub>s,n</sub>	
- Qoffset2 <sub>s,n</sub>	0dB
- Maximum allowed UL TX power	
- HCS neighbouring cell information	Reference to table 6.1.1
- CHOICE mode	Not present
- Qqualmin	FDD
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Reference to table 6.1.1
	Not present

## Test Procedure

Table 8.2.2.33

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec <a href="#">(FDD)</a>	dBm/ 3.84 MHz	-55	-72	Off	-55
<a href="#">P-CCPCH RSCP (TDD)</a>	<a href="#">dBm</a>	<a href="#">-55</a>	<a href="#">-72</a>	<a href="#">Off</a>	<a href="#">-55</a>

Table 8.2.2.33 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.33. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. [For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters.](#) The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter CELL\_PCH state in cell 6. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.33. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.3) specified in TS 34.108.	
3	←→		SS executes procedure P10 (clause 7.4.2.4.3) specified in TS 34.108.	
4	←→		SS executes procedure P14 (clause 7.4.2.6.3) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.33.
6	←		RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.</a>
7	→		RADIO BEARER RECONFIGURATION COMPLETE	UE transmit this message on the common physical channel in cell 1.
8				The SS waits for 5 s.
9	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

## Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) [\(FDD\)](#)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6

[RADIO BEARER RECONFIGURATION \(Step 6\) \(TDD\)](#)

[Use the same message sub-type titled "Packet to CELL\\_FACH from CELL\\_FACH in PS" in \[9\] TS 34.108 clause 9 with following exceptions:](#)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>CELL_PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>3</u>
<u>Frequency info</u> - UARFCN (Nt)	<u>Same UARFCN as used for cell 6</u>
<u>Downlink information for each radio links</u> - Primary CCPCH info - Cell parameters ID	<u>As used for cell 6</u>

#### 8.2.2.33.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

#### 8.2.2.34 Radio Bearer Reconfiguration for transition from CELL\_FACH to URA\_PCH (Frequency band modification): Success

##### 8.2.2.34.1 Definition

##### 8.2.2.34.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C\_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA\_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause TS25.331 8.3.1 is fulfilled:
  - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
  - 2> when the URA update procedure is successfully completed:
    - 3> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.2.34.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL\_FACH to URA\_PCH according to the RADIO BEARER RECONFIGURATION message.
3. To confirm that the UE selects a common physical channel in a different frequency.

#### 8.2.2.34.4 Method of test

#### Initial Condition

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

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

#### Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

## System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include any information of cell 5 and cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 5 Same downlink UARFCN as used for cell 5
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	Not present
- Cell info	
- Cell individual offset	FALSE
- Reference time difference to cell	
- Read SFN indicator	FDD
- CHOICE mode	
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	0dB
- Qoffset2 <sub>s,n</sub>	
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	
- CHOICE mode	FDD
- Qqualmin	
- Qrxlevmin	Reference to table 6.1.1
- Inter frequency cell id	
- Frequency info	2
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	
- Read SFN indicator	FALSE
- CHOICE mode	
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	0dB
- Qoffset2 <sub>s,n</sub>	
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	
- CHOICE mode	FDD
- Qqualmin	
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	
	Not present

## Test Procedure

Table 8.2.2.34

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec <a href="#">(FDD)</a>	dBm/ 3.84 MHz	-55	-72	Off	-55
<a href="#">P-CCPCH RSCP (TDD)</a>	<a href="#">dBm</a>	<a href="#">-55</a>	<a href="#">-72</a>	<a href="#">Off</a>	<a href="#">-55</a>

Table 8.2.2.34 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6. The UE is in CELL\_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.34. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. [For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters.](#) - The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter URA\_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.



## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.34. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	←→		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.34.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 <a href="#">for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.</a>
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE transmit this message on the common physical channel. n cell 1.
8				The SS waits for 5 s.
9	←→		CALL C.5	If the test result of C.4 indicates that UE is in URA_PCH state, the test passes, otherwise it fails

## Specific Message Contents

## RADIO BEARER RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6

[RADIO BEARER RECONFIGURATION \(Step 6\)](#)

[Use the same message sub-type titled "Packet to CELL\\_FACH from CELL\\_FACH in PS" in \[9\] TS 34.108 clause 9 with following exceptions:](#)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>URA_PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>3</u>
<u>Frequency info</u> - <u>UARFCN (Nt)</u>	<u>Same UARFCN as used for cell 6</u>
<u>Downlink information for each radio links</u> - <u>Primary CCPCH info</u> - <u>Cell parameters ID</u>	<u>As used for cell 6</u>

## 8.2.2.34.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

3GPP TSG-T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

**T1-020836**

3GPP TSG-T1/SIG Meeting #26  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

**T1S020730**

CR-Form-v7
<b>CHANGE REQUEST</b>
⌘ <b>34.123-1 CR 378</b> ⌘ rev <b>-</b> ⌘ Current version: <b>5.1.1</b> ⌘

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

<b>Title:</b>	⌘ CR to 34.123-1 Rel-5: Correction to non-package 1&2 RRC test cases		
<b>Source:</b>	⌘ Panasonic		
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 25/10/2002</span>		
<b>Category:</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">           ⌘ <b>F</b>            Use <u>one</u> of the following categories:  <b>F</b> (correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (addition of feature),  <b>C</b> (functional modification of feature)  <b>D</b> (editorial modification)            Detailed explanations of the above categories can be found in 3GPP TR 21.900.         </td> <td style="width: 50%; vertical-align: top;"> <b>Release:</b> ⌘ REL-5            Use <u>one</u> of the following releases:            2 (GSM Phase 2)            R96 (Release 1996)            R97 (Release 1997)            R98 (Release 1998)            R99 (Release 1999)            Rel-4 (Release 4)            Rel-5 (Release 5)            Rel-6 (Release 6)         </td> </tr> </table>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	<b>Release:</b> ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	<b>Release:</b> ⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

<b>Reason for change:</b> ⌘	<ol style="list-style-type: none"> <li>1. UTRAN MOBILITY INFORMATION CONFIRM is transmitted on DCCH and C-RNTI should be included in the uplink MAC header. Therefore in TC 8.3.2.2, in order for the UE to transmit UTRAN MOBILITY INFORMATION CONFIRM message in step 6, the UTRAN must provide the UE with a new C-RNTI, since the UE is in URA_PCH state which does not have any C-RNTI. Alternatively, the IE "New U-RNTI" could be omitted so as not to trigger the transmission of UTRAN MOBILITY INFORMATION CONFIRM.</li>   <li>2. In TC 8.4.1.11, the configuration of TGPSI 1 was not defined. Furthermore, after the RADIO BEARER RECONFIGURATION message is received (step 5), the UE should respond with RADIO BEARER RECONFIGURATION message so that the radio bearer reconfiguration procedure can be completed as specified in subclause 8.2.2.4 (25.331). The transmission of RADIO BEARER RECONFIGURATION COMPLETE and PHYSICAL CHANNEL RECONFIGURATION FAILURE message should be treated as two independent events. Since the UE will only detect overlapping gaps at activation time, PHYSICAL CHANNEL RECONFIGURATION FAILURE message will only be sent after activation time, but RADIO BEARER RECONFIGURATION COMPLETE should be sent as soon as configuration is completed.</li>   <li>3. With new default definition of SIB 11/12 in TS 34.108 (which defines cell 1,2,3,7,8 as intra-freq cells; cell 4,5,6 as inter-freq cells), redundant SIB 11 Message Contents are removed.</li> </ol>
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4. In TC 8.2.1.5, 8.2.2.4 and 8.3.2.4, the IE "Measurement Identity" of the MEASUREMENT CONTROL message refers to the default value of 1. This value is similar to the default Measurement Identity of SIB 11/12. Thus, after state transition into CELL\_PCH or URA\_PCH, the UE will read SIB11/12 and overwrite the previously stored measurement info configured by the MEASUREMENT CONTROL message. As a result, MEASUREMENT REPORT will not be sent in step 8.
5. IE "Reference time difference to cell" in SIB 11/12 and MEASUREMENT CONTROL message should refer to the default value, which is set to "Not Present", in order to align with T1S020726/T1S020727. Furthermore, this IE is optional and has no implications on the Test Purpose.
6. Other alignments with T1S020726/T1S020727.
7. Editorial: Several table format in Specific Message Content are incorrect. Some IEs are mis-aligned.

**Summary of change:⌘**Changes to TC 8.1.2.10

- Specific Message Content of SIB 11 is added in Test Procedure as preamble.
- Redundant Message Content of SIB 11 is removed.
- In Specific Message Content of RRC CONNECTION SETUP (step 3), uplink/downlink UARFCN is corrected.

Changes to TC 8.1.2.11

- Specific Message Content of SIB 11 is added in Test Procedure as preamble to trigger RACH reporting.
- Editorial: In Specific Message Content of RRC CONNECTION REQUEST (step 3), the IE "Measured results on RACH" is set to SIB 11.

Changes to TC 8.1.3.5

- IE "Reference time difference to cell" received in SIB 11 message is removed.
- Corrections on SIB 11/12 as pointed out in T1S020726/727 are made.

Changes to TC 8.1.3.6

- Specific Message Content of SIB 11 is added in Test Procedure as preamble.
- Step 3 is removed because it does not serve any test purposes.
- Step 4 is removed because it has the same message content as the default SIB 3.

Changes to TC 8.2.1.5

- IE "Measurement Identity" in MEASUREMENT CONTROL is set to a value different from the measurement identity in SIB11/12.
- IE "Measurement Command" in MEASUREMENT CONTROL is set to "SETUP".
- IE "Measurement identity" in MEASUREMENT REPORT is updated accordingly.

Changes to TC 8.2.1.22

- Step 1 is removed because the message content of SIB 11 is similar to the default SIB 11.
- Editorial.

Changes to TC 8.2.2.4

- IE "Measurement Identity" in MEASUREMENT CONTROL is set to a value different from the measurement identity in SIB11/12.

- IE "Measurement Command" in MEASUREMENT CONTROL is set to "SETUP".
- IE "Measurement identity" in MEASUREMENT REPORT is updated accordingly.
- Editorial: The step numbering in Specific Message Content is corrected.

#### Changes to TC 8.2.2.21

- Old Specific Message Content is removed.

#### Changes to TC 8.2.2.22

- Old Specific Message Content is removed.

#### Changes to TC 8.2.3.4

- IE "Measurement Identity" in MEASUREMENT CONTROL is set to a value different from the measurement identity in SIB11/12.
- IE "Measurement Command" in MEASUREMENT CONTROL is set to "SETUP".
- IE "Measurement identity" in MEASUREMENT REPORT is updated accordingly.

#### Changes to TC 8.2.3.20

- Step 1 is removed because the message content of SIB 11 is similar to the default SIB 11.
- Editorial.

#### Changes to TC 8.2.3.21

- Test Procedure is inconsistent with the Expected Sequence. The UE should be in idle mode state initially.
- Step 1 is removed because the message content of SIB 11 is similar to the default SIB 11.
- Editorial.

#### Changes to TC 8.2.3.27

- The CPICH Ec of cell 1 and 6 at time "T1" are similar. This does not guarantee that the UE will re-select to cell 6. Thus, CPICH Ec of cell 6 at "T1" is increased to -55 dBm to ensure the UE will re-select to cell 6.
- At step 5, power settings of cells are changed before RADIO BEARER RELEASE message is transmitted. As a consequence, the UE might have re-selected to cell 6 before RADIO BEARER RELEASE message is received by the UE. It is proposed to switch the power settings of cells only after the UE has transmitted the RADIO BEARER RELEASE COMPLETE message (ie. step 7).
- At step 9 of Expected Sequence, generic procedure C.5 should be called instead of C.4 (see Test Procedure).
- In the Initial Condition, the IE "Inter frequency cell id" of SIB 11 should be 6.
- Corrections on SIB 11/12 as pointed out in T1S020726/727 are made.
- Editorial.

#### Changes to TC 8.2.4.22

- Old Specific Message Content is removed.

#### Changes to TC 8.2.4.23

- Old Specific Message Content is removed.

#### Changes to TC 8.2.4.29

- In Expected Sequence, the message "CALL C.3" is added.

#### Changes to TC 8.2.6.25

- Step 1 is removed because the message content of SIB 11 is similar to the default SIB 11.
- Editorial.

#### Changes to TC 8.2.6.26

- Step 1 is removed because the message content of SIB 11 is similar to the default SIB 11.
- Editorial.

#### Changes to TC 8.2.6.27

- Old Test Purpose is removed.

#### Changes to TC 8.1.2.11

- In Expected Sequence, arrows are added to step 2 and 7.

#### Changes to TC 8.3.2.2

- URA UPDATE CONFIRM in step 5 should not include the IE "New U-RNTI". Consequently, UTRAN MOBILITY INFORMATION CONFIRM should not be transmitted in step 6.

#### Changes to TC 8.3.4.5

- The Test Purpose can be satisfied by just using one time instant, ie "T0". Thus, columns "T1" and the corresponding description in Expected Sequence are deleted.
- CPICH Ec of cell 2 is set to a value lower than cell 1, to ensure that the UE will not re-select to cell 2.

#### Changes to TC 8.4.1.4

- In step 1, the UE should be in idle mode.
- IE "Reference time difference to cell" received in SIB 11 message is removed.
- Corrections on SIB 11/12 as pointed out in T1S020726/727 are made.

#### Changes to TC 8.4.1.6

- IE "Reference time difference to cell" received in MEASUREMENT CONTROL message is removed.
- Corrections on SIB 11/12 as pointed out in T1S020726/727 are made.
- Editorial: Table format of Specific Message Content are corrected.

#### Changes to TC 8.4.1.11

- The configuration of TGPSI 1 is defined in preamble.
- In step 6, the UE should respond with a RADIO BEARER RECONFIGURATION COMPLETE message.
- In PHYSICAL CHANNEL RECONFIGURATION FAILURE message (step 8), the IE "RRC transaction identifier" is set to "Not Present".
- Corrections on SIB 11/12 as pointed out in T1S020726/727 are made.
- In Specific Message Content of RADIO BEARER RECONFIGURATION (step 5), table format are corrected, and IE "Transmission gap pattern sequence configuration parameters" and its sub-IEs are aligned.

#### Changes to TC 8.4.1.15

- In Expected Sequence, the direction of arrow in step 18 is corrected.
- Test Requirement is added.

**Consequences if not approved:** ☒ Good UE will be failed.

**Clauses affected:** ☒ 8.1.2.10, 8.1.2.11, 8.1.3.5, 8.1.3.6, 8.2.1.5, 8.2.1.22, 8.2.2.4, 8.2.2.21, 8.2.2.22, 8.2.3.4, 8.2.3.20, 8.2.3.21, 8.2.3.27, 8.2.4.22, 8.2.4.23, 8.2.6.25, 8.2.6.26,

		8.2.6.27, 8.3.2.2, 8.3.4.5, 8.4.1.4, 8.4.1.6, 8.4.1.11, 8.4.1.15										
<b>Other specs Affected:</b>		<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X		X		X	Other core specifications	⌘
	Y	N										
		X										
	X											
	X											
		Test specifications										
		O&M Specifications										
<b>Other comments:</b>	⌘	Affects R99, REL-4, REL-5										

**How to create CRs using this form:**

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

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

**<Start of Modifications>**

## 8.1.2.10 RRC connection establishment in CELL\_DCH on another frequency

## 8.1.2.10.1 Definition

## 8.1.2.10.2 Conformance requirement

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

- 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

## 8.1.2.10.3 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.

## 8.1.2.10.4 Method of test

## Initial condition

System simulator: 2 cells – Cell 1 on UARFCN 1 and Cell ~~24~~ on UARFCN ~~24~~.

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

**Specific Message Content**

**For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.**



**System Information Block type 11**

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Not present
	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
- UARFCN downlink(Nd)	Reference to table 6.1.2 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4
- Primary CPICH Tx.power	Not present
- Cell Selection and Re-selection Info	Not present
	For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Qoffset1s,n	0dB
- Qoffset2s,n	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cells for measurement	Not present

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 42 on the DPCH described in the RRC CONNECTION SET UP message received from the SS. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

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
5	↔		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific message content

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

System Information Block type 14

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	4
— Intra-frequency cell info list	
— CHOICE intra-frequency cell removal	Remove no intra-frequency cells
— New intra-frequency info list	
— Intra-frequency cell id	4
— 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

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 uplink of cell <u>24</u>
- UARFCN downlink(Nd)	UARFCN downlink of cell <u>24</u>

## 8.1.2.10.5 Test requirement

In step 4, the UE shall send the RRC CONNECTION SETUP COMPLETE message on the frequency indicated in the RRC CONNECTION SETUP message.

**<End of Modifications>****<Start of Modifications>**

## 8.1.2.11 RRC Connection Establishment in FACH state (Frequency band modification): Success

## 8.1.2.11.1 Definition

## 8.1.2.11.2 Conformance requirement

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

If the values are different, the UE shall:

- 1> ignore the rest of the message.

If the values are identical, the UE shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified otherwise in the following:
  - 2> if the UE will be in the CELL\_FACH state at the conclusion of this procedure:
    - 3> if the IE "Frequency info" is included:
      - 4> select a suitable UTRA cell according to TS25.304 on that frequency;
      - 3> select PRACH according to TS25.331 subclause 8.5.17;
      - 3> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
      - 3> ignore the IE "UTRAN DRX cycle length coefficient" and stop using DRX.
  - 1> enter UTRA RRC connected mode, in a state according to TS25.331 subclause 8.6.3.3;
  - 1> submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per TS25.331 subclause 8.6.3.3;

And the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.3.

8.1.2.11.3 Test purpose

To confirm that the UE enters to CELL\_FACH state and correctly establishes signalling radio bearers using common physical channels of a cell within the frequency band specified by SS in RRC CONNECTION SETUP message.

8.1.2.11.4 Method of test

Initial Condition

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

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

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
- 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	Set to same code as used for cell 6
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	0dB
- Qoffset2 <sub>s,n</sub>	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

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

Test Procedure

**Table 8.1.2.11**

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-72

Table 8.1.2.11 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in Idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.2.11. The SS switches its downlink transmission power settings to columns "T1" and the UE transmits an RRC CONNECTION REQUEST message to the SS on the uplink CCCH by attempting to make an outgoing call. After SS receives this message, it assigns the necessary radio resources and U-RNTI to be used by the UE. The SS then transmits an RRC CONNECTION SETUP message containing an IE "frequency info" IE "Frequency info" set to uplink/downlink UARFCN as used for cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. The SS monitors all uplink RACH channels of cell 6. The UE transmitting an RRC CONNECTION SETUP COMPLETE message on the DCCH (mapped onto RACH) of cell 6.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in Idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.2.11.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.1.2.11.
3		→	RRC CONNECTION REQUEST	Operator makes an outgoing call. The UE shall transmit this message, indicating the proper establishment cause.
4		←	RRC CONNECTION SETUP	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
5		→	RRC CONNECTION SETUP COMPLETE	UE shall send this message on the DCCH, carried by the assigned PRACH resources in cell 6.

Specific Message Content

RRC CONNECTION REQUEST (Step 3)

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

Information Element	Value/remark
Initial UE identity	Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI
Establishment Cause	Originating Interactive Call or Originating Background Call or Originating Streaming Call
Measured results on RACH	Check to see if set in accordance with the IE "Intra-frequency reporting quantity for RACH Reporting" included in SYSTEM INFORMATION BLOCK Type 511
- 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 4)

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

Information Element	Value/remark
Frequency info <ul style="list-style-type: none"> <li>- UARFCN uplink(Nu)</li> <li>- UARFCN downlink(Nd)</li> </ul>	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links <ul style="list-style-type: none"> <li>- Primary CPICH info</li> <li>- Primary Scrambling Code</li> </ul>	Set to same code as used for cell 6

#### RRC CONNECTION SETUP COMPLETE (Step 5)

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

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

#### 8.1.2.11.5 Test requirement

After step 5 the UE shall transmit RRC CONNECTION SETUP COMPLETE message on the uplink DCCH in cell 6.

**<End of Modifications>**

**<Start of Modifications>**

#### 8.1.3.5 RRC Connection Release in CELL\_FACH state: Invalid message

##### 8.1.3.5.1 Definition

##### 8.1.3.5.2 Conformance requirement

If the RRC CONNECTION RELEASE message contains a protocol error causing the variable PROTOCOL\_ERROR\_REJECT to be set to TRUE according to TS 25.331 clause 9, and if the "protocol error cause" in PROTOCOL\_ERROR\_INFORMATION is set to any cause value except "ASN.1 violation or encoding error", the UE shall perform procedure specific error handling as follows:

The UE shall:

- 1> ignore any IE(s) causing the error but treat the rest of the RRC CONNECTION RELEASE message as normal according to TS 25.331 subclause 8.1.4.3, with an addition of the following actions:
- 2> if the RRC CONNECTION RELEASE message was received on the DCCH:
  - 3> set the IE "RRC transaction identifier" in the RRC CONNECTION RELEASE COMPLETE message to the value of "RRC transaction identifier" in the entry for the RRC CONNECTION RELEASE message in the table "Rejected transactions" in the variable TRANSACTIONS;
  - 3> include the IE "Error indication" in the RRC CONNECTION RELEASE COMPLETE message with:
    - 4> the IE "Failure cause" set to the cause value "Protocol error"; and
    - 4> the IE "Protocol error information" set to the value of the variable PROTOCOL\_ERROR\_INFORMATION.

## 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.

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length	2
coefficient	
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present 0 dB
- Reference time difference to cell	Not Present 0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS34.108 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 <sub>s,n</sub>	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	Not Present 0
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting	No report
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting	No report
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- 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	Acknowledged mode RLC
- Measurement Reporting Transfer Mode	Periodic Reporting
- Periodic Reporting/Event Trigger Reporting Mode	Intra-frequency measurement reporting criteria
- CHOICE report criteria	

<ul style="list-style-type: none"> <li>- Parameters required for each event</li> <li>- Intra-frequency event identity</li> <li>- Triggering condition 1</li> <li>- Triggering condition 2</li> <li>- Reporting Range Constant</li> <li>- Cells forbidden to affect reporting range</li> <li>- CHOICE mode</li> <li>- Primary CPICH info</li> <li>- Primary Scrambling Code</li> </ul>	<p>1a Not Present Not Present 20.0 dB Not Present FDD</p> <p><b>Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS34.108 Set to same code as used for cell 2</b></p>
<ul style="list-style-type: none"> <li>- W</li> <li>- Hysteresis</li> <li>- Threshold used frequency</li> <li>- Reporting deactivation threshold</li> <li>- Replacement activation threshold</li> <li>- Time to trigger</li> <li>- Amount of reporting</li> <li>- Reporting interval</li> <li>- Reporting Cell Status</li> <li>- CHOICE reported cell</li> </ul>	<p>0.0 1.0 dB -85 dBm 0 Not Present 0msec Infinity 12 seconds</p>
<ul style="list-style-type: none"> <li>- Maximum number of reported cells</li> <li>- Inter-frequency measurement system information</li> <li>- Traffic volume measurement system information</li> <li>- UE internal measurement system information</li> </ul>	<p>Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 Not Present Not Present Not Present</p>

CELL UPDATE (Step 6 and 11)

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

**<End of Modifications>****<Start of Modifications>****8.1.3.6 RRC Connection Release in CELL\_DCH state (Frequency band modification): Success****8.1.3.6.1 Definition****8.1.3.6.2 Conformance requirement**

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

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

If the timer T308 expires, the UE shall:

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

**Reference**

3GPP TS 25.331 clause 8.1.4.

**8.1.3.6.3 Test purpose**

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

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

**8.1.3.6.4 Method of test****Initial Condition**

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

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

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

<u>Information Element</u>	<u>Value/remark</u>
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	6
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink(Nu)	Not present
	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
- UARFCN downlink(Nd)	Reference to table 6.1.2 of TS34.108 for Cell 6
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 of TS34.108
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1s,n	0dB
- Qoffset2s,n	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cells for measurement	Not present

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 between~~ between columns "T0" ~~to and~~ "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.6. The SS switches its downlink transmission power settings to columns "T1" ~~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		←	<del>MEASUREMENT CONTROL</del>	<del>The SS specifies inter-frequency measurement for cell 6.</del>
4		←	<del>System Information Block type 3</del>	<del>The SS modifies SIB 3 in cell 6.</del>
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	2e
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 [s]

<ul style="list-style-type: none"> <li>-Reporting cell status</li> <li>-CHOICH reported cell</li>   <li>- Maximum number of reported cells</li> <li>- Parameters required for each non-used frequency</li> <li>- Threshold non used frequency</li> <li>- W non-used frequency</li> </ul>	<p>Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency</p> <p>2</p> <p>-85dbm</p> <p>0.0</p>
--	--

**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 <sub>barred</sub>	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.

**<End of Modifications>**



**<Start of Modifications>****8.2.1.5 Radio Bearer Establishment for transition from CELL\_DCH to CELL\_DCH:  
Failure (Physical channel Failure and cell reselection)****8.2.1.5.1 Definition****8.2.1.5.2 Conformance requirement**

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

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL\_DCH state) and the UE is unable to revert to the old configuration:
  - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
  - 2> after the cell update procedure has completed successfully:
    - 3> proceed as below.

...

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
  - 2> include the IE "RRC transaction identifier"; and
  - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
  - 2> clear that entry;
  - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED\_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

If the CELL UPDATE CONFIRM message:

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

the UE shall:

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

The UE shall:

- 1> in case of reception of a RADIO BEARER SETUP message:

...

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

## Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

## 8.2.1.5.3 Test purpose

To confirm that UE transmits RADIO BEARER SETUP FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer establishment procedure.

## 8.2.1.5.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH\_DCH (state 6-5) or PS\_DCCH\_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

## Test Procedure

The UE is in CELL\_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its dedicated physical channel in accordance with the settings in the message and release the old configuration after the RLC acknowledgement. The UE recognizes that it cannot synchronise on the new physical channel and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value of IE "failure cause" to "physical channel failure". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	
2				The SS does not configure new radio access bearer and shall release the configuration.
3		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
5				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

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

Information Element	Value/Remark
Measurement Identity	74
Measurement Command	Setup/Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 8)

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

Information Element	Value/Remarks
Measurement identity	74
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

**RADIO BEARER SETUP (Step 1)**

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108.

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

After step 2 the UE shall transmit CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

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

After step 6 the UE shall transmit RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

### <End of Modifications>

### <Start of Modifications>

#### 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 CCPCCH according to TS25.331 subclause 8.5.19;

- 1> use the transport format set given in system information;

- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

- 2> ignore that IE and stop using DRX.

- 1> if the contents of the variable C\_RNTI is empty:

- 2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL\_PCH or URA\_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.22.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_FACH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.1.22.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.1.22

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	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~~between columns "T0" ~~to~~and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode state of cell 1 and the SS configures its downlink transmission power setting according to columns "T0" in table 8.2.1.22. ~~The SS modifies the contents of System information block 11 in cell 1, so that include IE "Inter frequency measurement system information" about cell 6.~~The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message with no IE "Frequency info" to the UE. After the UE receives this message, it transits from CELL\_DCH in cell 1 to CELL\_FACH state in cell 6, and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Finally the UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4		←	System Information Block type 14	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 14 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.22.
1a	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←→		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.22.
3			Void	
4		←	RADIO BEARER SETUP	Not including frequency information.
5		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a common physical channel in cell 6.
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	4
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6
- Inter-frequency cell id	
- Frequency info	Same downlink UARFCN as used for cell 6
- UARFCN uplink(Nu)	0dB
- UARFCN downlink(Nd)	
- Cell info	Not present
- Cell individual offset	
- Reference time difference to cell	FALSE
- Read SFN indicator	FDD
- CHOICE mode	Set to same code as used for cell 6
- Primary CPICH info	
- Primary scrambling code	Not present
- Primary CPICH Tx power	0dB
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	Not present
- Qoffset2 <sub>s,n</sub>	Reference to table 6.1.1
- Maximum allowed UL TX power	Not present
- HCS neighbouring cell information	FDD
- CHOICE mode	Reference to table 6.1.1
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Not present
- Cell for measurement	

RADIO BEARER SETUP (Step 4)

Use the message sub-type indicated as "Packet to CELL\_FACH from CELL\_DCH in PS" found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info	Not Present
Downlink information for each radio link	Not Present

CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B



## UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

## 8.2.1.22.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL\_FACH state of cell 6.

**<End of Modifications>****<Start of Modifications>**8.2.2.4 Radio Bearer Reconfiguration from CELL\_DCH to CELL\_DCH: Failure  
(Physical channel failure and cell reselection)

## 8.2.2.4.1 Definition

## 8.2.2.4.2 Conformance requirement

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

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

If the CELL UPDATE CONFIRM message:

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

the UE shall:

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

The UE shall:

- 1> in case of reception of a RADIO BEARER RECONFIGURATION message:

...

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

## Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

### 8.2.2.4.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message after it completes a cell update procedure when the UE cannot reconfigure the new radio bearer and a subsequent failure to revert to the old configuration.

### 8.2.2.4.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

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

#### Test Procedure

The UE is in CELL\_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE. After the reception of the acknowledgement for the RADIO BEARER RECONFIGURATION message in SS, the SS shall not reconfigure dedicated physical channel in accordance with the settings in the message and release the previous configuration. The UE discovers that it cannot reconfigure the new radio bearer and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the dedicated physical channel in accordance with the RADIO BEARER RECONFIGURATION message and shall release the old configuration.
3		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
4				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
5		←	CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 40a)

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

Information Element	Value/Remark
Measurement Identity	Z4
Measurement Command	Setup/Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 40b and 843)

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

Information Element	Value/Remarks
Measurement identity	74
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION message (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as as found in 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 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".

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

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

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

#### <End of Modifications>

#### <Start of Modifications>

#### 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

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS 25.214;
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS 25.304 on that frequency.
- 1> select Secondary CCPCCH according to TS 25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- ...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

### 8.2.2.21.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL\_PCH state after it receives a RADIO BEARER RECONFIGURATION, which invoke the UE to transit from CELL\_DCH to CELL\_PCH, from SS.

### 8.2.2.21.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

## Test Procedure

The UE is in CELL\_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	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

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.

**<End of Modifications>****<Start of Modifications>**

## 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

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS 25.214;
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS 25.304 on that frequency.
- 1> select Secondary CCPCCH according to TS 25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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



In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

#### 8.2.2.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE and enters URA\_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL\_DCH to URA\_PCH, from SS.

#### 8.2.2.22.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-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. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

#### Specific Message Contents

##### RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	100

##### RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL\_FACH from CELL\_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	4

**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	
<del>CHOICE Used paging identity</del>	UTRAN identity
<del>U-RNTI</del>	
<del>SRNC Identity</del>	Previously assigned SRNC identity
<del>S-RNTI</del>	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.

**<End of Modifications>**

**<Start of Modifications>**

8.2.3.4 Radio Bearer Release for transition from CELL\_DCH to CELL\_DCH: Failure (Physical channel failure and cell reselection)

8.2.3.4.1 Definition

8.2.3.4.2 Conformance requirement

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

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL\_DCH state) and the UE is unable to revert to the old configuration:
  - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";

2> after the cell update procedure has completed successfully:

3> proceed as below.

...

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

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

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

2> clear that entry;

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

1> set the variable ORDERED\_RECONFIGURATION to FALSE;

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

If the CELL UPDATE CONFIRM message:

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

the UE shall:

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

The UE shall:

1> in case of reception of a RADIO BEARER RELEASE message:

...

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

## Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.

### 8.2.3.4.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update procedure when the UE cannot revert to the old configuration after encountering a physical channel failure during the execution of a radio bearer release procedure.

### 8.2.3.4.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

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

## Test Procedure

The UE is in CELL\_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RELEASE message to the UE but does not configure dedicated physical channel in accordance with the settings in the message and release the previous configuration. As a result, the UE recognizes that it cannot reconfigure the radio bearers and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RELEASE	
2				The SS does not configure the dedicated physical channel in accordance with the RADIO BEARER RELEASE message and shall release the old configuration.
3		→	CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
5				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

## Specific Message Contents

## MEASUREMENT CONTROL (Step 0a)

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

Information Element	Value/Remark
Measurement Identity	74
Measurement Command	Setup/Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 8)

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

Information Element	Value/Remarks
Measurement identity	74
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case are identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in Annex A.

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	Check to see if set to '0000 0000 0001'
- SRNC Identity	Check to see if set to '0000 0000 0000 0000 0000 0001'
- S-RNTI	"radio link failure"
Cell Update Cause	

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 initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

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

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
UplinkDPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

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

8.2.3.4.5 Test requirement

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

After step 2 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

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

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

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

**<End of Modifications>****<Start of Modifications>****8.2.3.20 Radio Bearer Release for transition from CELL\_DCH to CELL\_FACH (Frequency band modification): Success****8.2.3.20.1 Definition****8.2.3.20.2 Conformance requirement**

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS5.304.

1> if the received reconfiguration message included the IE "Primary CPICH info"), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" :

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL\_PCH or URA\_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C\_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL\_PCH or URA\_PCH state:

- 4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";
- 4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.20.3 Test purpose

- 1. To confirm that the UE transits from CELL\_DCH to CELL\_FACH according to the RADIO BEARER RELEASE message.
- 2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.3.20.4 Method of test

Initial Condition

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

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

Test Procedure

**Table 8.2.3.20**

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.3.20 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings ~~from~~between columns "T0" ~~to~~and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.20. ~~The SS modifies the contents of System information block 11 in cell 1, so that include IE "Inter-frequency measurement system information" about cell 6.~~ The SS and UE execute procedure P3 or P5. Next The SS and the UE execute procedure P7 or P9 and then execute procedure P11 or P13. The SS switches its downlink transmission power settings to columns "T1" transmits a RADIO BEARER RELEASE message with no IE "Frequency info" to the UE. The UE releases the radio access bearer and moves into cell 6. The UE transmits CELL UPDATE message with IE "Cell update cause" set to "cell reselection". SS then transmit CELL UDPATE CONFIRM with IE "New C\_RNTI". The UE shall respond with an UTRAN MOBILITY INFORMATION CONFIRM message, and then



transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC. The SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4		←	<del>System Information Block type 11</del>	<del>The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.20.</del>
1a		↔	SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b		↔	SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
1c		↔	SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.20.
3			Void	
4		←	RADIO BEARER RELEASE	Not including frequency information.
5		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER RELEASE COMPLETE	
9		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	4
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6
- Inter-frequency cell id	
- Frequency info	Same downlink UARFCN as used for cell 6
- UARFCN uplink(Nu)	0dB
- UARFCN downlink(Nd)	
- Cell info	Not present
- Cell individual offset	
- Reference time difference to cell	FALSE
- Read SFN indicator	FDD
- CHOICE mode	Set to same code as used for cell 6
- Primary CPICH info	
- Primary scrambling code	Not present
- Primary CPICH Tx power	0dB
- Cell Selection and Re-selection Info	
- Qoffset1 <sub>s,n</sub>	Not Present
- Qoffset2 <sub>s,n</sub>	Reference to table 6.1.1
- Maximum allowed UL TX power	Not present
- HCS neighbouring cell information	FDD
- CHOICE mode	Reference to table 6.1.1
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Not present
- Cell for measurement	

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" or "Non speech to CELL\_FACH from CELL\_DCH in CS" or "Speech to CELL\_FACH from CELL\_DCH in CS" in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Frequency info Downlink information for each radio link	Not present

CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

## UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

## 8.2.3.20.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL\_FACH state of cell 6.

**<End of Modifications>****<Start of Modifications>**

## 8.2.3.21 Radio Bearer Release from CELL\_DCH to CELL\_PCH (Frequency band modification): Success

## 8.2.3.21.1 Definition

## 8.2.3.21.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C\_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the UE enters CELL\_PCH state from CELL\_DCH state, and the received reconfiguration message included the IE "Primary CPICH info, and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":
  - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
  - 2> when the cell update procedure completed successfully:
    - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.21.3 Test purpose

1. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL\_DCH to CELL\_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases the radio access bearer and selects a common physical channel in a different frequency indicated by SS.

8.2.3.21.4 Method of test

Initial Condition

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

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

Test Procedure

**Table 8.2.3.21**

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.3.21 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings ~~from~~ between columns "T0" ~~to~~ and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in ~~CELL\_DCH state of~~ idle mode in cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.21. ~~The SS modifies the contents of System information block 11 in cell 1, so that include IE "Inter frequency measurement system information" about cell 6.~~ The SS and UE execute procedure P3 or P5. Next The SS and the UE execute procedure P7 or P9 and then execute procedure P11 or P13. The SS switches its downlink transmission power settings to columns "T1" and then transmits a RADIO BEARER RELEASE message with no IE "Frequency info". The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC and

enters CELL\_PCH state of cell 6, then the UE shall transmit CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection", to complete the procedure. The SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.21.
1a	←	→	SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←	→	SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
1c	←	→	SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.21.
3		←	Void	
4		←	RADIO BEARER RELEASE	Not including new frequency information.
5		→	RADIO BEARER RELEASE COMPLETE	The UE sends this message before it completes state transition. UE sends this message in cell 1.
6		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9		←	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	4
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6
- Inter-frequency cell id	
- Frequency info	Same downlink UARFCN as used for cell 6
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	0dB
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	0dB
- Qoffset1 <sub>s,n</sub>	
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

RADIO BEARER RELEASE (Step 4)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" or "Non speech to CELL\_FACH from CELL\_DCH in CS" or "Speech to CELL\_FACH from CELL\_DCH in CS" in [9] TS 34.108 clause 9, with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not Present
Downlink information for each radio link	Not Present

CELL UPDATE (Step 6)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9, with the following exceptions:

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

#### 8.2.3.21.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

### <End of Modifications>

### <Start of Modifications>

#### 8.2.3.27 Radio Bearer Release for transition from CELL\_FACH to URA\_PCH (Frequency band modification): Success

##### 8.2.3.27.1 Definition

##### 8.2.3.27.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C\_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9.
- 1> if the UE enters URA\_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:
  - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
  - 2> when the URA update procedure is successfully completed:
    - 3> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

### 8.2.3.27.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL\_FACH to URA\_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases radio access bearer and selects a common physical channel in a different frequency.

### 8.2.3.27.4 Method of test

#### Initial Condition

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

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

#### Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.



System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	46
- Inter-frequency cell info list	
- New inter-frequency cell id	Not present
- Inter frequency cell id	
- Frequency info	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101 Same uplink UARFCN as used for cell 6
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	Reference to table 6.1.2 of TS34.108 for Cell 6 Same downlink UARFCN as used for cell 6
- Cell info	Not Present 0dB
- Cell individual offset	
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	Refer to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4 Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	1
- Qoffset1s,n	0dB
- Qoffset2s,n	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cells for measurement	Not present

Test Procedure

Table 8.2.3.27

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-72 -55

Table 8.2.3.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.27. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE not including IE "Frequency info" and IE "Primary CPICH info". The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC and enter URA\_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.27. SS requests operator to make an outgoing call.
2		←→	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		←→	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		←→	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				<del>The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.27.</del>
6		←	RADIO BEARER RELEASE	Not including IE "Frequency info" and IE "Primary CPICH info"
7		→	RADIO BEARER RELEASE COMPLETE	UE transmit this message on the common physical channel in cell 1. <u>The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.27.</u>
8				The SS waits for 5 s.
9		←→	CALL C.54	If the test result of C.4 indicates that UE is in <del>CELLURA_PCH</del> state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 6)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
Downlink information for each radio link	Not present

8.2.3.27.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 1.

After step ~~6~~7 the UE shall be in URA\_PCH state in cell 6.

**<End of Modifications>**

**<Start of Modifications>**

## 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

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS 25.214;
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS 25.304 on that frequency.
- 1> select Secondary CCPCCH according to TS 25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

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

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

8.2.4.22.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters CELL\_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL\_FACH to CELL\_PCH state.

8.2.4.22.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH(state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL\_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL\_FACH to CELL\_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

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

**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.

**<End of Modifications>****<Start of Modifications>**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

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS 25.214;
- 1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS 25.304 on that frequency.
- 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

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

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

### 8.2.4.23.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters URA\_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL\_FACH to CELL\_PCH.

### 8.2.4.23.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH(state 6-11) as specified in clause 7.4 of TS 34.108.

## Test Procedure

The UE is in CELL\_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL\_FACH to CELL\_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA\_PCH state. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

## Specific Message Contents

### TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

**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	
<del>CHOICE</del> Used paging identity	UTRAN identity
<del>U-RNTI</del>	
<del>SRNC Identity</del>	Previously assigned SRNC identity
<del>S-RNTI</del>	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.

**<End of Modifications>****<Start of Modifications>****8.2.4.29 Transport Channel Reconfiguration for transition from CELL\_DCH to CELL\_DCH (Frequency band modification): Success****8.2.4.29.1 Definition****8.2.4.29.2 Conformance requirement**

If the UE receives:

-a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

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

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.4.29.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_DCH according to the TRANSPORT CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits the TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

8.2.4.29.4 Method of test

Initial Condition

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

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

Test Procedure

Table 8.2.4.29

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.4.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.29. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. The UE shall select cell 6 and reconfigure its transport channel parameters after receiving this message, and then remain in CELL\_DCH state. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC after completes configuration according to receiving TRANSPORT CHANNEL RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.



Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.29.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.29.
3		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
4				The UE select cell 6.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	<b>CALL C.3</b>	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 3)

The contents TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical the message subtype indicated by "Packet to CELL\_DCH from CELL\_DCH in PS" or "Speech in CS" or "Non speech from in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

8.2.4.29.5 Test requirement

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL\_DCH state in cell 6.

**<End of Modifications>**

**<Start of Modifications>**

## 8.2.6.25 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_FACH (Frequency band modification): Success

### 8.2.6.25.1 Definition

### 8.2.6.25.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_FACH state, the UE shall, after the state transition:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> if the received reconfiguration message included the IE "Primary CPICH info" (, and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL\_PCH or URA\_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

1> select PRACH according to TS25.331 subclause 8.5.17;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> use the transport format set given in system information;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> ignore that IE and stop using DRX.

1> if the contents of the variable C\_RNTI is empty:

2> perform a cell update procedure according to TS 25.331 subclause 8.3.1 using the cause "Cell reselection";

2> when the cell update procedure completed successfully:

3> if the UE is in CELL\_PCH or URA\_PCH state:

4> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "Uplink data transmission";

4> proceed as below.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.
- 1> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.25.3 Test purpose

- 1. To confirm that the UE transits from CELL\_DCH to CELL\_FACH according to the PHYSICAL CHANNEL RECONFIGURATION message.
- 2. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency..

8.2.6.25.4 Method of test

Initial Condition

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

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

Test Procedure

**Table 8.2.6.25**

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings ~~from between~~ columns "T0" ~~to~~ and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.25. ~~The SS modifies the contents of System information block 11 in cell 1, so that include IE "Inter frequency measurement system information" about cell 6.~~ The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message with no IE "Frequency info" and IE "Primary CPICH info". The UE selects cell 6 and and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Upon completion of the cell update procedure, UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC on the DCCH in cell 6. The SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.25.
1a	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←→		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108.	
1c	←→		SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.25.
3		←	Void	
4		←	PHYSICAL CHANNEL RECONFIGURATION	No including IE "Frequency info" and IE "Primary CPICH info"
5		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
6		←	CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a common physical channel in cell 6.
9	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	4
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6
- Inter-frequency cell id	
- Frequency info	Same downlink UARFCN as used for cell 6
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	0dB
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	0dB
- Qoffset1 <sub>s,n</sub>	
- Qoffset2 <sub>s,n</sub>	Not present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	Not Present
Downlink information for each radio link	Not Present

CELL UPDATE (Step 5)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

## UTRAN MOBILITY UPDATE CONFIRM (Step 7)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

## 8.2.6.25.5 Test requirement

After step 4 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 6 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall be in CELL\_FACH state of cell 6.

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

Test Procedure

Table 8.2.6.26

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings ~~from~~between columns "T0" ~~to~~and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26. ~~The SS modifies the contents of System information block 11 in cell 1, so that include IE "Inter-frequency measurement system information" about cell 6.~~ The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL\_DCH to CELL\_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
4	←		System Information Block type 11	<del>The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26.</del>
1a	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←→		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108..	
1c	←→		SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.26.
3			Void	
4	←		PHYSICAL CHANNELRECONFIGURATION	Not including IE" frequency info " and IE "Primary CPICH info"
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmit this message in cell 1.
6	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7	←		CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.



Specific Message Contents

System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	4
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6
- Inter-frequency cell id	
- Frequency info	Same downlink UARFCN as used for cell 6
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	0dB
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	Set to same code as used for cell 6
- Primary scrambling code	
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	0dB
- Qoffset1 <sub>s,n</sub>	
- Qoffset2 <sub>s,n</sub>	Not Present
- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cell for measurement	Not present

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	Same uplink UARFCN as used for cell 6
- UARFCN uplink (Nu)	
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6

CELL UPDATE (Step 6)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

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

#### 8.2.6.26.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

### <End of Modifications>

### <Start of Modifications>

#### 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.

**<End of Modifications>****<Start of Modifications>**

## 8.2.6.29 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Compressed mode initiation): Success

## 8.2.6.29.1 Definition

## 8.2.6.29.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> perform the physical layer synchronisation procedure as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration; 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

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

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6..

## 8.2.6.29.3 Test purpose

1. To confirm that the UE activates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is activated.
3. To confirm that the UE deactivates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
4. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is deactivated..

## 8.2.6.29.4 Method of test

## Initial Condition

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

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

## Test Procedure

Table 8.2.6.29

Parameter	Unit	Cell 1				Cell 6			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 2			
CPICH Ec	dBm/3 .84MH z	-60	-60	-60	-60	Off	-60	-90	-60

Table 8.2.6.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1" or "T1" to "T2" or "T2" to "T3", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29. The SS transmits MEASUREMENT CONTROL message in order for the UE to perform Inter-frequency measurements and report event 2c. The SS switches its downlink transmission power setting according to columns "T1" in table 8.2.6.29, but the UE shall not transmit any MEASUREMENT REPORT messages. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed mode info" with "TGPS Status Flag" set to "Activate". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. The UE shall transmit MEASUREMENT REPORT message to report event 2c with the measured CPICH RSCP value for cell 6 to the SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed mode info" with "TGPS Status Flag" set to "deactivate". The UE shall respond with the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. After the SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29 and 10s is passed, the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29. The UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH because the UE cannot measure the CPICH RSCP on non used frequency as the compressed mode operation has been deactivated.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29.
2		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2c.
3				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.29.
4				The SS checks that no MEASUREMENT REPORT messages receives for 10 s.
5		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to activate.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	MEASUREMENT REPORT	The UE shall report event 2c with the measured CPICH RSCP value for cell 6.
8		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to deactivate.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10				The SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29.
11				After 10 s is passed ,the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29.
12				The SS checks that no MEASUREMENT REPORT messages receives for 10 s..

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

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

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	No inter-frequency cells removed
- CHOICE inter-frequency cell removal	6
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	UARFCN of the uplink frequency for cell 6
- UARFCN uplink (Nu)	UARFCN of the downlink frequency for cell 6
- UARFCN downlink (Nd)	
- Cell info	0 dB
- Cell individual offset	0 chips
- Reference time difference to cell	
- Read SFN Indicator	FDD
- CHOICE Mode	FDD
- Primary CPICH Info	Set to same code as used for cell 6
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
- CHOICE reporting criteria	0
- Filter Coefficient	FDD
- CHOICE Mode	CPICH RSCP
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	FALSE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	No report
- SFN-SFN observed time difference reporting indicator	FALSE
- Cell synchronisation information reporting indicator	TRUE
- Cell Identity reporting indicator	FDD
- COICE Mode	FALSE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	Not present
- Reporting cell status	CELL_DCH
- Measurement validity	Not Present
- UE state	Inter-frequency measurement reporting criteria
- Inter-frequency set update	2c
- CHOICE report criteria	Not present
- Parameters required for each event	Not present
- Inter-frequency event identity	1.0 dB
- Threshold used frequency	10 [ms]
- W used frequency	
- Hysteresis	Report cells within monitored and/or virtual active set on non-used frequency
- Time to trigger	1
- Reporting cell status	
- CHOICH reported cell	
- Maximum number of reported cells per	

reported non-used frequency - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency DPCH compressed mode status info	-68dbm 0 Not present
--	----------------------------



## PHYSICAL CHANNEL RECONFIGURATION (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- CFN-target SFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE Mode	FDD
-DPC Mode	0 (Single)
- CHOICE Mode	FDD
- Power offset Pilot-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
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	mode 0
- ITP	mode 0
- CHOICE UL/DL Mode	DL and UL
- Downlink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

## MEASUREMENT REPORT (Step 7)

The contents of MEASUREMENT REPORT message is the same as them found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	Check to see if set to 15
Measured Results	
- CHOICE Measurement	
- Inter frequency measured results list	Check to see if set to "Inter-frequency measured results list"
- Inter frequency measurement results	
- Frequency info	
- CHOICE	FDD
- UARFCN uplink (Nu)	Check to see if set to the UARFCN of the uplink

- UARFCN downlink (Nd)	frequency for cell 6 Check to see if set to the UARFCN of the downlink frequency for cell 6
- UTRA carrier RSSI	Not checked
- Inter frequency cell measurement results	
- Cell measured results	
- Cell Identity	Not checked
- SFN-SFN observed time difference	Not checked
- Cell synchronisation information	Not checked
- CHOICE Mode	FDD
- Primary CPICH Info	Not checked
- CPICH Ec/No	Not checked
- CPICH RSCP	Check to see if it is present
- Pathloss	Not checked
Measured Results on RACH	Not checked
Additional Measured results	Not checked
- Measured Result	
Event results	Not checked

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	Not present

8.2.6.29.5 Test requirement

After step 3 the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH.

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

After step 6 the UE shall transmit a MEASUREMENT REPORT message containing the IE "measured results" reporting cell 6's CPICH RSCP value, also report the triggering of event '2c' included in IE "Event results".

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After 11 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.

**<End of Modifications>**

**<Start of Modifications>**

## 8.3.2.2 URA Update: Periodical URA update and Reception of Invalid message

### 8.3.2.2.1 Definition

### 8.3.2.2.2 Conformance requirement

A UE in URA\_PCH state shall initiate the URA update procedure in the following cases:

1> URA reselection:

...

1> Periodic URA update:

- 2> if the criteria for performing URA update with the causes as specified above in the current subclause are not met; and
- 2> if the timer T305 expires while the UE is in the service area; and
- 2> if periodic updating has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity":
  - 3> perform URA update using the cause "periodic URA update".

If the URA UPDATE CONFIRM message:

- includes "CN information elements"; or
- includes the IE "Ciphering mode info"; or
- includes the IE "Integrity protection mode info"; or
- includes any one or both of the IEs "New C-RNTI" and "New U-RNTI":

the UE shall:

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

If the UE receives an URA UPDATE CONFIRM message, which contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows:

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

- 2> set the variable `PROTOCOL_ERROR_INDICATOR` to TRUE;
- ...
- 2> in case of a URA update procedure:
  - 3> set the contents of the URA UPDATE message according to TS 25.331 subclause 8.3.1.3;
  - 3> submit the URA UPDATE message for transmission on the uplink CCCH.
- 2> increment counter V302;
- 2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.

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

...

- 2> release all its radio resources;
- 2> enter idle mode;

- 2> Other actions the UE shall perform when entering idle mode from connected mode are specified in TS 25.331 subclause 8.5.2;
- 2> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.3.1

### 8.3.2.2.3 Test purpose

1. To confirm that the UE executes a URA update procedure after the expiry of timer T305.
2. To verify that the UE handles an invalid URA UPDATE CONFIRM message correctly when executing the URA update procedure.

### 8.3.2.2.4 Method of test

#### Initial Condition

System Simulator: 1 cell

UE: URA\_PCH (state 6-13) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in URA\_PCH state. When the UE detects the expiry of timer T305, set according to the value specified in system information, the UE moves to CELL\_FACH state and transmits a URA UPDATE message to the SS on the uplink CCCH. The message shall indicate the cause to be "periodic URA update" in IE "URA update cause". SS replies with an invalid URA UPDATE CONFIRM message sent on downlink CCCH, and check to see if the UE handles this event properly. The UE shall attempt to retransmit the identical URA UPDATE message. After the SS receives the second URA UPDATE message, it transmits a correct URA UPDATE CONFIRM message, which includes the IE "new U-RNTI", to the UE on the downlink DCCH. Then the UE shall then transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH. The UE returns to URA\_PCH state. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in URA_PCH state. SS wait until T305 timer has expired.
2		→	URA UPDATE	UE shall transmit this message and set value "periodic URA update" into IE "URA update cause".
3		←	URA UPDATE CONFIRM	See specific message content.
4		→	URA UPDATE	UE shall not return to idle mode immediately, but attempts to re-transmit this message.
5		←	URA UPDATE CONFIRM	Including IE "new U-RNTI"
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

URA UPDATE (Step 2)

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

Information Element	Value/remark
U-RNTI - SRNC Identity - 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 (Step 4)

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

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI RRC Transaction identifier URA Update Cause Protocol error indicator Protocol error information - Protocol error 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 the value given in URA UPDATE CONFIRM message in step 3. Check to see if set to 'Periodic URA update' TRUE Message extension not comprehended

URA UPDATE CONFIRM (Step 3)

Use the URA UPDATE CONFIRM message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

~~URA UPDATE CONFIRM (Step 5)~~

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

Information Element	Value/remark
<del>New U-RNTI —SRNC Identity —S-RNTI</del>	<del>'0000 0000 0001' '0000 0000 0000 0000 1111'</del>

~~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 "Message extension not comprehended".

~~After step 5 the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH and returns to the URA\_PCH state.~~

**<End of Modifications>****<Start of Modifications>****8.3.4.5 Active set update in soft handover: Reception of an ACTIVE SET UPDATE message in wrong state****8.3.4.5.1 Definition****8.3.4.5.2 Conformance requirement**

If the UE is in another state than CELL\_DCH state upon reception of the ACTIVE SET UPDATE message, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state";
- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
  - 2> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received;
  - 2> and the procedure ends.

**Reference**

3GPP TS 25.331 clause 8.3.4.0

**8.3.4.5.3 Test purpose**

1. To confirm that the UE transmit an ACTIVE SET UPDATE FAILURE message when it receives an ACTIVE SET UPDATE message in any state other than CELL\_DCH.

**8.3.4.5.4 Method of test****Initial Condition**

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

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

Test Procedure

Table 8.3.4.5

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

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

Table 8.3.4.5 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution.

At the start of the test, the UE establishes a radio access bearer service in the CELL\_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. ~~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. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS calls for generic procedure C.2 to check that UE is in CELL\_FACH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
4				<del>SS configures its downlink transmission power settings according to columns "T1" in table 8.3.4.5</del>
2			Void	
3		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information".
4		→	ACTIVE SET UPDATE FAILURE	IE "failure cause" set to the cause value "protocol error" and includes the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state".
5		→	MEASUREMENT REPORT	
6		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 0a)

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

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



MEASUREMENT REPORT (Step 0b and 5)

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

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

ACTIVE SET UPDATE

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

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	Set to same code as assigned for cell 2
- Primary Scrambling Code	
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH can be used.
- DPCH frame offset	0
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not Present
- 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
- SS DT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present

8.3.4.5.5 Test requirement

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

After step 3 the UE shall transmit an ACTIVE SET UPDATE FAILURE message on the DCCH. In this message, the value "Message not compatible with receiver state" shall be set in IE "Protocol Error Information".

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

### <End of Modifications>

### <Start of Modifications>

#### 8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL\_FACH state

##### 8.4.1.4.1 Definition

##### 8.4.1.4.2 Conformance requirement

Upon transition from idle mode to CELL\_FACH state, the UE shall:

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

##### Reference

3GPP TS 25.331, clause 8.4.1.9.2

##### 8.4.1.4.3 Test Purpose

1. To confirm that the UE begins to monitor the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 11 or 12 messages, after it enters CELL\_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

##### 8.4.1.4.4 Method of test

##### Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

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

##### Test Procedure

Table 8.4.1.4-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

**Table 8.4.1.4-1**

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially at idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 4 into the "inter-frequency cell list" IE.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for inter-frequency cells belonging to the monitored set. SS re-adjusts its downlink power settings according to columns marked "T1" in table 8.4.1.4-1. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to cell 4 in order to report this event. Upon receiving this message, SS replies with the CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH. UE shall then reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is <del>PS-DCCH+DTCH-FACH (state 6-14)</del> in idle mode in cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
5		→	Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4-1.
8		→	CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9		←	CELL UPDATE CONFIRM	Use message content.
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

#### Specific Message Content

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

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 Indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101 Set to uplink UARFCN of cell 4
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS34.108 for Cell 4 Set to the downlink UARFCN of cell 4
- Cell info	
- Cell individual offset	Not Present 0 dB
- Reference time difference to cell	Not Present 0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS34.108 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 <sub>s,n</sub>	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI assigned during the execution of procedure P6.
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 9)

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

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

## UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

## 8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.

After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.

After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

**<End of Modifications>****<Start of Modifications>**

## 8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL\_DCH to CELL\_FACH state

## 8.4.1.6.1 Definition

## 8.4.1.6.2 Conformance requirement

Upon transition from CELL\_DCH to CELL\_FACH/ CELL\_PCH/URA\_PCH state, the UE shall:

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);
- 1> in CELL\_FACH state:
  - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

## Reference

3GPP TS 25.331, clause 8.4.1.6.2

## 8.4.1.6.3 Test Purpose

1. To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL\_DCH state to CELL\_FACH.
2. To confirm that the UE begins to monitor the cells listed in "inter-frequency cell info" received in System Information Block type 11 or 12 messages, following a state transition from CELL\_DCH state to CELL\_FACH state.

## 8.4.1.6.4 Method of test

## Initial Condition

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

UE: PS-DCCH+DTCH\_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

## Related ICS/IXIT statements

- Compressed mode required      yes/no

## Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

**Table 8.4.1.6-1**

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL\_DCH state. The System Information Block type 11 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL\_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	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	If compressed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12		←	Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13		←	SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16		←	CELL UPDATE CONFIRM	See message content.
17		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

System Information Block Type 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

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL\_DCH"

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL\_DCH from CELL\_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present



MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	Not Present 0 chips
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE Mode	Set to same code as used for cell 4
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	4
- Cells for measurement	Inter-frequency reporting criteria
- Inter-frequency cell id	0
- Inter-frequency measurement quantity	CPICH RSCP
- CHOICE reporting criteria	estimate
- Filter Coefficient	- Inter-frequency reporting quantity
- Measurement quantity for frequency quality	- UTRA Carrier RSSI
estimate	- Frequency quality estimate
- Inter-frequency reporting quantity	- Non frequency related cell reporting quantities
- UTRA Carrier RSSI	- SFN-SFN observed time difference reporting
- Frequency quality estimate	No report
- Non frequency related cell reporting quantities	indicator
- SFN-SFN observed time difference reporting	- Cell synchronisation information reporting
indicator	FALSE
- Cell synchronisation information reporting	indicator
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- CHOICE reported cell	2
- Maximum number of reported cells	Measurement validity
- Measurement validity	- UE state
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- 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)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL\_FACH from CELL\_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL\_FACH from CELL\_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
<del>Downlink information common for all radio links</del>	
<del>- Downlink DPCH info common for all RL</del>	<del>Not present</del>
<del>- DPCH compressed mode info</del>	
<del>- TGPSI</del>	<del>4</del>
<del>- TGPS Status Flag</del>	<del>Deactivate</del>
<del>- TGCFN</del>	<del>Not present</del>
<del>- Transmission gap pattern sequence configuration parameters</del>	<del>Not present</del>
<del>- TX Diversity Mode</del>	<del>None</del>
<del>- SSDT information</del>	<del>Not Present</del>
<del>- Default DPCH Offset Value</del>	<del>Not present</del>

Information Element	Value/Remarks
<u>Downlink information common for all radio links</u>	
<u>- Downlink DPCH info common for all RL</u>	<u>Not Present</u>
<u>- CHOICE mode</u>	<u>FDD</u>
<u>- DPCH compressed mode info</u>	
<u>- TGPSI</u>	<u>1</u>
<u>- TGPS Status Flag</u>	<u>Deactivate</u>
<u>- TGCFN</u>	<u>Not Present</u>
<u>- Transmission gap pattern sequence configuration parameters</u>	<u>Not Present</u>
<u>- TX Diversity Mode</u>	<u>None</u>
<u>- SSDT information</u>	<u>Not Present</u>
<u>- Default DPCH Offset Value</u>	<u>Not Present</u>

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information - Use of HCS - Cell_selection_and_reselection_quality_measure - Intra-frequency measurement system information - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - New inter-frequency cells - Inter-frequency cell id - Frequency info - CHOICE mode - UARFCN uplink (Nu)  - UARFCN downlink (Nd)  - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE Mode - Primary CPICH info - Primary scrambling code  - Primary CPICH Tx power - TX diversity indicator - Cell selection and re-selection info - Inter-RAT measurement system information - Traffic volume measurement system information - UE Internal measurement system information	Not used CPICH_Ec/No Not Present  Not Present No inter-frequency cells removed  4  FDD Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101 Set to uplink UARFCN for cell 4 Reference to table 6.1.2 of TS34.108 for Cell 4 Set to downlink UARFCN for cell 4  Not Present Not Present FALSE FDD  Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS34.108 Set to the scrambling code of cell 4  Not Present FALSE Not Present Not Present Not Present Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info - MIB Value tag	2

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI Cell update cause Protocol error info Measured results on RACH Protocol error information	Check to see if same to value assigned in P3 or P5 Check to see if it is set to "Cell Reselection" Check to see if it is absent or set to FALSE Check to see if it is absent Check to see if it is absent

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

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

#### UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

##### 8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

#### <End of Modifications>

#### <Start of Modifications>

##### 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

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

If variable INVALID\_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

...

- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified below.

When the UE has received from the UTRAN the configurations of several compressed mode transmission gap pattern sequences, and if several of these patterns are to be simultaneously active, the UE shall check to see if these simultaneously active transmission gap pattern sequences create transmission gaps in the same frame. An illegal overlap is created if two or more transmission gap pattern sequences create transmission gaps in the same frame, irrespective of the gaps are created in uplink or downlink.

If the parallel transmission gap pattern sequences create an illegal overlap, the UE shall:

- 1> delete the overlapping transmission gap pattern sequence configuration stored in the variable TGPS\_IDENTITY, which is associated with the highest value of IE "TGPSI";
- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the information elements as specified below:
  - 2> not include the IE "RRC transaction identifier";
  - 2> set the cause value in IE "failure cause" to value "compressed mode runtime error".
- 1> terminate the inter-frequency and/or inter-RAT measurements corresponding to the deleted transmission gap pattern sequence;
- 1> when the PHYSICAL CHANNEL RECONFIGURATION FAILURE message has been submitted to lower layers for transmission:
  - 2> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.15

### 8.4.1.11.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a 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.
2. 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.

Specific Message Contents

RADIO BEARER SETUP

The contents of RADIO BEARER SETUP message is identical to the message in P11 or P13 provided in TS 34.108 with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	FDD Measurement
- TGMP	Infinity
- TGPRC	4
- TGSN	7
- TGL1	5
- TGL2	0
- TGD	3
- TGPL1	5
- TGPL2	Mode 0
- RPP	Mode 0
- ITP	UL and DL
- CHOICE UL/DL Mode	SF/2
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	B
- Downlink frame type	2.0
- DeltaSIR1	1.0
- DeltaSIRafter1	Not Present
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

<u>Information Element</u>	<u>Value/remark</u>
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	
- Intra-frequency cell info list	This IE doesn't include information of cell 4
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	4
- Frequency info	FDD
- CHOICE mode	Not present
- UARFCN uplink(Nu)	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
- UARFCN downlink(Nd)	Reference to table 6.1.2 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS34.108
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	
- Qoffset1s,n	0dB
- Qoffset2s,n	Not Present

- Maximum allowed UL TX power	Reference to table 6.1.1
- HCS neighbouring cell information	Not present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Cells for measurement	Not present

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 "deactivate".
5		←	RADIO BEARER RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=2 and activates it simultaneously
<u>6</u>		→	<u>RADIO BEARER RECONFIGURATION COMPLETE</u>	
<u>76</u>				UE shall delete transmission gap pattern sequence configuration associated with TGPSI=2.
<u>87</u>		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	IE "Failure cause" shall be set to "Compressed mode runtime error"
<u>98</u>		→	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	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	0 chips
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Set to same code as used for cell 4
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	FALSE
- Cells for measurement	4
- Inter-frequency cell id	Inter-frequency reporting criteria
- Inter-frequency measurement quantity	0
- CHOICE reporting criteria	CPICH Ec/No
- Filter Coefficient	
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	TRUE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	
- Non frequency related cell reporting quantities	No report
- SFN-SFN observed time difference reporting indicator	FALSE
- 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	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- CHOICE reported cell	2
- Maximum number of reported cells	Not present
- Measurement validity	Not present
- Inter-frequency set update	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	1
- TGPSI	Activate
- TGPS Status Flag	(Current CFN+(256 – TTI/10msec)) mod 256
- TGCFN	

MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- 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	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical reporting
- Periodic Reporting / Event Trigger Reporting Mode	
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	Deactivate
- 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
- DPCCH compressed mode info	2
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	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
- N identify abort	Not Present
- T Reconfirm abort	Not Present

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 87)

Information Element	Value/remark
RRC transaction identifier	Not Present
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 5 the UE shall send RADIO BEARER RECONFIGURATION COMPLETE message to the SS.

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 87 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.

<End of Modifications>

<Start of Modifications>

## 8.4.1.15 Measurement Control and Report: Configuration Incomplete

### 8.4.1.15.1 Definition

### 8.4.1.15.2 Conformance requirement

If IE "Traffic volume measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "Traffic volume measurement quantity" or IE "Traffic volume reporting quantity" is not received, the UE shall:

1> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY;

1> set the variable CONFIGURATION\_INCOMPLETE to TRUE.

...

If IE "Measurement Reporting Mode" is not received by the UE in MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", the UE shall:

1> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY;

1> set the variable CONFIGURATION\_INCOMPLETE to TRUE.

...

If IE "Inter-frequency measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "Inter-frequency measurement quantity", IE "Inter-frequency reporting quantity" or "CHOICE Report criteria" is not received, the UE shall:

1> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY;

1> set the variable CONFIGURATION\_INCOMPLETE to TRUE;

...

If IE "Intra-frequency measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "Intra-frequency measurement quantity", IE "Intra-frequency reporting quantity" or "CHOICE Report criteria" is not received, the UE shall:

1> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY;

1> set the variable CONFIGURATION\_INCOMPLETE to TRUE.

...

If IE "Quality measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "Quality reporting quantity" is not received, the UE shall:

1> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY;

1> set the variable CONFIGURATION\_INCOMPLETE to TRUE.

...

If IE "UE internal measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "UE internal measurement quantity" or IE "UE internal reporting quantity" is not received, the UE shall:

1> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY;

1> set the variable CONFIGURATION\_INCOMPLETE to TRUE.

...

If the variable CONFIGURATION\_INCOMPLETE is set to TRUE, the UE shall:

- 1> retain the measurement configuration that was valid before the MEASUREMENT CONTROL message was received;
- 1> set the IE "RRC transaction identifier" in the MEASUREMENT CONTROL FAILURE message to the value of "RRC transaction identifier" in the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS and clear that entry;
- 1> clear the variable CONFIGURATION\_INCOMPLETE;
- 1> set the cause value in IE "failure cause" to "Configuration incomplete";
- 1> submit the MEASUREMENT CONTROL FAILURE message to lower layers for transmission on the DCCH using AM RLC;
- 1> continue with any ongoing processes and procedures as if the invalid MEASUREMENT CONTROL message has not been received;
- 1> and the procedure ends.

#### 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

1. 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
2. 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+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 then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS.

SS transmits a 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. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
1a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
1b		→	MEASUREMENT REPORT	
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		←	MEASUREMENT 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		←	MEASUREMENT 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"
18	↔	MEASUREMENT REPORT	
19	↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 1a)

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

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

MEASUREMENT REPORT (Step 1b and 18)

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

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

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	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical reporting
- Periodical Reporting/Event Trigger Reporting Mode	
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 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	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"

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	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical reporting
- Periodical Reporting/Event Trigger Reporting Mode	
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

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"

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

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"

## 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

## 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"

## 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

## 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"

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

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"

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

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"

## 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

## 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"

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 1a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2, 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.

After step 17, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

**<End of Modifications>**



3GPP TSG-T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

**T1-020837**

3GPP TSG-T1/SIG Meeting #26  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

**T1S020741**

CR-Form-v7

## CHANGE REQUEST

⌘ **34.123-1 CR 379** ⌘ rev **-** ⌘ Current version: **5.1.1** ⌘

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

<b>Title:</b>	⌘ CR to 34.123-1 clause 8.1 (Non-package1&2) Rel-5: Correction from CRs approved in RP17meeting		
<b>Source:</b>	⌘ Panasonic		
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 28/10/2002</span>		
<b>Category:</b>	⌘ <b>F</b> <span style="float: right;"><b>Release:</b> ⌘ REL-5</span>		
	<table border="0"> <tr> <td style="vertical-align: top;"> <p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </td> <td style="vertical-align: top;"> <p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> </td> </tr> </table>	<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p>
<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p>		

<b>Reason for change:</b> ⌘	<ol style="list-style-type: none"> <li>From CR1573 UE report of "SFN-SFN observed time difference" measurement in Intra- and Inter-frequency measurement report is not needed from a functional point of view.</li> <li>From CR 1541 The handling of the "UE internal measurement system information" IE which the UE may receive in SIB11/SIB12 is currently unclear in the specifications.</li> </ol>
<b>Summary of change:</b> ⌘	<ol style="list-style-type: none"> <li>Change to 8.1.3.6 IE "SFN-SFN observed time difference" and IE "SFN-SFN observed time difference reporting indicator" is deleted.</li> <li>Change to 8.1.3.5, 8.1.6.3 Remove IE "UE internal Measurement System Information" from IE "Measurement control system information"</li> </ol>
<b>Consequences if not approved:</b> ⌘	The test specifications are not aligned with the core specification

<b>Clauses affected:</b>	⌘	8.1.3.5, 8.1.3.6, 8.1.6.3			
<b>Other specs Affected:</b>		<table border="1"><tr><td>Y</td><td>N</td></tr></table>	Y	N	
	Y	N			
	⌘	<table border="1"><tr><td></td><td>X</td></tr></table>		X	Other core specifications
	X				
	<table border="1"><tr><td></td><td>X</td></tr></table>		X	Test specifications	
	X				
		<table border="1"><tr><td></td><td>X</td></tr></table>		X	O&M Specifications
	X				
<b>Other comments:</b>	⌘	Affects R99, REL-4, REL-5			

**How to create CRs using this form:**

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

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

**---<Start of Modifications>---****8.1.3.5 RRC Connection Release in CELL\_FACH state: Invalid message****8.1.3.5.1 Definition****8.1.3.5.2 Conformance requirement**

If the RRC CONNECTION RELEASE message contains a protocol error causing the variable PROTOCOL\_ERROR\_REJECT to be set to TRUE according to TS 25.331 clause 9, and if the "protocol error cause" in PROTOCOL\_ERROR\_INFORMATION is set to any cause value except "ASN.1 violation or encoding error", the UE shall perform procedure specific error handling as follows:

The UE shall:

- 1> ignore any IE(s) causing the error but treat the rest of the RRC CONNECTION RELEASE message as normal according to TS 25.331 subclause 8.1.4.3, with an addition of the following actions:
- 2> if the RRC CONNECTION RELEASE message was received on the DCCH:
  - 3> set the IE "RRC transaction identifier" in the RRC CONNECTION RELEASE COMPLETE message to the value of "RRC transaction identifier" in the entry for the RRC CONNECTION RELEASE message in the table "Rejected transactions" in the variable TRANSACTIONS;
  - 3> include the IE "Error indication" in the RRC CONNECTION RELEASE COMPLETE message with:
    - 4> the IE "Failure cause" set to the cause value "Protocol error"; and
    - 4> the IE "Protocol error information" set to the value of the variable PROTOCOL\_ERROR\_INFORMATION.

**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.

## 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 <sub>s,n</sub>	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	No report
indicator	
- Cell synchronisation information reporting indicator	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
indicator	
- Cell synchronisation information reporting indicator	FALSE
indicator	
- 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
<del>--- UE internal measurement system information</del>	<del>Not Present</del>

## CELL UPDATE (Step 6 and 11)

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

## RRC CONNECTION RELEASE (Step 8)

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	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".

---<End of Modifications>---

**---<Start of Modifications>---****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	
- <del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CHOICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- 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

## 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
- $T_{\text{barred}}$	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.

---<End of Modifications>---

**---<Start of Modifications>---****8.1.6.3 Measurement Report on INITIAL DIRECT TRANSFER message and UPLINK DIRECT TRANSFER message****8.1.6.3.1 Definition****8.1.6.3.2 Conformance requirement**

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.

**Reference**

3GPP TS 25.331, clause 8.1.8.2, 8.1.10.2

**8.1.6.3.3 Test Purpose**

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.

**8.1.6.3.4 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).

**Specific Message Content**

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

**System Information Block type 11 (Step 1)**

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

Information Element	Value/Remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- 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	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 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	
<del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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	
<del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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

Information Element	Value/Remark
- 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
<del>- UE internal measurement system information</del>	<del>Not Present</del>

### Test Procedure

The UE is initially in idle mode and camps 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 out going call procedure. During this procedure UE transmits INITIAL DIRECT TRANSFER and UPLINK DIRECT TRANSFER messages with IE"Measured results on RACH" which is set to measured CPICH RSCP in the current cell.

### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in idle mode and camps onto cell 1.
2				SS prompts the test operator to make an outgoing call.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	See default default message content ( Transition to CELL_FACH)
5		→	RRC CONNECTION SETUP COMPLETE	See default message content
6		→	INITIAL DIRECT TRANSFER ( SERVICE REQUEST )	See specific message content
7		←	DOWNLINK DIRECT TRANSFER( AUTHENTICATION AND CIPHERING REQUEST )	See default default message content
8		→	UPLINK DIRECT TRANSFER( AUTHENTICATION AND CIPHERING RESPONSE )	See specific message content
9		←	SECURITY MODE COMMAND	See default default message content
10		→	SECURITY MODE COMPLETE	See default default message content
11		→	UPLINK DIRECT TRANSFER( ACTIVATE PDP CONTEXT REQUEST )	See specific message content
12		←	RADIO BEARER SETUP	See default default message content ( Transition from CELL_FACH to CELL_FACH)
13		→	RADIO BEARER SETUP COMPLETE	See default default message content
14		←	DOWNLINK DIRECT TRANSFER( ACTIVATE PDP CONTEXT ACCEPT )	See default default message content

## Specific Message Content

## RRC CONNECTION REQUEST (Step 3)

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 <ul style="list-style-type: none"> <li>- Measurement result for current cell</li> <li>- CHOICE measurement quantity</li> <li>- CPICH RSCP</li> <li>- Measurement results for monitored cells</li> </ul>	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

## INITIAL DIRECT TRANSFER ( SERVICE REQUEST ) (Step 6)

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 <ul style="list-style-type: none"> <li>- Measurement result for current cell</li> <li>- CHOICE measurement quantity</li> <li>- CPICH RSCP</li> <li>- Measurement results for monitored cells</li> </ul>	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

## UPLINK DIRECT TRANSFER( AUTHENTICATION AND CIPHERING RESPONSE ) (Step 8)

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 <ul style="list-style-type: none"> <li>- Measurement result for current cell</li> <li>- CHOICE measurement quantity</li> <li>- CPICH RSCP</li> <li>- Measurement results for monitored cells</li> </ul>	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

## UPLINK DIRECT TRANSFER( ACTIVATE PDP CONTEXT REQUEST ) (Step 11)

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 <ul style="list-style-type: none"> <li>- Measurement result for current cell</li> <li>- CHOICE measurement quantity</li> <li>- CPICH RSCP</li> <li>- Measurement results for monitored cells</li> </ul>	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

## 8.1.6.3.5 Test Requirement

After step 2 the UE shall transmit a RRC CONNECTION REQUEST message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 5 the UE shall transmit a INITIAL DIRECT TRANSFER ( SERVICE REQUEST) message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 7 the UE shall transmit a UPLINK DIRECT TRANSFER( AUTHENTICATION AND CIPHERING RESPONSE ) message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 10 the UE shall transmit a UPLINK DIRECT TRANSFER( ACTIVATE PDP CONTEXT REQUEST ) message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

**---<End of Modifications>---**



3GPP TSG-T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

**T1-020838**

3GPP TSG-T1/SIG Meeting #26  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> Nov 2002

**T1S020743**

<small>CR-Form-v7</small>
<h2 style="margin: 0;">CHANGE REQUEST</h2>
⌘ <b>34.123-1 CR 380</b> ⌘ rev <b>-</b> ⌘ Current version: <b>5.1.1</b> ⌘

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

<b>Title:</b>	⌘ CR to 34.123-1 clause 8.4 (Non-package 1&2) Rel-5: Correction from CRs approved in RP17meeting		
<b>Source:</b>	⌘ Panasonic		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 28/10/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b> ⌘	<ol style="list-style-type: none"> <li>1. From CR1645 It's clarify that if the event condition is immediately met at setup or modify of the TVM.</li> <li>2. From CR 1624 The current semantics description states that under only one transmission gap in the transmission gap pattern, TGD should be set to "0", but this is not a possible value for this parameter.</li> <li>3. From CR1573 UE report of "SFN-SFN observed time difference" measurement in Intra- and Inter-frequency measurement report is not needed from a functional point of view.</li> <li>4. From CR1544 The IE "Observed time difference to GSM cell" was used instead of the correct IE "Observed time difference to GSM cell Reporting indicator" in two instances.</li> <li>5. From CR 1541 The handling of the "UE internal measurement system information" IE which the UE may receive in SIB11/SIB12 is currently unclear in the specifications.</li> </ol>
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<b>Summary of change:</b> ⌘	<ol style="list-style-type: none"> <li>1. Change to 8.4.1.29, 8.4.1.30 The contents was revised to test following two cases. (1) Event condition is met before TVM is setup (2) Event condition is met after TVM is setup</li> <li>2. Change to 8.4.1.6, 8.4.1.11, 8.4.1.12, 8.4.1.13, 8.4.1.24, 8.4.1.25, 8.4.1.26, 8.4.1.31, 8.4.1.33, 8.4.1.34, 8.4.1.35, 8.4.1.36, 8.4.1.40 The value of TGD shall be revised from "0" to "undefined" under this situation.</li> <li>3. Change to 8.4.1.6, 8.4.1.11, 8.4.1.12, 8.4.1.13, 8.4.1.24, 8.4.1.25 IE "SFN-SFN observed time difference" and IE "SFN-SFN observed time difference reporting indicator" is deleted.</li> <li>4. Change to 8.4.1.9, 8.4.1.33 IE "Observed time difference to GSM cell Reporting indicator" replaces IE "Observed time difference to GSM cell" in conformance requirement and specific message contents.</li> <li>5. Change to 8.4.1.3, 8.4.1.4, 8.4.1.6, 8.4.1.20, 8.4.1.29 Remove IE "UE internal Measurement System Information" from IE "Measurement control system information"</li> </ol>
<b>Consequences if not approved:</b> ⌘	The test specifications are not aligned with the core specification

<b>Clauses affected:</b> ⌘	8.4.1.4, 8.4.1.6, 8.4.1.11, 8.4.1.12, 8.4.1.13, 8.4.1.20, 8.4.1.24, 8.4.1.25, 8.4.1.26, 8.4.1.29, 8.4.1.30, 8.4.1.31, 8.4.1.33, 8.4.1.34, 8.4.1.35, 8.4.1.36, 8.4.1.40									
<b>Other specs Affected:</b> ⌘	<table border="1" style="display: inline-table;"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘
Y	N									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<b>Other comments:</b> ⌘	Affects R99, REL-4, REL-5									

**How to create CRs using this form:**

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

Below is a brief summary:

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

## ---&lt;Start of Modifications&gt;---

## 8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL\_FACH state

## 8.4.1.4.1 Definition

## 8.4.1.4.2 Conformance requirement

Upon transition from idle mode to CELL\_FACH state, the UE shall:

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

## Reference

3GPP TS 25.331, clause 8.4.1.9.2

## 8.4.1.4.3 Test Purpose

1. To confirm that the UE begins to monitor the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 11 or 12 messages, after it enters CELL\_FACH state from idle mode. However, it shall not transmit any MEASUREMENT REPORT messages to report measured results for inter-frequency cells.

## 8.4.1.4.4 Method of test

## Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

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

## Test Procedure

Table 8.4.1.4-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

**Table 8.4.1.4-1**

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially at idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 4 into the "inter-frequency cell list" IE.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for inter-frequency cells belonging

to the monitored set. SS re-adjusts its downlink power settings according to columns marked "T1" in table 8.4.1.4-1. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to cell 4 in order to report this event. Upon receiving this message, SS replies with the CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH. UE shall then reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is 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		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
5		→	Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4-1.
8		→	CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9		←	CELL UPDATE CONFIRM	Use message content.
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

#### Specific Message Content

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

## System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 Indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- 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 <sub>s,n</sub>	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
<del>UE internal measurement system information</del>	<del>Not Present</del>

## CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI assigned during the execution of procedure P6.
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

## CELL UPDATE CONFIRM (Step 9)

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

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

## UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

## 8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.

After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.

After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

---<End of Modifications>---

---<Start of Modifications>---

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL\_DCH to CELL\_FACH state

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

Upon transition from CELL\_DCH to CELL\_FACH/ CELL\_PCH/URA\_PCH state, the UE shall:

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);
- 1> in CELL\_FACH state:
  - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

Reference

3GPP TS 25.331, clause 8.4.1.6.2

8.4.1.6.3 Test Purpose

1. To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL\_DCH state to CELL\_FACH.
2. To confirm that the UE begins to monitor the cells listed in "inter-frequency cell info" received in System Information Block type 11 or 12 messages, following a state transition from CELL\_DCH state to CELL\_FACH state.

8.4.1.6.4 Method of test

Initial Condition

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

UE: PS-DCCH+DTCH\_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- Compressed mode required            yes/no

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL\_DCH state. The System Information Block type 11 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL\_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.



## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	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	If compressed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12		←	Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13		←	SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16		←	CELL UPDATE CONFIRM	See message content.
17		→	UTRAN MOBILITY INFORMATION CONFIRM	

## Specific Message Content

## System Information Block Type 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
<del>- UE Internal measurement system information</del>	<del>Not Present</del>

## RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL\_DCH"

## PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL\_DCH from CELL\_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	<a href="#">undefined</a> <sup>0</sup>
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

## MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	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	
- <del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

## MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
<del>SFN-SFN observed time difference</del>	<del>Check to see if it is absent</del>
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

## PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL\_FACH from CELL\_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL\_FACH from CELL\_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	Not present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not present

## Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

## System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality_measure	CPICH_Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	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
<del>UE Internal measurement system information</del>	<del>Not Present</del>

## SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	2

## CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI	Check to see if same to value assigned in P3 or P5
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

## CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

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

## UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

## 8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

**---<End of Modifications>---**

**---<Start of Modifications>---****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 UTRAN instructs the UE to perform a measurement that is not supported by the UE, the UE shall:

- 1> retain the measurement configuration that was valid before the MEASUREMENT CONTROL message was received;
- 1> set the IE "RRC transaction identifier" in the MEASUREMENT CONTROL FAILURE message to the value of "RRC transaction identifier" in the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry.
- 1> set the cause value in IE "failure cause" to "unsupported measurement";
- 1> submit the MEASUREMENT CONTROL FAILURE message to lower layers for transmission on the DCCH using AM RLC;
- 1> continue with any ongoing processes and procedures as if the invalid MEASUREMENT CONTROL message has not been received;
- 1> and the procedure ends.

**Reference**

3GPP TS 25.331 clause 8.4.1.4

**8.4.1.9.3 Test purpose**

1. 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 shall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC. SS verifies that the UE continues to transmit MEASUREMENT 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.
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	
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



## 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 <i>Radio Access Technology</i>	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 <a href="#">Reporting indicator</a>	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/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.

---<End of Modifications>---

---<Start of Modifications>---

#### 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

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

If variable INVALID\_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

...

- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified below.

When the UE has received from the UTRAN the configurations of several compressed mode transmission gap pattern sequences, and if several of these patterns are to be simultaneously active, the UE shall check to see if these simultaneously active transmission gap pattern sequences create transmission gaps in the same frame. An illegal overlap is created if two or more transmission gap pattern sequences create transmission gaps in the same frame, irrespective of the gaps are created in uplink or downlink.

If the parallel transmission gap pattern sequences create an illegal overlap, the UE shall:

- 1> delete the overlapping transmission gap pattern sequence configuration stored in the variable TGPS\_IDENTITY, which is associated with the highest value of IE "TGPSI";
- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the information elements as specified below:
  - 2> not include the IE "RRC transaction identifier";
  - 2> set the cause value in IE "failure cause" to value "compressed mode runtime error".
- 1> terminate the inter-frequency and/or inter-RAT measurements corresponding to the deleted transmission gap pattern sequence;
- 1> when the PHYSICAL CHANNEL RECONFIGURATION FAILURE message has been submitted to lower layers for transmission:
  - 2> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.15

## 8.4.1.11.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a 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.
2. 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 "deactivate".
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	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	0 chips
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Set to same code as used for cell 4
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	FALSE
- Cells for measurement	4
- Inter-frequency cell id	Inter-frequency reporting criteria
- Inter-frequency measurement quantity	0
- CHOICE reporting criteria	CPICH Ec/No
- Filter Coefficient	
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
<del>- SFN-SFN observed time difference reporting indicator</del>	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	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

## MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
<del>SFN-SFN observed time difference</del>	<del>Check to see if it is absent</del>
- 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	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical reporting
- Periodic Reporting / Event Trigger Reporting Mode	
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	Deactivate
- 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	2
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	undefined
- TGPL1	3
- TGPL2	5
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL
- 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

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

If variable INVALID\_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

...

- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified below.

When the UE has received from the UTRAN the configurations of several compressed mode transmission gap pattern sequences, and if several of these patterns are to be simultaneously active, the UE shall check to see if these simultaneously active transmission gap pattern sequences create transmission gaps in the same frame. An illegal overlap is created if two or more transmission gap pattern sequences create transmission gaps in the same frame, irrespective of the gaps are created in uplink or downlink.

If the parallel transmission gap pattern sequences create an illegal overlap, the UE shall:

- 1> delete the overlapping transmission gap pattern sequence configuration stored in the variable TGPS\_IDENTITY, which is associated with the highest value of IE "TGPSI";
- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the information elements as specified below:
  - 2> not include the IE "RRC transaction identifier";
  - 2> set the cause value in IE "failure cause" to value "compressed mode runtime error".
- 1> terminate the inter-frequency and/or inter-RAT measurements corresponding to the deleted transmission gap pattern sequence;
- 1> when the PHYSICAL CHANNEL RECONFIGURATION FAILURE message has been submitted to lower layers for transmission:
  - 2> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.15

#### 8.4.1.12.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a TRANSPORT CHANNEL RECONFIGURATION message which includes IE "DPCH compressed mode info" that causes an illegal overlap involving more than one parallel transmission gap pattern sequences.
2. To confirm that the UE terminate any measurements corresponding to the deleted transmission gap pattern sequence.

#### 8.4.1.12.4 Method of test

##### Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: CS-DCCH+DTCH\_DCH (State 6-9) or PS-DCCH+DTCH\_DCH (State 6-10) as specified in TS34.108 clause 7.4, depending on the CN domain supported.

##### Test Procedure

For this test case, the downlink transmission power settings shall follow that specified in table 8.4.1.11-1 in clause 8.4.1.11.4.

The UE is in the CELL\_DCH state in cell 1. SS sends a MEASUREMENT CONTROL message on the downlink DCCH to request the UE to start inter-frequency measurement for cell 4's CPICH  $E_c/N_0$  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 "Deactivate".
5		←	TRANSPORT CHANNEL RECONFIGURATION	SS specifies the parameters for transmission gap pattern sequence with TGPSI=2 and activates it simultaneously
6				UE shall delete transmission gap pattern sequence configuration associated with TGPSI=2.
7		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	IE "Failure cause" shall be set to "Compressed mode runtime error"
8		→	MEASUREMENT REPORT	The contents shall be the same as that in step 3.

## Specific Message Contents

## MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	0 chips
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Set to same code as used for cell 4
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	FALSE
- Cells for measurement	4
- Inter-frequency cell id	Inter-frequency reporting criteria
- Inter-frequency measurement quantity	0
- CHOICE reporting criteria	CPICH Ec/No
- Filter Coefficient	
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- <del>SFN-SFN observed time difference reporting indicator</del>	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	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- CHOICE reported cell	2
- Maximum number of reported cells	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

## MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
<del>SFN-SFN observed time difference</del>	<del>Check to see if it is absent</del>
- 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	Deactivate
- TGCFN	Not present

## TRANSPORT CHANNEL RECONFIGURATION (Step 5)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL\_DCH from CELL\_DCH in PS" or "Non-speech in CS" or "Speech in CS" found in Annex A with the following exceptions:

Information Element	Value/remark
- DPCH compressed mode info	2
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	62
- TGSN	4
- TGL1	7
- TGL2	5
- TGD	<a href="#">undefined</a>
- 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

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL\_INFO\_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- 1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

If variable INVALID\_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

...

- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified below.

When the UE has received from the UTRAN the configurations of several compressed mode transmission gap pattern sequences, and if several of these patterns are to be simultaneously active, the UE shall check to see if these simultaneously active transmission gap pattern sequences create transmission gaps in the same frame. An illegal overlap is created if two or more transmission gap pattern sequences create transmission gaps in the same frame, irrespective of the gaps are created in uplink or downlink.

If the parallel transmission gap pattern sequences create an illegal overlap, the UE shall:

- 1> delete the overlapping transmission gap pattern sequence configuration stored in the variable TGPS\_IDENTITY, which is associated with the highest value of IE "TGPSI";
- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the information elements as specified below:
  - 2> not include the IE "RRC transaction identifier";
  - 2> set the cause value in IE "failure cause" to value "compressed mode runtime error".
- 1> terminate the inter-frequency and/or inter-RAT measurements corresponding to the deleted transmission gap pattern sequence;
- 1> when the PHYSICAL CHANNEL RECONFIGURATION FAILURE message has been submitted to lower layers for transmission:
  - 2> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, clause 8.2.11.2, clause 8.6.6.14

### 8.4.1.13.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the uplink DCCH using AM RLC, if it receives a 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.
2. 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  $E_c/N_0$  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 "Deactivate".
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	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	0 chips
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Set to same code as used for cell 4
- Primary Scrambling Code	Not Present
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	FALSE
- Cells for measurement	4
- Inter-frequency cell id	Inter-frequency reporting criteria
- Inter-frequency measurement quantity	0
- CHOICE reporting criteria	CPICH Ec/No
- Filter Coefficient	
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	TRUE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
<del>- SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- CHOICE reported cell	2
- Maximum number of reported cells	Not present
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

## MEASUREMENT REPORT (Step 3 and Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to "1"
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is present
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
<del>SFN-SFN observed time difference</del>	<del>Check to see if it is absent</del>
- 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	Deactivate
- 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	2
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	FDD Measurement
- TGMP	62
- TGPRC	4
- TGSN	7
- TGL1	5
- TGL2	undefined <sup>9</sup>
- TGD	3
- TGPL1	5
- TGPL2	Mode 0
- RPP	Mode 0
- ITP	UL and DL
- CHOICE UL/DL Mode	SF/2
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	B
- Downlink frame type	2.0
- DeltaSIR1	1.0
- DeltaSIRafter1	Not Present
- 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.

---<End of Modifications>---

## ---&lt;Start of Modifications&gt;---

## 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

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT\_IDENTITY; and
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> stop measurement reporting;
    - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_DCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurements set up or modified through a MEASUREMENT CONTROL message and valid in CELL\_FACH or CELL\_PCH or URA\_PCH states are stored in the variable MEASUREMENT\_IDENTITY with the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - ...

In CELL\_PCH or URA\_PCH state, the UE shall:

- 1> first perform the cell update procedure, using the cause "uplink data transmission", in order to transit to CELL\_FACH state; and then
  - 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT\_IDENTITY are fulfilled for any ongoing traffic volume measurement or UE positioning measurement which is being performed in the UE.

## 8.4.1.20.3 Test Purpose

1. 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, 3GPP TS 25.331 clause 8.4.1.6.6.

## 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 reporting. 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/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
<del>- UE internal measurement system information</del>	<del>Not Present</del>

## 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/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.

---<End of Modifications>---

---<Start of Modifications>---

## 8.4.1.24 Measurement Control and Report: Inter-frequency measurement for event 2A

## 8.4.1.24.1 Definition

## 8.4.1.24.2 Conformance requirement

When event 2a is configured in the UE within a measurement, the UE shall:

- 1> when the measurement is initiated or resumed:
  - 2> store the used frequency in the variable BEST\_FREQUENCY\_2A\_EVENT.
- 1> if equation 1 below has been fulfilled for a time period indicated by "Time to trigger" for a frequency included for that event and which is not stored in the variable BEST\_FREQUENCY\_2A\_EVENT:
  - 2> send a measurement report with IEs set as below:
    - 3> set in "inter-frequency measurement event results":
      - 4> "inter-frequency event identity" to "2a"; and
      - 4> "Frequency info" to the frequency that triggered the event; and
      - 4> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cells parameters ID" of the best primary CCPCH for TDD cells on that frequency.
    - 3> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2;
  - 2> update the variable BEST\_FREQUENCY\_2A\_EVENT with that frequency.

Equation 1:

$$Q_{NotBest} \geq Q_{Best} + H_{2a} / 2$$

The variables in the formula are defined as follows:

$Q_{NotBest}$  is the quality estimate of a frequency not stored the "best frequency" in the variable BEST\_FREQUENCY\_2A\_EVENT.

$Q_{Best}$  is the quality estimate of the frequency stored in "best frequency" in the variable BEST\_FREQUENCY\_2A\_EVENT.

$H_{2a}$  is the hysteresis parameter for the event 2a in that measurement.

## Reference

3GPP TS 25.331 clause 14.2.1.1

## 8.4.1.24.3 Test Purpose

- 1.A To confirm that the UE sends MEASUREMENT REPORT message if event 2A is configured, and if any of the non- used frequencies quality estimate becomes better than the currently used frequency quality estimate.
- 1.B To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if hysteresis condition is not fulfilled.
- 1.C To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if time to trigger condition is not fulfilled.

## 8.4.1.24.4 Method of test

## Initial Condition

System Simulator: 2 cells – The initial configurations of the 2 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.24-1. The table is found in "Test Procedure" clause.

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

## Related ICS/IXIT statements

- Compressed mode required yes/no

## Test Procedure

Table 8.4.1.24-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1", "T2", "T3", "T4" and "T5" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.24-1

Parameter	Unit	Cell 1						Cell 4					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
UTRA RF Channel Number		Ch. 1						Ch. 2					
CPICH E <sub>c</sub>	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. If UE requires compressed mode, SS performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS then commands the UE to perform Inter-frequency measurements and report event 2A by sending MEASUREMENT CONTROL message. In MEASUREMENT CONTROL message, IE "Hysteresis" is set to 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	To setup UE Internal measurement. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2A.
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.24-1.
6				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as hysteresis condition is not fulfilled.
7				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.24-1.
8		←	MEASUREMENT CONTROL	Modify hysteresis parameter for event 2A.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.24-1.
10				SS re-adjusts the downlink transmission power settings according to columns "T4" in table 8.4.1.24-1. This step should be completed within 5 seconds after completing step 9.
11				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as time to trigger condition is not fulfilled.
12				SS re-adjusts the downlink transmission power settings according to columns "T5" in table 8.4.1.24-1.
14		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

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

## MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE transmitted power
- Filter Coefficient	4
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE mode	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE report criteria	No reporting
Measurement reporting mode	Not present
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/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Maintain
- Timing Indication	
- 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	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	<a href="#">undefined</a>
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 10
- CHOICE UL/DL mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not present
- DeltaSIRAfter2	Not present
- N identify abort	Not present
- T Reconfirm abort	Not present
- TX diversity mode	None
- SSDT information	Not present
- Default DPCH offset value	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	
- <del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- Inter-frequency SET UPDATE	
- UE autonomous update mode	On with no reporting
- 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

## MEASUREMENT REPORT (Step 13)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present
- UE RX TX report entry list	Check to see if it is absent
Event results	Inter frequency 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

When event 2b is configured in the UE within a measurement, the UE shall:

- 1> if equations 1 and 2 below have been fulfilled for a time period indicated by "Time to Trigger" from the same instant, respectively for one or several non-used frequencies included for that event and for the used frequency:
- 2> if any of those non-used frequency is not stored in the variable TRIGGERED\_2B\_EVENT:
  - 3> store the non-used frequencies that triggered the event and that were not previously stored in the variable TRIGGERED\_2B\_EVENT into that variable;
  - 3> send a measurement report with IEs set as below:
    - 4> set in "inter-frequency measurement event results":
      - 5> "inter-frequency event identity" to "2b"; and
      - 5> for each non-used frequency that triggered the event, beginning with the best frequency:
        - 6> "Frequency info" to that non-used frequency; and
        - 6> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cell parameters ID" of the best primary CCPCH for TDD cells on that non-used frequency.
    - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
- 1> if equation 3 below is fulfilled for a non-used frequency stored in the variable TRIGGERED\_2B\_EVENT:
  - 2> remove that non-used frequency from the variable TRIGGERED\_2B\_EVENT.
- 1> if equation 4 below is fulfilled for the used frequency:
  - 2> clear the variable TRIGGERED\_2B\_EVENT.

Triggering conditions:

Equation 1:

$$Q_{Non\ used} \geq T_{Non\ used\ 2b} + H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency that becomes better than an absolute threshold.

$T_{Non\ used\ 2b}$  is the absolute threshold that applies for this non-used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

Equation 2:

$$Q_{Used} \leq T_{Used\ 2b} - H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2b}$  is the absolute threshold that applies for the used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

Leaving triggered state condition:

Equation 3:

$$Q_{Non\ used} < T_{Non\ used\ 2b} - H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency that is stored in the variable TRIGGERED\_2B\_EVENT.

$T_{Non\ used\ 2b}$  is the absolute threshold that applies for this non-used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

Equation 4:

$$Q_{Used} > T_{Used\ 2b} + H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2b}$  is the absolute threshold that applies for the used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

...

When event 2e is configured in the UE within a measurement, the UE shall:

- 1> if equation 1 below has been fulfilled for one or several non-used frequencies included for that event during the time "Time to trigger":
  - 2> if any of those non-used frequencies is not stored in the variable TRIGGERED\_2E\_EVENT:
    - 3> store the non-used frequencies that triggered the event and that were not previously stored in the variable TRIGGERED\_2E\_EVENT into that variable;
    - 3> send a measurement report with IEs set as below:
      - 4> set in "inter-frequency measurement event results":
        - 5> "inter-frequency event identity" to "2e"; and
        - 5> for each non-used frequency that triggered the event, beginning with the best frequency:
          - 6> "Frequency info" to that non-used frequency; and
          - 6> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cell parameters ID" of the best primary CCPCH for TDD cells on that non-used frequency.
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
  - 1> if equation 2 below is fulfilled for a non-used frequency stored in the variable TRIGGERED\_2E\_EVENT:
    - 2> remove that non-used frequency from the variable TRIGGERED\_2E\_EVENT.

Triggering condition:

Equation 1:

$$Q_{Non\ used} \leq T_{Non\ used\ 2e} - H_{2e} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency that becomes worse than an absolute threshold.

$T_{Non\ used\ 2e}$  is the absolute threshold that applies for that non-used frequency for that event.

$H_{2e}$  is the hysteresis parameter for the event 2e.

Leaving triggered state condition:

Equation 2:

$$Q_{Non\ used} > T_{Non\ used\ 2e} + H_{2e} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency stored in the variable TRIGGERED\_2E\_EVENT.

$T_{Non\ used\ 2e}$  is the absolute threshold that applies for that non-used frequency for that event.

$H_{2e}$  is the hysteresis parameter for the event 2e.

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

#### Related ICS/IXIT statements

- Compressed mode required            yes/no

#### Test Procedure

Table 8.4.1.25-1 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. If UE requires compressed mode, SS 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2B and 2E. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		→	MEASUREMENT 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.
9		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

#### Specific Message Contents

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	
- <del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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
- Inter-frequency SET UPDATE	
- UE autonomous update mode	On with no reporting
- 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	0.4
- 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/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Maintain
- Timing Indication	
- Downlink DPCH power control information	
- DPC mode	0 (Single)
- CHOICE Mode	FDD
- Power offset PPilot-DPCH	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	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	<a href="#">undefined</a>
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL mode	UL and DL or DL only depending on UE capability
Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	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/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/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
<del>- SFN-SFN Observed Time Difference</del>	<del>Check to see if this IE is absent</del>
- 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, 2B
- Event ID	
- 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

When event 2d is configured in the UE within a measurement, the UE shall:

- 1> if equation 1 below has been fulfilled for the used frequency during the time "Time to trigger":
  - 2> if the variable TRIGGERED\_2D\_EVENT is set to FALSE:
    - 3> set the variable TRIGGERED\_2D\_EVENT to TRUE;
    - 3> send a measurement report with IEs set as below:
      - 4> set in "inter-frequency event results": "inter-frequency event identity" to "2d" and no IE "Inter-frequency cells";
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
- 1> if the variable TRIGGERED\_2D\_EVENT is set to TRUE and if equation 2 is fulfilled for the used frequency:
  - 2> set the variable TRIGGERED\_2D\_EVENT to FALSE.

Triggering condition:

Equation 1:

$$Q_{Used} \leq T_{Used\ 2d} - H_{2d} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2d}$  is the absolute threshold that applies for the used frequency and event 2d.

$H_{2d}$  is the hysteresis parameter for the event 2d.

Leaving triggered state condition:

Equation 2:

$$Q_{Used} > T_{Used\ 2d} + H_{2d} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2d}$  is the absolute threshold that applies for the used frequency and event 2d.

$H_{2d}$  is the hysteresis parameter for the event 2d.

...

When event 2f is configured in the UE within a measurement, the UE shall:

- 1> if equation 1 below has been fulfilled for the used frequency during the time "Time to trigger":
  - 2> if the variable TRIGGERED\_2F\_EVENT is set to FALSE:
    - 3> set the variable TRIGGERED\_2F\_EVENT to TRUE;
    - 3> send a measurement report with IEs set as below:
      - 4> set in "inter-frequency event results": "inter-frequency event identity" to "2f", and no IE "Inter-frequency cells";
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
  - 2> if the variable TRIGGERED\_2F\_EVENT is set to TRUE and if equation 2 is fulfilled for the used frequency:
    - 2> set the variable TRIGGERED\_2F\_EVENT to FALSE.

Triggering condition:

Equation 1:

$$Q_{Used} \geq T_{Used\ 2f} + H_{2f} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2f}$  is the absolute threshold that applies for the used frequency and event 2f.

$H_{2f}$  is the hysteresis parameter for the event 2f.

Leaving triggered state condition:

Equation 2:



$$Q_{Used} < T_{Used\ 2f} - H_{2f} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2f}$  is the absolute threshold that applies for the used frequency and event 2f.

$H_{2f}$  is the hysteresis parameter for the event 2f.

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

#### Related ICS/IXIT statements

- Compressed mode required      yes/no

#### Test Procedure

Table 8.4.1.26-1 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 $E_c$	dBm	-60	-72

The UE is initially in CELL\_DCH state of cell 1. If UE requires compressed mode, 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. 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				If Compressed Mode not required (refer ICS/IXIT) go to step 4
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2D and 2F.
5		→	MEASUREMENT REPORT	The UE shall report event 2F
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.26-1.
7		→	MEASUREMENT REPORT	The UE shall report event 2D.
8		↔	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:

## 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/remark
Downlink information common for all radio links <ul style="list-style-type: none"> <li>- Downlink DPCH info common for all RL</li> <li>- Timing Indication</li> <li>- Downlink DPCH power control information</li> <li>- DPC mode</li> <li>- CHOICE Mode</li> <li>- Power offset PPilot-DPDCH</li> <li>- DL rate matching restriction information</li> <li>- Spreading factor</li> <li>- Fixed or flexible position</li> <li>- TFCI existence</li> <li>- Number of bits for Pilot bits (SF=128, 256)</li> <li>- DPCH compressed mode info</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- Transmission gap pattern sequence</li> </ul> configuration parameters <ul style="list-style-type: none"> <li>- TGMP</li> <li>- TGPRC</li> <li>- TGSN</li> <li>- TGL1</li> <li>- TGL2</li> <li>- TGD</li> <li>- TGPL1</li> <li>- TGPL2</li> <li>- RPP</li> <li>- ITP</li> <li>- CHOICE UL/DL mode</li> <li>- Downlink compressed mode method</li> <li>- Uplink compressed mode method</li> <li>- Downlink frame type</li> <li>- DeltaSIR1</li> <li>- DeltaSIRAfter1</li> <li>- DeltaSIR2</li> <li>- DeltaSIRAfter2</li> <li>- N identify abort</li> <li>- T Reconfirm abort</li> <li>- TX Diversity Mode</li> <li>- SSDT information</li> <li>- Default DPCH Offset Value</li> </ul>	Maintain  0 (Single) FDD TBD Not present Refer to the parameter set in TS 34.108 Flexible FALSE Not present  1 Activate (Current CFN+(256 – TTI/10msec)) mod 256  FDD Measurement Infinity 4 7 Not Present <a href="#">undefined</a> 3 Not Present Mode 0 Mode 0 UL and DL or DL only depending on UE capability SF/2 SF/2 or Not present depending on UE capability A 2.0 1.0 Not present Not present Not present Not present None Not present 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	
- <del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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/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, 2F
- Event ID	
- 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/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, 2D
- Event ID	
- 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.

---<End of Modifications>---

---<Start of Modifications>---

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

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

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
  - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
  - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 

...
  - 2> for measurement type "UE positioning measurement":
 

...
  - 2> for any other measurement type:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> begin measurements according to the stored control information for this measurement identity.

...

For traffic volume measurements in the UE only one quantity is compared with the thresholds. This quantity is Transport Channel Traffic Volume (which equals the sum of Buffer Occupancies of RBs multiplexed onto a transport channel) in number of bytes. Every TTI, UE measures the Transport Channel Traffic Volume for each transport channel and compares it with the configured thresholds. If the monitored Transport Channel Traffic Volume exceeds an absolute threshold, i.e. if TCTF>Reporting threshold, this is an event (event 4a) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

In CELL\_FACH state, the UE shall:

- 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT\_IDENTITY are met for any ongoing traffic volume measurement or UE positioning measurement that is being performed in the UE;
- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

## Reference

3GPP TS 25.331, clause 14.4.2.1, 3GPP TS 25.331, clause 8.4.1.3, 8.4.2.2.

## 8.4.1.29.3 Test Purpose

1. To verify that in CELL\_FACH state when event 4a triggered ~~s~~ at TVM set up 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.
- 2 To verify that in CELL\_FACH state when event 4a triggered ~~s~~ after TVM set up 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.
32. To confirm that the UE includes in the MEASUREMENT REPORT message, measurement report in IE "Measurement results on RACH" as specified in System Information Block type 12.

## 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. The System Information Block type 12 is modified compared to the default settings so that CPICH RSCP is reported for intra-frequency reporting when transmitting RACH messages. After this modification, SS configures transport channel traffic volume so as to exceed threshold ant thenSS 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. SS configures UE's transport channel load decreases to zero and UE sends no MEASUREMENT REPORT message. SS configures transport channel traffic volume so as to exceed threshold again and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. After 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT 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 brought to the CELL_FACH state in the cell 1.
<a href="#">1a</a>	←		<a href="#">CLOSED UE TEST LOOP</a>	<a href="#">TC</a> <a href="#">UE Test Loop Mode1</a>
<a href="#">1b</a>	→		<a href="#">CLOSED UE TEST LOOP COMPLETE</a>	<a href="#">TC</a>
<a href="#">1ca</a>	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	System Information Block type 12 is different from the default settings (see specific message contents)
<a href="#">1db</a>	←		SYSTEM INFORMATION CHANGE INDICATION	To notify the modification of SYSTEM INFORMATION BLOCK TYPE 12, this message is transmitted.
<a href="#">1e</a>				<a href="#">SS configures transport channel traffic volume so as to exceed threshold.</a>
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.
<a href="#">4a</a>				<a href="#">SS configures UE's transport channel load decreases to zero</a>
<a href="#">4b</a>				<a href="#">SS receive no MEASUREMENT CONTROL message.</a>
<a href="#">4c</a>				<a href="#">SS configures transport channel traffic volume so as to exceed threshold</a>
<a href="#">4d</a>	→		<a href="#">MEASUREMENT REPORT</a>	<a href="#">UE reports that Traffic Volume measurement event 4A is triggered.</a>
<a href="#">4e</a>	→		<a href="#">MEASUREMENT REPORT</a>	<a href="#">UE repeats message after 1000 ms.</a>
5	↔		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

## Specific Message Content

System Information Block type 12 (Step [1ca](#))

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



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	5
- 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	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 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	
<del>- SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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	
<del>- SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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

Information Element	Value/Remark
- 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
<del>- UE internal measurement system information</del>	<del>Not Present</del>

#### MASTER INFORMATION BLOCK (Step 1ca)

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

Information Element	Value/remark
MIB Value tag	2

#### SYSTEM INFORMATION CHANGE INDICATION (Step 1cb)

Information Element	Value/remark
Message Type	
BCCH modification info	
MIB Value Tag	2
BCCH Modification time	Not Present

#### 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
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- 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, [step4](#), [step4d](#) and step 4e)

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	1
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	2
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	3
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	4
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	20
- RLC Buffers Payload	Check to see if the value is reasonable
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
Measured Results on RACH	
- Measurement result for current cell	Check to see if set to 'CPICH RSCP'
- CHOICE measurement quantity	Checked to see if set to within an acceptable range.
- CPICH RSCP	Checked to see if this IE is absent
- Measurement results for monitored cells	Check to see if set to 'CPICH RSCP'
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. The IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP shall be included in this message.

In step 4, [4d](#) and [4e](#) 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

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

The UE shall:

- 1> read the IE "Measurement command";

- 1> if the IE "Measurement command" has the value "setup":
    - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
    - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
      - ...
    - 2> for measurement type "UE positioning measurement":
      - ...
    - 2> for any other measurement type:
      - 3> if the measurement is valid in the current RRC state of the UE:
        - 4> begin measurements according to the stored control information for this measurement identity.
- ...

For traffic volume measurements in the UE only one quantity is compared with the thresholds. This quantity is Transport Channel Traffic Volume (which equals the sum of Buffer Occupancies of RBs multiplexed onto a transport channel) in number of bytes. Every TTI, UE measures the Transport Channel Traffic Volume for each transport channel and compares it with the configured thresholds.

If the monitored Transport Channel Traffic Volume exceeds an absolute threshold, i.e. if  $TCTF > \text{Reporting threshold}$ , this is an event (event 4a) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

If the monitored Transport Channel Traffic Volume becomes smaller than an absolute threshold, i.e. if  $TCTF < \text{Reporting threshold}$ , this is an event (4b) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

## Reference

3GPP TS 25.331, clause 14.4.2.2, 3GPP TS 25.331, clause 8.4.1.3.

### 8.4.1.30.3 Test Purpose

1. To verify that in CELL\_DCH state when event 4a or 4b triggered at setup TVM 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.
2. To verify that in CELL\_DCH state when event 4a or 4b triggered after setup TVM 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. SS configure UE's transport channel traffic volume to exceeds threshold. and 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 events 4a , and~~ after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT message. SS configures UE's transport channel load decreases to zero and sends 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 event 4b. ~~Event 4b triggers and~~ after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT message. ~~previous signaling procedure repeats.~~ SS increases transport channel traffic volume to exceeds threshold. Event 4a is triggered and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS decreases transport channel traffic volume to zero. Event 4b is triggered and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
<a href="#">1a</a>	←		<a href="#">CLOSED UE TEST LOOP</a>	<a href="#">TC</a> <a href="#">UE Test Loop Mode1</a>
<a href="#">1b</a>	→		<a href="#">CLOSED UE TEST LOOP COMPLETE</a>	<a href="#">TC</a>
<a href="#">1c</a>				<a href="#">SS configures transport channel traffic volume so as to exceed threshold</a>
2	←		MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias (event 4a) to UE.
3	←		<del>Void</del> <a href="#">MEASUREMENT CONTROL</a>	<del>SS provides Traffic Volume measurement criterias (event 4b) to UE.</del>
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.
<a href="#">5a</a>				<a href="#">UE's transport channel traffic volume decreases to zero.</a>
<a href="#">5b</a>	←		<a href="#">MEASUREMENT CONTROL</a>	<a href="#">SS provides Traffic Volume measurement criterias (event 4b) to UE.</a>
6	→		MEASUREMENT REPORT	<del>UE's transport channel traffic volume decreases to zero.</del> UE reports that Traffic Volume measurement event 4B is triggered.
7	→		MEASUREMENT REPORT	UE repeats message after 2000 ms.
<a href="#">7a</a>				<a href="#">SS increses transport channel traffic volume so as to exceed threshold</a>
<a href="#">7b</a>	→		<a href="#">MEASUREMENT REPORT</a>	<a href="#">IE "Measurement Identity" is set to "15".</a>
<a href="#">7c</a>				<a href="#">UE's transport channel traffic volume decreases to zero.</a>
<a href="#">7d</a>	→		<a href="#">MEASUREMENT REPORT</a>	<a href="#">IE "Measurement Identity" is set to "14".</a>
8	↔		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## MEASUREMENT CONTROL (Step 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
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- 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 [5b3](#))

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
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- 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 and step 7b)

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	1
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	2
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	3
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	4
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	20
- RLC Buffers Payload	Check to see if the value is reasonable
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
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 and 7d)

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~~, 7b and 7d 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
BCCCH ARFCN	#	1	7
CELL identity	#	0	1
BSIC	#	BSIC1	BSIC2

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

System Information Block type 11 nor 12 does not include Inter-RAT measurement system information.

#### Related ICS/IXIT statements

- Compressed mode required yes/no

#### Test Procedure

The UE is brought to the CELL\_DCH state after a successful outgoing call attempt. 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. If required 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2		←	PHYSICAL CHANNEL RECONFIGURATION	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 Initial BSIC identification measurement is started.
8		→	MEASUREMENT REPORT	UE reports measurement results of GSM Initial BSIC identification measurement to SS.
9		→	MEASUREMENT REPORT	Next periodical measurement report.
10		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links - DPCCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined <sup>0</sup>
- TGPL1	12
- 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	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM Initial BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	0
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 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	
CHOICE Inter-RAT Cell Removal	Remove no inter-RAT cells
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	not required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	1000
Physical channel information elements	
- DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	Not present

## MEASUREMENT REPORT (Step 5 and step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	

<ul style="list-style-type: none"> <li>- CHOICE system</li> <li>- Measured GSM cells</li> <li>- GSM carrier RSSI</li> <li>CHOICE BSIC</li> <li>- BCCH ARFCN</li> <li>- Observed time difference to GSM cell</li> <li>- GSM carrier RSSI</li> <li>CHOICE BSIC</li> <li>- BCCH ARFCN</li> <li>- Observed time difference to GSM cell</li> </ul> <p>Measured results on RACH Additional Measured results Event results</p>	<p>GSM</p> <p>Check to see if present Non verified BSIC Check that is set to "0" Check that not present Check that measurement result is reasonable Non verified BSIC Check that is set to "7" Check that not present Check that not present Check that not present</p>
---	---

## MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	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	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

## MEASUREMENT REPORT (Step 8 and step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "1"
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

## 8.4.1.31.5 Test Requirement

In step 5 and step 6 UE reports correctly GSM RSSI values.

In step 8 and step 9 UE reports correctly BSIC values.

Reporting period is the requested one.

---<End of Modifications>---

---<Start of Modifications>---

## 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

- 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.
- 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 "activate" 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 identified in IE "TGPSI"
  - 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 [Reporting indicator](#)" 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 MEASUREMENT 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.

##### Related ICS/IXIT statements

- Compressed mode required            yes/no

##### 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					39				
CELL identity	#	1					2					3				
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	T4
UTRA RF Channel Number		Ch.1				
CPICH Ec/No	dB	-5	-20	-20	-20	-5

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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), 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 instant T4, the RF signal strength for GSM cell 1 increases above the threshold for the other system for event 3a+hysteresis. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3a in the UE. If the UE requires compressed mode (refer ICS/IXIT), 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.
13		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	<a href="#">undefined</a>
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- 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	Deactivate
- 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 0
- 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	Deactivate
- 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 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	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	

<p>CHOICE system</p> <ul style="list-style-type: none"> <li>- Observed time difference to to GSM cell reporting indicator</li> <li>- GSM carrier RSSI reporting indicator</li> </ul> <p>CHOICE report criteria</p> <ul style="list-style-type: none"> <li>- Inter-RAT measurements reporting criteria <ul style="list-style-type: none"> <li>- Parameters required for each event (1 to &lt;maxMeasEvent&gt;) <ul style="list-style-type: none"> <li>- Inter-RAT event identity</li> <li>- Threshold own system</li> <li>- W</li> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li> </ul> </li> </ul> </li> <li>- Maximum number of reported cells</li> </ul> <p>Physical channel information elements</p> <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li> </ul> <ul style="list-style-type: none"> <li>- TGPS reconfiguration CFN</li> <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;) <ul style="list-style-type: none"> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul> </li> </ul>	<p>GSM TRUE</p> <p>TRUE</p> <p>&lt;MaxMeasEvent&gt;=1 3a -12 0 -80 5 640 ms Report cells within active set or within virtual active set or of the other RAT 2 cells</p> <p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present. Not present &lt;MaxTGPS&gt;=3</p> <p>1 Activate (Current CFN + (252 – TTI/10msec))mod 256 2 Activate (Current CFN + (254 – TTI/10msec))mod 256 3 Activate (Current CFN + (250 – TTI/10msec))mod 256</p>
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## MEASUREMENT REPORT (Step 8)

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

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";

When event 3b is configured in the UE within a measurement, the UE shall:

- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "required":
  - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several GSM cells that match any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement:
  - 3> if the inter-RAT cell id of any of those GSM cell is not stored in the variable TRIGGERED\_3B\_EVENT:
    - 4> store the inter-RAT cell ids of the GSM cells that triggered the event and that were not previously stored in the variable TRIGGERED\_3B\_EVENT into that variable;
    - 4> send a measurement report with IEs set as below:
      - 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3b", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cells that triggered the event (worst one first);

- 5> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
- 2> if equation 2 below is fulfilled for a GSM cell whose inter-RAT cell id is stored in the variable TRIGGERED\_3B\_EVENT:
- 3> remove the inter-RAT cell id of that GSM cell from the variable TRIGGERED\_3B\_EVENT.
- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "not required":
- 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several of the BCCH ARFCNs considered in that inter-RAT measurement:
- 3> if any of those BCCH ARFCN is not stored into the variable TRIGGERED\_3B\_EVENT:
- 4> store the BCCH ARFCNs that triggered the event and that were not previously stored in the variable TRIGGERED\_3B\_EVENT into that variable;
- 4> send a measurement report with IEs set as below:
- 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3b", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to BCCH ARFCNs that triggered the event (worst one first);
- 5> set the IE "measured results" and the IE "additional measured results" according to 8.4.2.;
- 2> if equation 2 below is fulfilled for a BCCH ARFCN that is stored in the variable TRIGGERED\_3B\_EVENT:
- 3> remove that BCCH ARFCN from the variable TRIGGERED\_3B\_EVENT.

Triggering condition:

Equation 1:

$$M_{Other\ RAT} + CIO_{Other\ RAT} \leq T_{Other\ RAT} - H_{3b} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3b}$  is the hysteresis parameter for event 3b.

Leaving triggered state condition:

Equation 2:

$$M_{Other\ RAT} + CIO_{Other\ RAT} > T_{Other\ RAT} + H_{3b} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.  $M_{Other\ RAT}$  is expressed in dBm.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3b}$  is the hysteresis parameter for event 3b.

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.

## Related ICS/IXIT statements

- Compressed mode required            yes/no

## 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		39	
CELL identity	#	1		2		3	
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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.



## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3b in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in 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.
10		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	<a href="#">undefined</a>
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- 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	Deactivate
- 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 0
- 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	Deactivate
- 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 0
- 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 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	Report cells within active set or within virtual active set or of the other RAT
- Maximum number of reported cells	3
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	Not present
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Activate

- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	Activate
- TGCFN	(Current CFN + (250 – TTI/10msec))mod 256

## MEASUREMENT REPORT (Step 7)

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

- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "required":
- 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several GSM cells that match any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement:
- 3> if the inter-RAT cell id of any of those GSM cell is not stored in the variable TRIGGERED\_3C\_EVENT:

- 4> store the Inter-RAT cell ids of the GSM cells that triggered the event and that were not previously stored in the variable TRIGGERED\_3C\_EVENT into that variable;
- 4> send a measurement report with IEs set as below:
  - 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3c", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cells that triggered the event (best one first);
  - 5> set the IE "measured results" and the IE "additional measured results" according to 8.4.2.
- 2> if equation 2 below is fulfilled for a GSM cell whose inter-RAT cell id is stored in the variable TRIGGERED\_3C\_EVENT:
  - 3> remove the inter-RAT cell id of that GSM cell from the variable TRIGGERED\_3C\_EVENT.
- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "not required":
  - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one or several of the BCCH ARFCNs considered in that inter-RAT measurement:
    - 3> if any of those BCCH ARFCN is not stored into the variable TRIGGERED\_3C\_EVENT:
      - 4> store the BCCH ARFCNs that triggered the event and that were not previously stored in the variable TRIGGERED\_3C\_EVENT into that variable;
      - 4> send a measurement report with IEs set as below:
        - 5> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3c", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to BCCH ARFCNs that triggered the event (best one first);
        - 5> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
    - 2> if equation 2 is fulfilled for a BCCH ARFCN that is stored in the variable TRIGGERED\_3C\_EVENT:
      - 3> remove that BCCH ARFCN from the variable TRIGGERED\_3C\_EVENT.

Triggering condition:

Equation 1:

$$M_{Other\ RAT} + CIO_{Other\ RAT} \geq T_{Other\ RAT} + H_{3c} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.  $M_{Other\ RAT}$  is expressed in dBm.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.

$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3c}$  is the hysteresis parameter for event 3c.

Leaving triggered state condition:

Equation 2:

$$M_{Other\ RAT} + CIO_{Other\ RAT} < T_{Other\ RAT} - H_{3c} / 2$$

The variables in the formula are defined as follows:

$M_{Other\ RAT}$  is the measurement quantity for the cell of the other system.  $M_{Other\ RAT}$  is expressed in dBm.

$CIO_{Other\ RAT}$  is the cell individual offset for the cell of the other system.



$T_{Other\ RAT}$  is the absolute threshold that applies for the other system in that measurement.

$H_{3c}$  is the hysteresis parameter for event 3c.

#### 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.

##### Related ICS/IXIT statements

- Compressed mode required            yes/no

##### Test procedure

**Table 8.4.1.35.4-1**

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0	T1	T2	T3
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				7			
CELL identity	#	1				2			
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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.35.4-1.

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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3c in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.35.4-1.
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 table 8.4.1.35.4-1.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.35.4-1.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	<a href="#">undefined</a>
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- 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	Deactivate
- 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 0
- 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	Deactivate
- 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 0
- 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 (No Data)
- Remove all inter-RAT cells	MaxCellMeas=2
New inter-RAT cells (1 to <MaxCellMeas>)	
- 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	FALSE
reporting indicator	
- 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

<ul style="list-style-type: none"> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li> </ul>	<p>-80</p> <p>5</p> <p>100 ms</p> <p>Report cells within active set or within virtual active set or of the other RAT</p>
<ul style="list-style-type: none"> <li>- Maximum number of reported cells</li> </ul>	<p>2</p>
<p>Physical channel information elements</p> <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li> </ul>	<p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.</p> <p>Not present</p> <p>&lt;MaxTGPS&gt;=3</p>
<ul style="list-style-type: none"> <li>- TGPS reconfiguration CFN</li> <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;)</li> </ul>	<p>1</p> <p>Activate</p> <p>(Current CFN + (252 – TTI/10msec))mod 256</p>
<ul style="list-style-type: none"> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul>	<p>2</p> <p>Activate</p> <p>(Current CFN + (254 – TTI/10msec))mod 256</p>
<ul style="list-style-type: none"> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul>	<p>3</p> <p>Activate</p> <p>(Current CFN + (250 – TTI/10msec))mod 256</p>

MEASUREMENT REPORT (Step 7)

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

8.4.1.35.4 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.

---<End of Modifications>---

**---<Start of Modifications>---****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**

When event 3d is configured in the UE within a measurement, the UE shall:

- 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "required":
  - 2> when the measurement is initiated or resumed:
    - 3> store in the variable BEST\_CELL\_3D\_EVENT the Inter-RAT cell id of the GSM cell that has the best measured quantity among the GSM cells that match any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement
    - 3> send a measurement report with IE set as below:
      - 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cell that is stored in the variable BEST\_CELL\_3D\_EVENT;
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
    - 2> if equation 1 has been fulfilled for a time period indicated by "time to trigger" for a GSM cell that is different from the one stored in BEST\_CELL\_3D\_EVENT and that matches any of the BCCH ARFCN and BSIC combinations considered in that inter-RAT measurement:
      - 3> store the Inter-RAT cell id of that GSM cell in the variable BEST\_CELL\_3D\_EVENT;
      - 3> send a measurement report with IEs set as below:
        - 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "verified BSIC" and "Inter-RAT cell id" to the GSM cell is now stored in BEST\_CELL\_3D\_EVENT;
        - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
  - 1> if the other RAT is GSM, and if IE "BSIC verification required" is set to "not required":
    - 2> when the measurement is initiated or resumed:
      - 3> store in the variable BEST\_CELL\_3D\_EVENT the BCCH ARFCN of the GSM cell that has the best measured quantity among the BCCH ARFCNs considered in that inter-RAT measurement;
      - 3> send a measurement report with IE set as below:
        - 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to the BCH ARFCN that is stored in the variable BEST\_CELL\_3D\_EVENT;
        - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
      - 2> if equation 1 below has been fulfilled for a time period indicated by "time to trigger" for one of the BCCH ARFCNs considered in that inter-RAT measurement and different from the one stored in BEST\_CELL\_3D\_EVENT:
        - 3> store the BCCH ARFCN of that GSM cell in the variable BEST\_CELL\_3D\_EVENT;

3> send a measurement report with IEs set as below:

- 4> set in "inter-RAT measurement event result": "inter-RAT event identity" to "3d", "CHOICE BSIC" to "non verified BSIC" and "BCCH ARFCN" to the BCCH ARFCN that is now stored in the variable BEST\_CELL\_3D\_EVENT;
- 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.

Equation 1:

$$M_{New} \geq M_{Best} + H_{3d} / 2$$

The variables in the formula are defined as follows:

$M_{New}$  is the measurement quantity for a GSM cell that is not stored in the variable BEST\_CELL\_3D.

$M_{Best}$  is the measurement quantity for a GSM cell that is stored in the variable BEST\_CELL\_3D.

$H_{3d}$  is the hysteresis parameter for event 3d.

## Reference

3GPP TS 25.331 clause 14.3.1.4.

### 8.4.1.36.3 Test Purpose

1. 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.

#### Related ICS/IXIT statements

- Compressed mode required      yes/no

#### 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	#	1		2	
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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3d in the UE. If the UE requires compressed mode (refer ICS/IXIT), 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, if the UE requires compressed mode (refer ICS/IXIT), deactivates compressed mode.
9				If the UE requires compressed mode (refer ICS/IXIT), SS checks that the UE has deactivated compressed mode.
10		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.



## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	1
- TGPSI	Deactivate
- TGPS Status Flag	Not present
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	<a href="#">undefined</a>
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- 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	Deactivate
- 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 0
- 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	Deactivate
- 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 0
- 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	FALSE
reporting indicator	
- 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

<ul style="list-style-type: none"> <li>- Threshold other system</li> <li>- Hysteresis</li> <li>- Time to Trigger</li> <li>- Reporting cell status</li> </ul>	<p>Not present</p> <p>5</p> <p>200 ms</p> <p>Report cells within active set or within virtual active set or of the other RAT</p> <p>2</p>
<p>Physical channel information elements</p> <ul style="list-style-type: none"> <li>- DPCH compressed mode status info</li> </ul>	<p>If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.</p> <p>Not present</p> <p>&lt;MaxTGPS&gt;=3</p>
<ul style="list-style-type: none"> <li>- TGPS reconfiguration CFN</li> <li>- Transmission gap pattern sequence (1 to &lt;MaxTGPS&gt;)</li> </ul>	<p>1</p> <p>Activate</p> <p>(Current CFN + (252 – TTI/10msec))mod 256</p> <p>2</p> <p>Activate</p> <p>(Current CFN + (254 – TTI/10msec))mod 256</p> <p>3</p> <p>Activate</p> <p>(Current CFN + (250 – TTI/10msec))mod 256</p>
<ul style="list-style-type: none"> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> </ul>	<p>1</p> <p>Activate</p> <p>(Current CFN + (252 – TTI/10msec))mod 256</p> <p>2</p> <p>Activate</p> <p>(Current CFN + (254 – TTI/10msec))mod 256</p> <p>3</p> <p>Activate</p> <p>(Current CFN + (250 – TTI/10msec))mod 256</p>

MEASUREMENT REPORT (Step 5)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell id was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 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/remark
Measurement identity	Check to see if set to 3
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	Check that measurement results for two GSM cells are included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell id was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 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	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present. (Current CFN + (256 – TTI/10msec))mod 256 <MaxTGPS>=3
- TGPS reconfiguration CFN	
- Transmission gap pattern sequence (1 to <MaxTGPS>)	
- TGPSI	1
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	3
- TGPS status flag	Deactivate
- TGCFN	Not present

## 8.4.1.36.5 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.

---<End of Modifications>---

**---<Start of Modifications>---****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	12		Set-up to monitor 12 GSM neighbours every second measurement period, i.e. every second 480ms period.
GSM Initial BSIC identification	Note 1	Inf.	4	7	Not sent	0	8		Equal to Pattern 6 in TS 25.133 table 8.7.
GSM BSIC re-confirmation	Note 1	Inf.	4	7	Not sent	0	8		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.

## Related ICS/IXIT statements

- Compressed mode required            yes/no

## Test procedure

**Table 8.4.1.40.4.2 Inter-RAT cell specific data**

Parameter	Unit	Cell 1 (GSM)				Cell 2 (GSM)			
		T0	T1	T2	T3	T0	T1	T2	T3
Test Channel	#	GSM Ch.1				GSM Ch.2			
BCCH ARFCN	#	1				7			
CELL identity	#	1				2			
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. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters 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 if the UE requires compressed mode (refer ICS/IXIT), compressed mode is activated.

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

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2		←	PHYSICAL CHANNEL RECONFIGURATION	If the UE requires compressed mode (refer ICS/IXIT), compressed mode pattern sequence parameters are loaded to UE.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS configures event 3c in the UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.40.4.2.
7		→	MEASUREMENT REPORT	After about 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.
11		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Content

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark
Downlink information common for all radio links	
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	GSM Carrier RSSI Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	<a href="#">undefined</a>
- TGPL1	12
- 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	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	Deactivate
- 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 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	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	Deactivate
- 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 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	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 (No Data)
- Remove all inter-RAT cells	
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	Report cells within active set or within virtual active set or of the other RAT
- Maximum number of reported cells	2
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	Not present

- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (252 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (254 – TTI/10msec))mod 256
- TGPSI	3
- TGPS status flag	Activate
- TGCFN	(Current CFN + (250 – TTI/10msec))mod 256

## MEASUREMENT REPORT (Step 7)

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

## 8.4.1.40.5 Test Requirement

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.

---<End of Modifications>---

## CHANGE REQUEST

⌘ **34.123-1 CR 384** ⌘ rev - ⌘ Current version: **5.1.1** ⌘  
**Spec Title:** User Equipment (UE) conformance specification; ⌘  
 Part 1: Protocol conformance specification

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

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 MM test case 9.4.7		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 2002-10
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)	<b>2</b> (GSM Phase 2)	
	<b>A</b> (corresponds to a correction in an earlier release)	<b>R96</b> (Release 1996)	
	<b>B</b> (addition of feature),	<b>R97</b> (Release 1997)	
	<b>C</b> (functional modification of feature)	<b>R98</b> (Release 1998)	
	<b>D</b> (editorial modification)	<b>R99</b> (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>REL-4</b> (Release 4)	
		<b>REL-5</b> (Release 5)	

<b>Reason for change:</b>	⌘ RRC messages should in general not be shown in the NAS test cases. Which RRC procedures to be triggered by the SS should instead be indicated in the comments column. When to start integrity protection should also be indicated.  In test case 9.4.7, IMSI attach is disallowed. The purpose is to force a normal location update instead of IMSI attach. However, a precondition to be able to perform a normal location update, the UE is "Idle updated" in the cell and if that is a precondition, disallowing IMSI attach has no meaning.
<b>Summary of change:</b>	⌘ In test case 9.4.7: RRC messages have been removed and replaced with comments (including start of integrity protection).  IMSI attach disallowed has been removed. Instead, precondition is changed to state that the UE is "Idle updated" in the cell.
<b>Consequences if not approved:</b>	⌘ The UE has to be forced to perform a normal location update for the test case to run, even if that would really not be necessary.

<b>Clauses affected:</b>	⌘ 9.4.7
<b>Other specs</b>	⌘ <input type="checkbox"/> Other core specifications ⌘

<b>affected:</b>	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
<b>Other comments:</b>	⌘	Affects R99,REL-4 and REL-5.	
		T1S-020893 is a revision of T1S-020788 (correction to cover page)	

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

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

## 9.4.7 Location Updating / accept with replacement or deletion of Equivalent PLMN list

### 9.4.7.1 Definition

Test to verify that the UE replaces or deletes its stored Equivalent PLMN list when no Equivalent PLMN list is included in the LOCATION UPDATING ACCEPT message from the network during a Location Update.

### 9.4.7.2 Conformance requirement

- 1) The stored list in the mobile station shall be replaced on each occurrence of the LOCATION UPDATING ACCEPT message.
- 2) If no equivalent PLMN list is contained in the LOCATION UPDATING ACCEPT message, then the stored equivalent PLMN list in the mobile station shall be deleted.

### References

TS 24.008 4.4.4.6

### 9.4.7.3 Test purpose

- 1) To verify that the UE replaces its stored equivalent PLMN list if the equivalent PLMN list is contained in the LOCATION UPDATING ACCEPT message received from the network during a location updating procedure.
- 2) To verify that the UE deletes its stored equivalent PLMN list if no equivalent PLMN list is contained in the LOCATION UPDATING ACCEPT message received from the network during a location updating procedure.

### 9.4.7.4 Method of test

#### Initial conditions:

- System Simulator:
  - two cells: A and B, with different PLMN Codes (PLMN 1 and PLMN 2 respectively). ~~IMSI attach/detach is not allowed on either cell.~~
- User Equipment:
  - the UE is switched off. The HPLMN is PLMN 3 and no other information about PLMN priorities or forbidden PLMNs is stored in the USIM. The equivalent PLMN list in the mobile station is empty.
  - the UE is "Idle updated" on cell B.

#### Related ICS/IXIT statement(s)

Switch off on button Yes/No.

#### Test procedure

When the UE is initially switched on it will perform a normal location updating in Cell A, which is the only suitable cell available. The LOCATION UPDATING ACCEPT message sent by the SS on reception of the LOCATION UPDATING REQUEST message shall include PLMN 2 in the equivalent PLMN list. When Cell B is made available and its RF signal level is higher than that of Cell A the UE will perform a normal location updating in this cell. The LOCATION UPDATING ACCEPT message sent by the SS shall include PLMN 1 in the equivalent PLMN list. When Cell B is made unavailable the UE shall perform a normal location updating again in Cell A, but in this occasion the LOCATION UPDATING ACCEPT message shall contain an empty equivalent PLMN list. When Cell B is made available again and its RF signal level is higher than that of Cell A the UE shall not perform a normal location updating in this cell since it is not in the ePLMN list.

Expected Sequence

Step	Direction		Message	Contents
	UE	SS		
1		SS		The following messages shall be sent and received on Cell A Set the cell type of Cell A to the "Suitable neighbour cell". Set the cell type of Cell B to the "non-suitable cell". (see note)
2		UE		The UE is switched on by either using the Power Switch or by applying power.
3		<del>SS</del> →	<del>RRC CONNECTION REQUEST</del>	<del>The IE "Establishment cause": in the received RRC CONNECTION REQUEST message is not checked</del> <del>Registration.</del>
4		←	<del>VoidRRC CONNECTION SETUP</del>	
5		→	<del>VoidRRC CONNECTION SETUP COMPLETE</del>	
6		→	LOCATION UPDATING REQUEST	"Location Update Type": normal.
6a		SS		<u>The SS starts integrity protection.</u>
7		←	LOCATION UPDATING ACCEPT	Equivalent PLMNs: PLMN 2
8		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<del>After sending this message the SS waits for the disconnection of the main signalling link.</del> <del>The SS releases the RRC connection.</del>
9		→	<del>VoidRRC CONNECTION RELEASE COMPLETE</del>	
10		SS		The following messages shall be sent and received on Cell B. Set the cell type of Cell B to the "Serving cell". (see note)
11		<del>SS</del> →	<del>RRC CONNECTION REQUEST</del>	<del>The SS verifies that the IE "Establishment cause": in the received RRC CONNECTION REQUEST message is set to "Registration".</del>
12		←	<del>VoidRRC CONNECTION SETUP</del>	
13		→	<del>VoidRRC CONNECTION SETUP COMPLETE</del>	
14		→	LOCATION UPDATING REQUEST	"Location Update Type": normal.
14a		SS		<u>The SS starts integrity protection.</u>
15		←	LOCATION UPDATING ACCEPT	Equivalent PLMNs : PLMN 1
16		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<del>After sending this message the SS waits for the disconnection of the main signalling link.</del> <del>The SS releases the RRC connection.</del>
17		→	<del>VoidRRC CONNECTION RELEASE COMPLETE</del>	
18		SS		The following messages shall be sent and received on Cell A. Set the cell type of Cell B to the "non-suitable cell". (see note)
19		<del>SS</del> →	<del>RRC CONNECTION REQUEST</del>	<del>The SS verifies that the IE "Establishment cause": in the received RRC CONNECTION REQUEST message is set to "Registration".</del>
20		←	<del>VoidRRC CONNECTION SETUP</del>	
21		→	<del>VoidRRC CONNECTION SETUP COMPLETE</del>	
22		→	LOCATION UPDATING REQUEST	"Location Update Type": normal.
22a		SS		<u>The SS starts integrity protection.</u>
23		←	LOCATION UPDATING ACCEPT	Equivalent PLMNs : empty
24		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<del>After sending this message the SS waits for the disconnection of the main signalling link.</del> <del>The SS releases the RRC connection.</del>
25		→	<del>VoidRRC CONNECTION RELEASE COMPLETE</del>	



26	SS		Set the cell type of Cell B to the "Serving cell". (see note)
27	SS		The SS shall wait for 7 minutes during which no messages should be received.
NOTE: The definitions for "Serving cell", "Suitable neighbour cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

#### Specific message contents

None.

#### 9.4.7.5 Test requirements

- 1) At step 14 the UE shall perform a normal location updating in Cell B.
- 2) At step 27 the UE shall not perform a normal location updating in Cell B.

CR-Form-v6.1	
<b>CHANGE REQUEST</b>	
#	34.123-1 CR 385 # rev - # Current version: 5.1.1 #
<b>Spec Title:</b>	User Equipment (UE) conformance specification; Part 1: Protocol conformance specification #

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

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

<b>Title:</b>	# CR to TS 34.123-1 [REL-5]; Correction to package 3 SM test case 11.1.1.2.1		
<b>Source:</b>	# Ericsson		
<b>Work item code:</b>	# TEI	<b>Date:</b>	# 2002-10
<b>Category:</b>	# F	<b>Release:</b>	# REL-5
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	# Which RRC procedures to be triggered by the SS should be indicated in the comments column.  In test case 11.1.1.2.1, the SS should respond with lower QoS than the UE requested. However, this needs to be specified more in detail.
<b>Summary of change:</b>	# Test case 11.1.1.2.1: Comments about RRC signalling have been added. Specific message content has been specified for the ACTIVATE PDP CONTEXT REQUEST and ACTIVATE PDP CONTEXT ACCEPT messages.
<b>Consequences if not approved:</b>	# Unclear test case prose.

<b>Clauses affected:</b>	# 11.1.1.2.1		
<b>Other specs affected:</b>	# <input type="checkbox"/> Other core specifications #	<input type="checkbox"/> Test specifications	<input type="checkbox"/> O&M Specifications
<b>Other comments:</b>	# Affects R99,REL-4 and REL-5.  T1S-020894 is a revision of T1S-020789 (correction to cover page)		

### **How to create CRs using this form:**

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## 11.1.1.2.1 QoS accepted by UE

### 11.1.1.2.1.1 Definition

### 11.1.1.2.1.2 Conformance requirement

In order to request a PDP context activation, the UE sends an ACTIVATE PDP CONTEXT REQUEST message to the network, enters the state PDP-ACTIVE-PENDING and starts timer T3380. If the QoS offered by the network is acceptable to UE, then upon receipt of the message ACTIVATE PDP CONTEXT ACCEPT, the UE shall stop timer T3380.

In GSM, the MS shall initiate establishment of the logical link for the LLC SAPI indicated by the network with the offered QoS and selected radio priority level, if no logical link has been already established for that SAPI.

In UMTS, both the network and the MS shall store the LLC SAPI and the radio priority in the PDP context.

### Reference

3GPP TS 24.008 clause 6.1.3.1.1.

### 11.1.1.2.1.3 Test purpose

To test the behaviour of the UE when the SS responds to a PDP context activation request with a lower QoS than that requested.

### 11.1.1.2.1.4 Method of test

#### Initial conditions

##### System Simulator:

1 cell, default parameters.

##### User Equipment:

The UE is in GMM-state "GMM-REGISTERED, normal service" with valid P-TMSI and CKSN.

#### Related ICS/IXIT statements

- PS Supported yes/no
- User setting of Minimum QoS supported yes/no
- Method of setting minimum QoS
- Method of context activation

## Test procedure

The requested QoS and Minimum QoS are set. A context activation is requested by the user. On receipt of the ACTIVATE PDP CONTEXT REQUEST message an ACTIVATE PDP CONTEXT ACCEPT is returned by the SS with QoS lower than the requested but higher than or equal to the minimum. The SS then sends a MODIFY PDP CONTEXT REQUEST message and the UE shall respond with a MODIFY PDP CONTEXT ACCEPT message to confirm the context is active.

## Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1 <a href="#">1a</a>	UE	<a href="#">SS</a>		Initiate a context activation <a href="#">The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Background Call".</a>
2 <a href="#">2a</a> <a href="#">2b</a>	→	<a href="#">SS</a>	ACTIVATE PDP CONTEXT REQUEST	Request a PDP context activation  <a href="#">The SS starts ciphering and integrity protection.</a> <a href="#">The SS establishes the Radio Access Bearer.</a>
3	←		ACTIVATE PDP CONTEXT ACCEPT	Accept a PDP context activation
4	←		MODIFY PDP CONTEXT REQUEST (NETWORK TO UE DIRECTION)	Send a modify request to UE for the activated context
5	→		MODIFY PDP CONTEXT ACCEPT (UE TO NETWORK DIRECTION)	Accept the modification request from network to show context is activated

## Specific message contents

~~None.~~

### [ACTIVATE PDP CONTEXT REQUEST \(step 2\)](#)

<a href="#">Information Element</a>	<a href="#">Value/remark</a>
<a href="#">Requested NSAPI</a>	
<a href="#">Requested LLC SAPI</a>	
<a href="#">Requested QoS</a>	
<a href="#">- Maximum btrate for uplink</a>	
<a href="#">- Maximum btrate for downlink</a>	
<a href="#">Requested PDP address</a>	
<a href="#">Access Point Name</a>	<a href="#">Not checked</a>
<a href="#">Protocol configuration options</a>	<a href="#">Not checked</a>

ACTIVATE PDP CONTEXT ACCEPT (step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>Negotiated NSAPI</u>	
<u>Negotiated LLC SAPI</u>	
<u>Negotiated QoS</u>	
<u>- Maximum btrate for uplink</u>	<u>Set to a lower value than received as the corresponding field in the ACTIVATE PDP CONTEXT REQUEST message received from the UE</u>
<u>- Maximum btrate for downlink</u>	<u>Set to a lower value than received as the corresponding field in the ACTIVATE PDP CONTEXT REQUEST message received from the UE</u>
<u>Radio Priority</u>	
<u>PDP address</u>	
<u>Protocol configuration options</u>	<u>Not present</u>
<u>Packet flow identifier</u>	

11.1.1.2.1.5 Test requirements

To pass the test UE shall:

- when the SS responds to a PDP context activation request, initiated by the UE, with the QoS lower than the requested but higher than or equal to the minimum, the UE shall complete the PDP context activation procedure.
- to see if the PDP context activation was successful, SS shall request PDP context modification and UE shall accept it.

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020847

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020895

CR-Form-v7

## CHANGE REQUEST

# **34.123-1 CR 386** # rev **-** # Current version: **5.1.1** #

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

<b>Title:</b>	# CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.1.2 SMS mobile originated				
<b>Source:</b>	# Ericsson				
<b>Work item code:</b>	# TEI	<b>Date:</b>	# 15/10/2002		
<b>Category:</b>	# <b>F</b>	<b>Release:</b>	# REL-5		
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)		

<b>Reason for change:</b>	# Some comments are missing in the expected sequence table.  Some test requirements are incorrect according to the expected sequence table.  Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in order to be known by the TTCN implementor.
<b>Summary of change:</b>	# The 16.1.2 section has been corrected following the reason for change of this CR.  Test requirements section, test procedure and expected sequence have been corrected.  The current CR also includes the proposed changes to 16.1.2 defined by T1S-020603; Related ICS/IXIT Statements and Test requirements -partly-.
<b>Consequences if not approved:</b>	# The test cannot test the UE correctly.

<b>Clauses affected:</b>	# 16.1.2				
<b>Other specs</b>	# <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table> Other core specifications #	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N				
<input type="checkbox"/>	<input checked="" type="checkbox"/>				

<b>affected:</b>	<input checked="" type="checkbox"/>	Test specifications
	<input checked="" type="checkbox"/>	O&M Specifications
<b>Other comments:</b>	⌘	Affects R99, Rel-4 and Rel-5 test cases.
		T1S-020895 is a revision of T1S-020792 (correction to cover page)

### 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.



## 16.1.2 SMS mobile originated

16.1.2.1 Definition

16.1.2.2 Conformance requirements

An active UE shall be able to submit short message TPDU (SMS-SUBMIT) at any time, independently of whether or not there is a speech or data call in progress.

### Reference

3GPP TS 23.040 clause 3.1.

16.1.2.3 Test purpose

To verify that the UE is able to correctly send a short message where the SMS is provided for the point to point service.

16.1.2.4 Method of test

### Initial Conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in MM-state "Idle, updated";
  - the SMS message storage shall be empty.

### Related ICS/IXIT Statements

Support for Short message MO/PP.

Support for state U10 of call control.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Maximum length (characters) of a mobile originated short message.

[Maximum number of retransmissions of an unacknowledged CP-DATA message.](#)

### Test procedure

- a) The UE shall be set up to send an SM to the SS. [The UE establishes successfully an RRC connection](#)~~The SS responds to RRC CONNECTION REQUEST by allocating a CCCH. The SS receives RRC CONNECTION SETUP COMPLETE on DCCH and then performs the authentication.~~
- b) [The SS performs authentication and after that, the SS starts integrity protection](#)~~After receiving SECURITY MODE COMMAND UE shall send SECURITY COMMAND COMPLETE.~~
- c) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message.
- d) The SS sends a channel release message to the UE.
- e) Steps a) and b) are repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 5 s after the last CP-DATA retransmission the

UE initiates channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions.

- f) Steps a) and b) are repeated. On receipt of the CP-DATA from the UE the SS sends a CP-ERROR message within TC1M containing a "Network Failure" cause. Then the SS initiates channel release.
- g) A data or speech call is established with the SS and the state U10 of call control is entered. The UE is set up to send an SM to the SS. After the reception of the CM SERVICE REQUEST, the SS sends a CM SERVICE ACCEPT message.
- h) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message. Then the SS sends a channel release message to the UE.
- i) Step g) is repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions (during a call in progress).
- j) (void)
- k) The UE is set up to send an SM to the SS. On receipt of the CM SERVICE REQUEST the SS sends a CM SERVICE REJECT message with the reject cause set to "Service Option not supported" or "Service Option temporarily out of order". After 5 s the SS initiates channel release.

#### Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE	←	SYSTEM INFORMATION	The UE is set up to send an SM <u>BCCH</u>
2	SS	→	RRC CONNECTION REQUEST	<u>CCCH</u> The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
3		←	(void)RRC CONNECTION SETUP	<u>CCCH</u>
4		→	(void)RRC CONNECTION SETUP COMPLETE	<u>DCCH</u>
5		-->	CM SERVICE REQUEST	<u>CM service type set to "short message transfer"</u>
6		<--	AUTHENTICATION REQUEST	
7		-->	AUTHENTICATION RESPONSE	
8	SS	←	SECURITY MODE COMMAND	<u>The SS starts integrity protection</u>
9		→	(void)SECURITY MODE COMPLETE	
10		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
11		<--	CP-ACK	Sent within TC1M after step 10
12		<--	CP-DATA	Contains RP-ACK RPDU
13		SS		Waits max 25 s for CP-ACK
14		-->	CP-ACK	
15	SS	←	RRC CONNECTION RELEASE	<u>The SS releases the RRC connection-is released.</u>
16	UE	→	RRC CONNECTION RELEASE COMPLETE	<u>The UE is set up to send an SM</u>
17	SS	←	SYSTEM INFORMATION	<u>BCCH</u> The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
18		→	(void)RRC CONNECTION REQUEST	<u>CCCH</u>
19		←	(void)RRC CONNECTION SETUP	<u>CCCH</u>
20		→	(void)RRC CONNECTION SETUP COMPLETE	<u>DCCH</u>
21			(void)	
22		-->	CM SERVICE REQUEST	<u>CM service type set to "short message transfer"</u>
23		<--	AUTHENTICATION REQUEST	
24		-->	AUTHENTICATION RESPONSE	
25		<--	SECURITY MODE COMMAND	
26		-->	SECURITY MODE COMPLETE	
27		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
28		SS		SS configured not to send CP-ACK

Step	Direction		Message	Comments
	UE	SS		
29	-->		CP-DATA	Retransmitted CP-DATA message within twice TC1M after step 27
30	UE			Depending on the maximum number of CP-DATA retransmissions implemented, step 29 may be repeated. The maximum number of retransmissions may however not exceed three.
30a	<del>UE</del>	<del>SS</del>		<del>The SS releases the RRC connection</del> <del>The UE aborts the RRC connection</del>
31			(void)	
32	UE		(void)	The UE is set up to send an SM
33	<del>SS</del>	<del>←</del>	<del>SYSTEM INFORMATION</del>	<del>BCCH</del> The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
34		→	<del>(void) RRC CONNECTION REQUEST</del>	<del>CGCH</del>
35		←	<del>(void) RRC CONNECTION SETUP</del>	<del>CCCH</del>
36		→	<del>(void) RRC CONNECTION SETUP COMPLETE</del>	<del>DCCH</del>
37	-->		CM SERVICE REQUEST	CM service type set to "short message transfer"
38	<--		AUTHENTICATION REQUEST	
39	-->		AUTHENTICATION RESPONSE	
40	<del>←</del>	<del>SS</del>	<del>SECURITY MODE COMMAND</del>	The SS starts integrity protection
41		→	<del>(void) SECURITY MODE COMPLETE</del>	
42	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
43	<--		CP-ERROR	Sent within TC1M containing "Network Failure" cause.
44	<del>←</del>	<del>SS</del>	<del>RRC CONNECTION RELEASE</del>	<del>The SS releases the RRC connection</del> <del>CONNECTION is released.</del>
45		→	<del>(void) RRC CONNECTION RELEASE COMPLETE</del>	
46	SS			A data or speech call is established on a DTCH and the state U10 of call control is entered.
47	UE			The UE is set up to send an SM
47a	SS			The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
48	-->		CM SERVICE REQUEST	CM service type set to "short message "
49	<--		CM SERVICE ACCEPT	
50	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
51	<--		CP-ACK	Sent within TC1M after step 50
52	<--		CP-DATA	Contains RP-ACK RPDU
53	SS			Waits max 25 s for CP-ACK
54	-->		CP-ACK	
55	<del>←</del>	<del>SS</del>	<del>RRC CONNECTION RELEASE</del>	<del>The SS releases the RRC connection</del> <del>CONNECTION is released.</del>
56		→	<del>(void) RRC CONNECTION RELEASE COMPLETE</del>	
57	SS			A data or speech call is established on a DTCH and the state U10 of call control is entered.
57a	UE			The UE is set up to send an SM
57b	SS			The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
58	-->		CM SERVICE REQUEST	CM service type set to "short message <u>transfer</u> "
59	<--		CM SERVICE ACCEPT	
60	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
61	SS			SS configured not to send CP-ACK
62	-->		CP-DATA	Transmitted CP-DATA message within twice TC1M after step 60
63	UE			Depending on the maximum number of CP-DATA retransmissions implemented, step 62 may be repeated. The maximum number of retransmissions may however not exceed three.

Step	Direction		Message	Comments
	UE	SS		
64		←SS	RRC CONNECTION RELEASE	The SS releases the RRC connection. The RRC connection is released after a duration of TC1m + 15 s after the last CP-DATA retransmission.
65		→	(void) RRC CONNECTION RELEASE COMPLETE	
66-78			(void)	
79	UE	→	RRC CONNECTION REQUEST	The UE is set up to send an SM
80	SS	←	RRC CONNECTION SETUP	The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
81		→	(void) RRC CONNECTION SETUP COMPLETE	
82		-->	CM SERVICE REQUEST	CM service type set to "short message transfer"
83		<--	CM SERVICE REJ	Reject cause set to "Service Option not supported" or "Service Option temporarily out of order"
84			(void)	
85		←SS	RRC CONNECTION RELEASE	The SS releases the RRC connection. Sent 5 s after CM SERVICE REJ
86		→	(void) RRC CONNECTION RELEASE COMPLETE	
NOTE: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.				

### Specific Message Contents

#### SMS SUBMIT TPDU

Information element	Comment Value
TP-UDL TP-UD (140 octets max)	as applicable maximum number of characters (text of message) as defined by the manufacturer (see ICS/IXIT)

#### 16.1.2.5 Test requirements

After step ~~109~~ UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 27 UE shall retransmit a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

~~After step 44 UE shall send the RRC CONNECTION RELEASE COMPLETE.~~

After step ~~5049~~ UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step ~~6260~~ UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step ~~8583~~ UE shall not send any CP-DATA.

<End of modified text>

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020848

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020896

CR-Form-v7

## CHANGE REQUEST

⌘ **34.123-1 CR 387** ⌘ rev **-** ⌘ Current version: **5.1.1** ⌘

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.1.9 Multiple SMS mobile originated		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 23/09/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

**Reason for change:** ⌘ The requirements regarding Multiple SMS MO defined in TS 24.011 section 5.4 states that the MS shall transmit a CM SERVICE REQUEST for the new CM connection before the final CP-ACK for the old MM connection is transmitted and that CP-ACK shall be transmitted before the first CP-DATA on the new MM connection. In that way, it is totally irrelevant whether the CP-ACK message for the previous SMS, which belongs to the old MM connection, is sent before or after the CM SERVICE ACCEPT message is received. The final CP-ACK sent by the UE is only specified in reference to the first CP-DATA on the new MM connection, not in reference to the network response to CM SERVICE REQUEST.

At present, 16.1.9 is not fully compliant with the core specification (TS 24.011) stating an expected sequence where it is mandated to send the CP-ACK for the old MM connection before the CM SERVICE ACCEPT message is received. The section is currently not taking into account that an UE can send the CP-ACK before or after the CM SERVICE ACCEPT according to standards.

Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in order to be known by the TTCN implementor.

The core specification for Multiple SMS (TS 24.011 section 5.4) is different from

<b>Rel-4 onwards.</b>	
<b>Summary of change:</b>	<p>⌘ The 16.1.9 section has been corrected indicating that the CP-ACK for the old MM connection could be received either before or after the reception of the CM SERVICE ACCEPT message.</p> <p>The expected sequences in 16.1.9.1.4 and 16.1.9.2.2 have been corrected.</p> <p>In 16.1.9.1.4 bullets a) and g) are clarified and corrected. Furthermore, bullets e) and f) are made void.</p> <p>The current CR also includes the proposed changes to 16.1.9 defined by T1S-020603.</p> <p><b>For test cases 16.1.9.1 and 16.1.9.2: Added information in conformance requirement, method of test and test requirement that current specification only covers the R99 case and that REL-4 and later releases are for FFS.</b></p>
<b>Consequences if not approved:</b>	<p>⌘ The current specification text does not describe all possible expected sequences for a Multiple SMS MO scenario. This results in possible undesirable effects for example, an UE following the standards can fail the test.</p> <p>Furthermore, this conflicts with requirements on Multiple SMS MO stated in TS 24.011 (Section 5.4). Thus, TS 34.123-1 cannot be compliant with the core specifications.</p>

<b>Clauses affected:</b>	⌘ 16.1.9.1.4 and 16.1.9.2.2								
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; vertical-align: middle;"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </tbody> </table> <span style="display: inline-block; vertical-align: middle; margin-left: 10px;">           Other core specifications ⌘            Test specifications ⌘            O&amp;M Specifications ⌘         </span>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
<b>Other comments:</b>	⌘ Affects only R99 test cases. The core specification for Multiple SMS (TS 24.011 section 5.4) is different from Rel-4 onwards.								

**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.

## 16.1.9 Multiple SMS mobile originated

### 16.1.9.1 UE in idle mode

This test applies to UE supporting the ability of sending multiple short messages on the same RRC connection when there is no call in progress.

#### 16.1.9.1.1 Definition

#### 16.1.9.1.2 Conformance requirements

##### Release 1999:

When the UE chooses to use the same RRC connection to send another short message or a memory available notification, then:

- the UE shall transmit a CM SERVICE REQUEST for the new CM connection before the final CP-ACK (e.g. the one that acknowledges the CP-DATA that carried the RP-ACK) for the old MM connection is transmitted;
- before transmission of the first CP-DATA on the new MM connection, the UE shall transmit the CP-ACK for the old MM connection;
- the Transaction Identifier used on the new MM connection shall be different to that used on the old MM connection; and
- the UE shall not initiate establishment of the new MM connection before the final CP-DATA (e.g. the one carrying the RP-ACK) has been received.

##### References

- 3GPP TS 23.040 clause 3.1.
- 3GPP TS 24.011 clause 5.4.

##### Release 4 or later release:

##### FFS

#### 16.1.9.1.3 Test purpose

To verify that the UE is able to correctly send multiple short messages on the same RRC connection when using a DCCH.

#### 16.1.9.1.4 Method of test

##### Release 4 or later release:

##### FFS

##### Release 1999:

##### Initial conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in MM-state "Idle, updated";
  - the SMS message storage shall be empty.

## Related ICS/IXIT statements

Support for multiple short message MO/PP on the same RRC connection.

Description of how to enter multiple SMS.

Whether SMS messages are stored in the USIM and/or the ME.

## Foreseen final state of UE

Idle, updated.

## Test procedure

- a) The UE shall be set up to send 3 short messages as multiple SM to the SS. The UE establishes successfully an RRC connection~~The SS answers correctly to RRC CONNECTION REQUEST on CCCH~~ and then the SS performs the authentication.
- b) The SS starts integrity protection~~After receiving SECURITY MODE COMMAND UE shall send SECURITY COMMAND COMPLETE.~~
- c) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message followed by a CP-DATA message containing the correct RP-ACK RPDU. The Transaction Identifier used on this MM connection is 'x'.
- d) The UE shall transmit a CM SERVICE REQUEST for the new CM connection (for the second short message) before the final CP-ACK (the one that acknowledges the CP-DATA that carried the RP-ACK before) for the old MM connection is transmitted. The UE shall not initiate establishment of the new MM connection before the final CP-DATA (i.e. the one carrying the RP-ACK for the first short message) has been received. Before transmission of the first CP-DATA on the new MM connection, the UE shall transmit the CP-ACK for the old MM connection. The Transaction Identifier used on the new MM connection shall be y, where  $y < x$  (see procedure c)). Thereby, the UE can transmit the final CP-ACK after either the sending of the CM SERVICE REQUEST for the new CM connection or the reception of the CM SERVICE ACCEPT for the new CM connection, thus two expected sequences for the transmission of the final CP-ACK are possible which are specified in the expected sequence table like A and B respectively.
- e) Void.~~The SS waits a maximum of 5 s after receiving the CM SERVICE REQUEST for the CP-ACK message from the UE.~~
- f) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message followed by a CP-DATA message containing the correct RP-ACK RPDU.
- g) The UE shall transmit a CM SERVICE REQUEST for the new CM connection (for the third short message) before the final CP-ACK (the one that acknowledges the CP-DATA that carried the RP-ACK before) for the old MM connection is transmitted. Before transmission of the first CP-DATA on the new MM connection, the UE shall transmit the CP-ACK for the old MM connection. The Transaction Identifier used on the new MM connection shall be z, where  $z < y$  (see procedure d)). The UE shall not initiate establishment of the new MM connection before the final CP-DATA (i.e. the one carrying the RP-ACK for the second short message) has been received. Thereby, the UE can transmit the final CP-ACK after either the sending of the CM SERVICE REQUEST for the new CM connection or the reception of the CM SERVICE ACCEPT for the new CM connection, thus two expected sequences for the transmission of the final CP-ACK are possible which are specified in the expected sequence table like A and B respectively.
- h) Void.~~The SS waits a maximum of 5 s after receiving the CM SERVICE REQUEST for the CP-ACK message from the UE.~~
- i) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message followed by a CP-DATA message containing the correct RP-ACK RPDU.
- j) The SS waits a maximum of 5 s after sending CP-DATA for the CP-ACK message from the UE.
- k) The SS sends a RRC CONNECTION RELEASE to the UE.



## Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE ←		<del>SYSTEM INFORMATION</del>	<del>The UE is set up to send 3 short messages as multiple SM BCCH</del>
2		SS →	<del>RRC CONNECTION REQUEST</del>	<del>CGCH The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".</del>
3		←	<del>(void) RRC CONNECTION SETUP</del>	<del>CCCH</del>
4		→	<del>(void) RRC CONNECTION SETUP COMPLETE</del>	<del>DCCH</del>
5		-->	CM SERVICE REQUEST	CM service type set to "Short message transfer".
6		<--	AUTHENTICATION REQUEST	
7		-->	AUTHENTICATION RESPONSE	
8	SS ←		<del>SECURITY MODE COMMAND</del>	<del>The SS starts integrity protection</del>
9		→	<del>SECURITY MODE COMPLETE</del>	
10		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU). The Transaction Identifier used in steps 10, 11, 12 and 14 shall be x.
11		<--	CP-ACK	
12		<--	CP-DATA	Contains RP-ACK RPDU
13		-->	CM SERVICE REQUEST	CM service type set to "Short message transfer".
<u>A14</u>		-->	CP-ACK	<del>The one that acknowledges the CP-DATA which carried the RP-ACK RPDU. (See note 2) Shall be sent within 5 s of step 13</del>
<u>A15</u>		<--	CM SERVICE ACCEPT	
<u>B14</u> <u>B15</u>	<-- -->		<u>CM SERVICE ACCEPT</u> <u>CP-ACK</u>	<del>The one that acknowledges the CP-DATA which carried the RP-ACK RPDU. (See note 2)</del>
16		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU). The Transaction Identifier used in steps 16, 17, 18 and 20 shall be y where y <> x (see step 10).
17		<--	CP-ACK	
18		<--	CP-DATA	Contains RP-ACK RPDU
19		-->	CM SERVICE REQUEST	CM service type set to "Short message transfer".
<u>A20</u>		-->	CP-ACK	<del>The one that acknowledges the CP-DATA which carried the RP-ACK RPDU. (See note 2) Shall be sent within 5 s of step 19</del>
<u>A21</u>		<--	CM SERVICE ACCEPT	
<u>B20</u> <u>B21</u>	<-- -->		<u>CM SERVICE ACCEPT</u> <u>CP-ACK</u>	<del>The one that acknowledges the CP-DATA which carried the RP-ACK RPDU. (See note 2)</del>
22		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU). The Transaction Identifier used in steps 22, 23, 24 and 25 shall be z, where z <> y (see step 16).
23		<--	CP-ACK	
24		<--	CP-DATA	Contains RP-ACK RPDU
25		-->	CP-ACK	Shall be sent within 5 s of step 24
26	SS ←		<del>RRC CONNECTION RELEASE</del>	<del>The SS releases the RRC connection-is released.</del>
27		→	<del>RRC CONNECTION RELEASE COMPLETE</del>	
<u>NOTE 1: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.</u>				
<u>NOTE 2: The CP-ACK for the old MM connection can be received either before or after the reception of the CM SERVICE ACCEPT message.</u>				

## 16.1.9.1.5

## Test requirements

Release 1999:

In step 13 the UE shall transmit a CM SERVICE REQUEST for the new CM connection (for the second short message) before the final CP-ACK for the old MM connection is transmitted.

In step 19 the UE shall transmit a CM SERVICE REQUEST for the new CM connection (for the third short message) before the final CP-ACK for the old MM connection is transmitted.

Release 4 or later release:

FFS

### 16.1.9.2 UE in active mode

This test applies to UE supporting the ability of sending concatenated multiple short messages when there is a call in progress.

16.1.9.2.1 Definition

16.1.9.2.2 Conformance requirements

Release 1999:

When the UE chooses to use the same RRC connection to send another short message or a memory available notification, then:

- the UE shall transmit a CM SERVICE REQUEST for the new CM connection before the final CP-ACK (e.g. the one that acknowledges the CP-DATA that carried the RP-ACK) for the old MM connection is transmitted;
- before transmission of the first CP-DATA on the new MM connection, the UE shall transmit the CP-ACK for the old MM connection;
- the Transaction Identifier used on the new MM connection shall be different to that used on the old MM connection; and
- the UE shall not initiate establishment of the new MM connection before the final CP-DATA (e.g. the one carrying the RP-ACK) has been received.

#### References

- 3GPP TS 23.040 clause 3.1.
- 3GPP TS 24.011 clause 5.4.

Release 4 or later release:

FFS

16.1.9.2.3 Test purpose

To verify that the UE is able to correctly concatenate multiple short messages on the same RRC connection when sent parallel to a call.

16.1.9.2.4 Method of test

Release 4 or later release:

FFS

Release 1999:

#### Initial conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:

- the UE shall be in MM-state "Idle, updated";
- the SMS message storage shall be empty.

#### Related ICS/IXIT statements

Support for multiple short message MO/PP on the same RRC connection.

Description of how to enter multiple SMS.

Support for state U10 of call control.

Whether SMS messages are stored in the USIM and/or the ME.

#### Foreseen final state of UE

Idle, updated.

#### Test procedure

- A data or speech call is established on a DTCH with the SS and the state U10 of call control is entered. The UE is set up to send 3 short messages as multiple SM to the SS. After the reception of the CM SERVICE REQUEST, the SS sends a CM SERVICE ACCEPT message.
- Steps c) to k) of the test procedure in clause 16.1.9.1.4 are repeated.

#### Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		A data or speech call is established on a DTCH and the state U10 of call control is entered.
2		UE		
3	-->		CM SERVICE REQUEST	The UE is set up to send 3 short messages as multiple SM
4	<--		CM SERVICE ACCEPT	Sent in a layer 2 frame on the DCCH. CM service type set to "short message transfer"
7	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU). The Transaction Identifier used in steps 7, 8, 9 and 11 shall be x.
8	<--		CP-ACK	Contains RP-ACK RPDU
9	<--		CP-DATA	
10	-->		CM SERVICE REQUEST	
<a href="#">A11</a>	-->		CP-ACK	<a href="#">The one that acknowledges the CP-DATA which carried the RP-ACK RPDU.</a> <a href="#">(See note 2)</a> <b>Shall be sent within 5 s of step 10</b>
<a href="#">A12</a>	<--		CM SERVICE ACCEPT	
<a href="#">B11</a>	<--		<a href="#">CM SERVICE ACCEPT</a>	<a href="#">The one that acknowledges the CP-DATA which carried the RP-ACK RPDU.</a> <a href="#">(See note 2)</a>
<a href="#">B12</a>	-->		<a href="#">CP-ACK</a>	
13	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU). The Transaction Identifier used in steps 13, 14, 15 and 17 shall be y where y <> x (see step 7).
14	<--		CP-ACK	Contains RP-ACK RPDU
15	<--		CP-DATA	
16	-->		CM SERVICE REQUEST	
<a href="#">A17</a>	-->		CP-ACK	<a href="#">The one that acknowledges the CP-DATA which carried the RP-ACK RPDU.</a> <a href="#">(See note 2)</a> <b>Shall be sent within 5 s of step 16</b>
<a href="#">A18</a>	<--		CM SERVICE ACCEPT	
<a href="#">B17</a>	<--		<a href="#">CM SERVICE ACCEPT</a>	

Step	Direction		Message	Comments
	UE	SS		
<a href="#">B18</a>		-->	<a href="#">CP-ACK</a>	<a href="#">The one that acknowledges the CP-DATA which carried the RP-ACK RPDU. (See note 2)</a>
19		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU). The Transaction Identifier used in steps 19, 20, 21 and 22 shall be z, where z <> y (see step 13).
20		<--	CP-ACK	Contains RP-ACK RPDU Shall be sent within 5 s of step 21 <a href="#">The SS releases the RRC connection</a> <del>is released.</del>
21		<--	CP-DATA	
22		-->	CP-ACK	
23	<a href="#">SS</a>	<del>←</del>	<del>RRC CONNECTION RELEASE</del>	
24		<del>→</del>	<del>(void) RRC CONNECTION RELEASE COMPLETE</del>	
NOTE 1: <a href="#">Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.</a>				
NOTE 2: <a href="#">The CP-ACK for the old MM connection can be received either before or after the reception of the CM SERVICE ACCEPT message.</a>				

#### 16.1.9.2.5 Test requirements

##### [Release 1999:](#)

In step 10 the UE shall transmit a CM SERVICE REQUEST for the new CM connection (for the second short message) before the final CP-ACK for the old MM connection is transmitted.

In step 16 the UE shall transmit a CM SERVICE REQUEST for the new CM connection (for the third short message) before the final CP-ACK for the old MM connection is transmitted.

##### [Release 4 or later release:](#)

##### [EFS](#)

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020849

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020897

CR-Form-v7

## CHANGE REQUEST

⌘ 34.123-1 CR 388 ⌘ rev - ⌘ Current version: 5.1.1 ⌘

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.2.1 SMS mobile terminated		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 15/10/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

**Reason for change:** ⌘ The 16.2.1 test case has the purpose of verifying that an active UE is able to receive an MT SM at any time. The current test makes the indication of an SM arrival mandated. However, in TS 23.040 R99 is clearly stated that upon the receipt of an SM type 0 it is highly recommended that the UE does not indicate the receipt of the type 0 short message to the user and the message is not stored in the (U)SIM or ME. Furthermore, in TS 23.040 Rel-4 and Rel-5 is mandated not to indicate at all the receipt of the type 0 SM to the user and the SM shall neither be stored in the (U)SIM nor ME. The current test case lets the SS send the type 0 SM, so a correction is needed.

Some test requirements are missing and incorrect according to the expected sequence table.

The sentence 'the UE aborts the RRC connection' stated in the expected sequence of the test case is incorrect according to core specs. The abortion of an RRC connection by the UE follows an abnormal case, not a normal case as in the expected sequence of the test case. The normal case is if all MM connections are released by their CM entities, the UE expects the release of the RRC connection by the network. If the RRC connection is no more needed, as it's the case of the test case, then the network will request the RR sublayer to release it.

Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in

		order to be known by the TTCN implementor.								
<b>Summary of change:</b>	⌘	The 16.2.1 section has been corrected following the reason for change of this CR. The expected sequence, test requirements and SMS DELIVER TPDU have been corrected.  The current CR also includes some of the proposed changes to 16.2.1 defined by T1S-020603; Related ICS/IXIT Statements, Reference and Test requirements - partly-.								
<b>Consequences if not approved:</b>	⌘	The test cannot test the UE correctly.								
<b>Clauses affected:</b>	⌘	16.2.1								
<b>Other specs affected:</b>	⌘	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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<b>Other comments:</b>	⌘	Affects R99, Rel-4 and Rel-5 test cases.  T1S-020897 is a revision of T1S-020794 (correction to cover page)								

**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.

## 16.2 Short message service point to point on PS mode

All of test cases in this clause are applied to the UE supported PS mode.

### 16.2.1 SMS mobile terminated

#### 16.2.1.1 Definition

#### 16.2.1.2 Conformance requirements

An active UE shall be able to receive short message TPDU (SMS-DELIVER) at any time, independently of whether or not there is a PDP context in progress. A report will always be returned to the SC, confirming that the UE has received the short message.

#### References

3GPP TS 23.040 clauses 3.1, [9.2.3.16](#).

#### 16.2.1.3 Test purpose

To verify the ability of a UE to receive and decode the SMS where provided for the point to point service.

#### 16.2.1.4 Method of test

#### Initial Conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in GMM-state "GMM-REGISTERED";
  - the SMS message storage shall be empty.

#### Related ICS/IXIT Statements

Support for Short message MT/PP.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Support for session management state "PDP-ACTIVE".

[Maximum number of retransmissions of an unacknowledged CP-DATA message.](#)

#### Test procedure

- a) Mobile terminates establishment of Radio Resource Connection. After the completion of RRC Connection the SS authenticates the UE and activates ciphering.  
  
After the SS receives SECURITY MODE COMPLETE, the SS sends a CP-DATA message. The information element of the CP-DATA message will be RP-DATA RPDU (SMS DELIVER TPDU).
- b) The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.
- c) The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates channel release.

- d) Steps a), b) and c) are repeated but the first CP-DATA message from the UE is not acknowledged. The second CP-DATA message from the UE is acknowledged by a CP-ACK within a time TC1M.
- e) Steps a) and b) are repeated. The SS is configured not to send CP-ACK. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 5 s after the last CP-DATA retransmission the SS then initiates the channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum allowed (3) CP-DATA retransmissions.
- f) The SMS message store shall be cleared manually by the operator.
- g) A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered.

The SS sends a CP-DATA message. The information element of the CP-DATA message will be RP-DATA RPDU (SMS DELIVER TPDU). The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.

- h) The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates channel release. The SMS message store shall be cleared manually by the operator.
- i) Steps g) and h) are repeated but the first CP-DATA message from the UE is not acknowledged. The second CP-DATA message from the UE is acknowledged by a CP-ACK within a time TC1M.
- j) Step g) is repeated. The SS is configured not to send CP-ACK. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates the channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum allowed (3) CP-DATA retransmissions (during PDP context in progress).
- k) A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The PDP context is cleared by the SS with a disconnect message. (The PDP context deactivating is continued in parallel to the following exchange of messages related to SMS).

The SS sends a CP-DATA RPDU (SMS DELIVER TPDU) message. The information element of the CP-DATA message is RP-DATA.

The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.

The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates channel release.

The SMS message store shall be cleared manually by the operator.

- l) A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The PDP context shall be cleared from the UE. (The PDP context deactivating is continued in parallel to the following exchange of messages related to SMS).

The SS sends a CP-DATA message. The information element of the CP-DATA message is RP-DATA RPDU (SMS DELIVER TPDU).

The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.

The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates channel release.

The SMS message store shall be cleared manually by the operator.



## Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1			Mobile terminated establishment of Radio Resource Connection	See 3GPP TS34.108. <a href="#">The IE "Paging cause" in the PAGING TYPE 1 message is set to "Terminating Low Priority Signalling"</a> . The SS verifies that the IE <a href="#">"Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Terminating Low Priority Signalling"</a> .
2	-->		SERVICE REQUEST	
3	<--		AUTHENTICATION AND CIPHERING REQUEST	
4	-->		AUTHENTICATION AND CIPHERING RESPONSE	
5	<del>←SS</del>		<del>SECURITY MODE COMMAND</del>	<a href="#">The SS starts integrity protection</a>
6	<del>→</del>		<del>(void)SECURITY MODE COMPLETE</del>	
7	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
8	SS			Waits max 25 s for CP-ACK
9	-->		CP-ACK	
10	SS			Waits max 60 s for RP-ACK RPDU
11	-->		CP-DATA	Contains RP-ACK RPDU
12	<--		CP-ACK	
13	UE			There should be no further CP-DATA messages until the UE aborts the RRC connection (disconnection of layer 2). The UE shall indicate that an SM has arrived.
14	UE			
15			Mobile terminated establishment of Radio Resource Connection	See 3GPP TS34.108. <a href="#">The IE "Paging cause" in the PAGING TYPE 1 message is set to "Terminating Low Priority Signalling"</a> . The SS verifies that the IE <a href="#">"Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Terminating Low Priority Signalling"</a> .
16	-->		SERVICE REQUEST	
17	<--		AUTHENTICATION AND CIPHERING REQUEST	
18	-->		AUTHENTICATION AND CIPHERING RESPONSE	
19	<del>←SS</del>		<del>SECURITY MODE COMMAND</del>	<a href="#">The SS starts integrity protection</a>
20	<del>→</del>		<del>(void)SECURITY MODE COMPLETE</del>	
21	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
22	SS			Waits max 25 s for CP-ACK
23	-->		CP-ACK	
24	SS			Waits max 60 s for RP-ACK RPDU
25	-->		CP-DATA	First CP-DATA from UE, contains RP-ACK RPDU
26	SS			First CP-DATA message not acknowledged by SS
27	-->		CP-DATA	Retransmitted CP-DATA from UE within twice TC1M, after step 25, contains RP-ACK RPDU
28	<--		CP-ACK	Second CP_DATA message is acknowledged
29	UE			There should be no further CP-DATA messages until the UE aborts the RRC connection
30	UE			The UE shall indicate that an SM has arrived.
31			Mobile terminated establishment of Radio Resource Connection	See 3GPP TS34.108. <a href="#">The IE "Paging cause" in the PAGING TYPE 1 message is set to "Terminating Low Priority Signalling"</a> . The SS verifies that the IE <a href="#">"Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Terminating Low Priority Signalling"</a> .
32	-->		SERVICE REQUEST	
33	<--		AUTHENTICATION AND CIPHERING REQUEST	
34	-->		AUTHENTICATION AND CIPHERING RESPONSE	
35	<del>SS←</del>		<del>SECURITY MODE COMMAND</del>	<a href="#">The SS starts integrity protection</a>
36	<del>→</del>		<del>(void)SECURITY MODE COMPLETE</del>	
37	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)

Step	Direction		Message	Comments
	UE	SS		
38		SS		Waits max 25 s for CP-ACK
39		-->	CP-ACK	
40		SS		Waits max 60 s for RP-ACK RPDU
41		-->	CP-DATA	Contains RP-ACK RPDU
42		SS		First CP-DATA message not acknowledged by SS
43			CP-DATA	Retransmitted CP-DATA from UE within twice TC1M after step 41, contains RP-ACK RPDU
44		SS		Retransmitted CP-DATA message not acknowledged by SS
45		UE		Depending upon the maximum number of CP-DATA retransmissions implemented, step 43 and 44 may be repeated.
46		<u>SS</u> ←	<del>RRC CONNECTION RELEASE</del>	<u>The SS releases the RRC connection.</u> The RRC connection is released after a duration of TC1M + 5 s after the last CP-DATA retransmission.
47		-->	<del>RRC CONNECTION RELEASE COMPLETE</del>	
48		UE		The UE shall indicate that an SM has arrived.
49		<del>SS</del> <u>UE</u>		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered.
50			(void)	
51		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
52		SS		Waits max 25 s for CP-ACK
53		-->	CP-ACK	
54		SS		Waits max 60 s for RP-ACK RPDU
55		-->	CP-DATA	Contains RP-ACK RPDU
56		<--	CP-ACK	
57		<--	DEACTIVATE PDP CONTEXT REQUEST	Deactivates an existing PDP context.
58		-->	DEACTIVATE PDP CONTEXT ACCEPT	
59		UE		The UE shall indicate that an SM has arrived.
60		UE		Clear the SMS message store
61		<del>SS</del> <u>UE</u>		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered.
62			(void)	
63		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
64		SS		Waits max 25 s for CP-ACK
65		-->	CP-ACK	
66		SS		Waits max 60 s for RP-ACK RPDU
67		-->	CP-DATA	First CP-DATA from UE, contains RP-ACK RPDU
68		SS		First CP-DATA message not acknowledged by SS
69		-->	CP-DATA	Retransmitted CP-DATA message within twice TC1M after step 67, contains RP-ACK RPDU
70		<--	CP-ACK	Second CP-DATA message is acknowledged
71		<--	DEACTIVATE PDP CONTEXT REQUEST	Deactivates an existing PDP context.
72		-->	DEACTIVATE PDP CONTEXT ACCEPT	
73		<del>UE</del> <u>SS</u>		<u>The SS releases the RRC connection</u> <del>There should be no further CP-DATA messages until the UE aborts the RRC connection</del>
74		UE		The UE shall indicate that an SM has arrived.
75		UE		Clear the SMS message store
76		<del>SS</del> <u>UE</u>		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered.
77			(void)	
78		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
79		SS		Waits max 25 s for CP-ACK
80		-->	CP-ACK	
81		SS		Waits max 60 s for RP-ACK RPDU
82		-->	CP-DATA	First CP-DATA from UE, contains RP-ACK RPDU
83		SS		First CP-DATA message not acknowledged by SS
84		-->	CP-DATA	Transmitted CP-DATA message within twice TC1M after step 82, contains RP-ACK RPDU

Step	Direction		Message	Comments
	UE	SS		
85		SS		Retransmitted CP-DATA message not acknowledged by SS
86		UE		Depending on the maximum number of CP-DATA retransmissions implemented, step 83-84 may be repeated. The maximum number of retransmissions may however not exceed three.
87		<del>←SS</del>	<del>RRC CONNECTION RELEASE</del>	<del>The SS releases the RRC connection. The RRC connection</del> <del>CONNECTION</del> <del>is released after a duration of TC1M + 15 s after the last CP-DATA retransmission.</del>
88		<del>→</del>	<del>(void)RRC CONNECTION RELEASE COMPLETE</del>	
89		UE		The UE shall indicate that an SM has arrived.
90		UE		Clear the SMS message store
91		SS		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered.
92			(void)	
93			(void)	
94			CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
94A			DEACTIVATE PDP CONTEXT REQUEST	The PDP context is deactivated by the SS. The PDP context deactivating is continued in parallel to the following exchange of messages related to SMS.
94B			DEACTIVATE PDP CONTEXT ACCEPT	This message may be transmitted after this step timing.
95		SS		Waits max 25 s for CP-ACK
96			CP-ACK	
97		SS		Waits max 60 s for RP-ACK RPDU
98			CP-DATA	Contains RP-ACK RPDU
99			CP-ACK	
100		<del>UESS</del>		<del>The SS releases the RRC connection</del> <del>There should be no further CP-DATA messages until the UE aborts the RRC connection.</del>
101		UE		The UE shall indicate that an SM has arrived.
102		UE		Clear the SMS message store
103		<del>SSUE</del>		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered.
104			(void)	
105			DEACTIVATE PDP CONTEXT REQUEST	The PDP context is deactivated by the UE. The PDP context deactivation is continued in parallel to the following
106			CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
107			DEACTIVATE PDP CONTEXT ACCEPT	
108			CP-ACK	shall be sent before 25 s after the start of step 106
109		SS		Waits max 60 s for RP-ACK RPDU
110			CP-DATA	Contains RP-ACK RPDU
111			CP-ACK	
112		<del>UESS</del>		<del>The SS releases the RRC connection</del> <del>There should be no further CP-DATA messages until the UE aborts the RRC connection.</del>
113		UE		The UE shall indicate that an SM has arrived.
114		UE		Clear the SMS message store

NOTE: Time values for SS wait time are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.

## Specific Message Contents

SMS DELIVER TPDU ([not containing a type 0 message](#))

Information element	Comment Value
<a href="#">TP-PID</a>	<a href="#">Different from Type 0: "01000000"B</a>
TP-UJDL	160
TP-UD (140 octets)	text of message (160 characters)
NOTE: The 160 characters in TP-UD shall include at least one occurrence of each character in the default alphabet (see 3GPP TS 23.038, clause 6.2.1).	

## 16.2.1.5 Test requirements

After step 7 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 14 UE shall indicate that an SM has arrived.](#)

After step ~~27~~<sup>25</sup> UE shall retransmit CP-DATA containing RP-ACK within twice TC1M.

After step 30 UE shall indicate that an SM has arrived.

After step 43 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 48 UE shall indicate that an SM has arrived.

After step 51 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 59 UE shall indicate that an SM has arrived.](#)

After step ~~69~~<sup>67</sup> UE shall retransmit CP-DATA containing RP-ACK within twice TC1M.

After step ~~74~~<sup>3</sup> UE shall indicate that an SM has arrived.

After step ~~84~~<sup>78</sup> UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 89 UE shall indicate that an SM has arrived.

After step 94 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 101 UE shall indicate that an SM has arrived.](#)

After step 106 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 113 UE shall indicate that an SM has arrived.](#)

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020850

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020898

CR-Form-v7

## CHANGE REQUEST

⌘ 34.123-1 CR 389 ⌘ rev - ⌘ Current version: 5.1.1 ⌘

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.2.2 SMS mobile originated		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 15/10/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Some comments are missing in the expected sequence table.  Some test requirements are incorrect according to the expected sequence table.  Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in order to be known by the TTCN implementor.
<b>Summary of change:</b>	⌘ The 16.1.2 section has been corrected following the reason for change of this CR.  Test requirements section, test procedure and expected sequence have been corrected.  The current CR also includes some of the proposed changes to 16.2.2 defined by T1S-020603; Related ICS/IXIT Statements, Reference, Expected sequence and Test requirements -partly-.
<b>Consequences if not approved:</b>	⌘ The test cannot test the UE correctly

<b>Clauses affected:</b>	⌘ 16.2.2
--------------------------	----------

<b>Other specs affected:</b>		<b>Y</b>	<b>N</b>		
	⌘	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	
<b>Other comments:</b>	⌘	Affects R99, Rel-4 and Rel-5 test cases.			
		T1S-020898 is a revision of T1S-020796 (correction to cover page)			

**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.

## 16.2.2 SMS mobile originated

### 16.2.2.1 Definition

### 16.2.2.2 Conformance requirements

An active UE shall be able to submit short message TPDU (SMS-SUBMIT) at any time, independently of whether or not there is a PDP context in progress.

### References

3GPP TS 23.040 clause 3.1, [9.2.3.16](#).

### 16.2.2.3 Test purpose

To verify that the UE is able to correctly send a short message where the SMS is provided for the point to point service.

### 16.2.2.4 Method of test

#### Initial Conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in GMM-state "GMM-REGISTERED";
  - the SMS message storage shall be empty.

#### Related ICS/IXIT Statements

Support for Short message MO/PP.

Support for state PDP-ACTIVE of session management.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Maximum length (characters) of a mobile originated short message.

[Maximum number of retransmissions of an unacknowledged CP-DATA message.](#)

#### Test procedure

- a) The UE shall be set up to send an SM to the SS. [The UE establishes successfully an RRC connection](#)~~The SS responds to RRC CONNECTION REQUEST by allocating a CCCH. The SS receives RRC CONNECTION SETUP COMPLETE on DCCH and then performs the authentication.~~
- b) [The SS performs authentication and after that, the SS starts integrity protection](#)~~After receiving SECURITY MODE COMMAND UE shall send SECURITY COMMAND COMPLETE.~~
- c) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message.
- d) The SS sends a channel release message to the UE.
- e) Steps a) and b) are repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 5 s after the last CP-DATA retransmission the

SS initiates channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions.

- f) Steps a) and b) are repeated. On receipt of the CP-DATA from the UE the SS sends a CP-ERROR message within TC1M containing a "Network Failure" cause. Then the SS initiates channel release.
- g) A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM to the SS.
- h) The SS responds to the CP-DATA containing RP-DATA RPDU (SMS SUBMIT TPDU) from the UE with a CP-ACK message within TC1M followed by a CP-DATA message containing the correct RP-ACK RPDU. The SS waits a maximum of 25 s for the CP-ACK message. Then the SS sends a channel release message to the UE.
- i) Step g) is repeated. The SS is configured not to send the CP-ACK message. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum CP-DATA retransmissions (during a PDP context in progress).
- j) (void)
- k) The UE is set up to send an SM to the SS. On receipt of the SERVICE REQUEST the SS sends a SERVICE REJECT message with the reject cause set to "GPRS services not allowed". After 5 s the SS initiates channel release.

#### Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE	←	SYSTEM INFORMATION	The UE is set up to send an SM BCCH
2	SS	→	RRC CONNECTION REQUEST	CGCH The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
3		←	(void)RRC CONNECTION SETUP	CCCH
4		→	(void)RRC CONNECTION SETUP COMPLETE	DCCH
5		→	SERVICE REQUEST	
6		←	AUTHENTICATION AND CIPHERING REQUEST	
7		→	AUTHENTICATION AND CIPHERING RESPONSE	
8	SS	←	SECURITY MODE COMMAND	The SS starts integrity protection
9		→	(void)SECURITY MODE COMPLETE	
10		→	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
11		←	CP-ACK	Sent within TC1M after step 10
12		←	CP-DATA	Contains RP-ACK RPDU
13		SS		Waits max 25 s for CP-ACK
14		→	CP-ACK	
15	SS	←	RRC CONNECTION RELEASE	The SS releases the RRC connection <del>is released.</del>
16		→	(void)RRC CONNECTION RELEASE COMPLETE	
17	UE	←	SYSTEM INFORMATION	The UE is set up to send an SM BCCH
18	SS	→	RRC CONNECTION REQUEST	CGCH The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
19		←	(void)RRC CONNECTION SETUP	CCCH
20		→	(void)RRC CONNECTION SETUP COMPLETE	DCCH
21		→	SERVICE REQUEST	
22		←	AUTHENTICATION AND CIPHERING REQUEST	
23		→	AUTHENTICATION AND CIPHERING RESPONSE	
24	SS	←	SECURITY MODE COMMAND	The SS starts integrity protection
25		→	(void)SECURITY MODE COMPLETE	
26		→	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)



Step	Direction		Message	Comments
	UE	SS		
27		SS		SS configured not to send CP-ACK
28		-->	CP-DATA	Retransmitted CP-DATA message within twice TC1M after step 26
29		UE		Depending on the maximum number of CP-DATA retransmissions implemented, step 28 may be repeated. The maximum number of retransmissions may however not exceed three.
30		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<u>The SS releases the RRC connection. The RRC connection</u> <del>CONNECTION</del> is released after a duration of TC1M + 5 s after the last CP-DATA retransmission.
31		→	<del>(void)RRC CONNECTION RELEASE COMPLETE</del>	
32		UE←	<del>SYSTEM INFORMATION</del>	<u>BCCH The UE is set up to send an SM</u>
33		<del>SS</del> →	<del>RRC CONNECTION REQUEST</del>	<u>CGCH The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".</u>
34		←	<del>(void)RRC CONNECTION SETUP</del>	<u>CGCH</u>
35		→	<del>(void)RRC CONNECTION SETUP COMPLETE</del>	<u>DCCH</u>
36		-->	SERVICE REQUEST	
37		<--	AUTHENTICATION AND CIPHERING REQUEST	
38		-->	AUTHENTICATION AND CIPHERING RESPONSE	
39		<del>SS</del> ←	<del>SECURITY MODE COMMAND</del>	<u>The SS starts integrity protection</u>
40		→	<del>(void)SECURITY MODE COMPLETE</del>	
41		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
42		<--	CP-ERROR	Sent within TC1M containing "Network Failure" cause.
43		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<u>The SS releases the RRC connection</u> <del>CONNECTION is released.</del>
44		→	<del>(void)RRC CONNECTION RELEASE COMPLETE</del>	
45		UESS		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM
46		UE		
47			(void)	
48			(void)	
49		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
50		<--	CP-ACK	Sent within TC1M after step 49
51		<--	CP-DATA	Contains RP-ACK RPDU
52		SS		Waits max 25 s for CP-ACK
53		-->	CP-ACK	
54		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<u>The SS releases the RRC connection</u> <del>CONNECTION is released.</del>
55		→	<del>(void)RRC CONNECTION RELEASE COMPLETE</del>	
56		UESS		A PDP context is established with the SS and the state PDP-ACTIVE of session management is entered. The UE is set up to send an SM
56a		UE		
57			(void)	
58			(void)	
59		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
60		SS		SS configured not to send CP-ACK
61		-->	CP-DATA	Transmitted CP-DATA message within twice TC1M after step 59
62		UE		Depending on the maximum number of CP-DATA retransmissions implemented, step 61 may be repeated. The maximum number of retransmissions may however not exceed three.
63		<del>SS</del> ←	<del>RRC CONNECTION RELEASE</del>	<u>The SS releases the RRC connection. The RRC connection</u> <del>CONNECTION</del> is released after a duration of TC1m + 15 s after the last CP-DATA retransmission.
64		→	<del>(void)RRC CONNECTION RELEASE COMPLETE</del>	
65-77			(void)	

Step	Direction		Message	Comments
	UE	SS		
78 79	UE → SS ←		RRC CONNECTION REQUEST RRC CONNECTION SETUP	<del>initiate outgoing call</del> The UE is set up to send an SM The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
80 81 82 83 84	→ → ← SS ← →		(void)RRC CONNECTION SETUP COMPLETE SERVICE REQUEST SERVICE REJECT RRC CONNECTION RELEASE (void)RRC CONNECTION RELEASE COMPLETE	Reject cause set to "GPRS services not allowed" The SS releases the RRC connection. The RRC connection is released <del>sent</del> 5 s after SERVICE REJ
NOTE: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.				

### Specific Message Contents

#### SMS SUBMIT TPDU

Information element	Comment Value
TP-UDL TP-UD (140 octets max)	as applicable maximum number of characters (text of message) as defined by the manufacturer (see ICS/IXIT)

#### 16.2.2.5 Test requirements

After step ~~109~~ UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 26 UE shall retransmit a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

~~After step 43 UE shall send the RRC CONNECTION RELEASE COMPLETE.~~

After step ~~49~~~~46~~ UE shall send a CP-DATA containing RP-data. The RP-DATA shall contain SMS SUBMIT TPDU.

After step 61 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 82 UE shall not send CP-DATA.

## CHANGE REQUEST

⌘ **34.123-1 CR 392** ⌘ rev - ⌘ Current version: **5.1.1** ⌘  
**Spec Title:** User Equipment (UE) conformance specification; ⌘  
 Part 1: Protocol conformance specification

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

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

<b>Title:</b>	⌘ Test case for alternative RAB configuration agreed during T1/SIG #25		
<b>Source:</b>	⌘ Nortel Networks		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 28/10/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)	<b>2</b> (GSM Phase 2)	
	<b>A</b> (corresponds to a correction in an earlier release)	<b>R96</b> (Release 1996)	
	<b>B</b> (addition of feature),	<b>R97</b> (Release 1997)	
	<b>C</b> (functional modification of feature)	<b>R98</b> (Release 1998)	
	<b>D</b> (editorial modification)	<b>R99</b> (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<b>REL-4</b> (Release 4)
			<b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ A new channel coding alternative was added to Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH. Therefore, a separate test case needs to be included.
<b>Summary of change:</b>	⌘ Test case 14.2.23a.2 is added.
<b>Consequences if not approved:</b>	⌘ No test defined for this new configuration.

<b>Clauses affected:</b>	⌘
<b>Other specs affected:</b>	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
<b>Other comments:</b>	⌘ Affects R99, REL-4, REL-5

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

## **START OF MODIFICATION**

14.2.23a Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

### **14.2.23a.1 Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / CC**

14.2.23a.1.1 Conformance requirement

See 14.2.4.1.

14.2.23a.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.23a, [for a convolutional coding case](#).

14.2.23a.1.3 Method of test

See 14.1.1 for test procedure.

Uplink TFS:

	<b>TFI</b>	<b>RB5 (8 kbps)</b>	<b>DCCH</b>
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Uplink TFCS:

<b>TFCI</b>	<b>(8 kbps RAB, DCCH)</b>
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

		<b>RB5 (8 kbps)</b>	<b>DCCH</b>
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Downlink TFCS:

<b>TFCI</b>	<b>(8 kbps RAB, DCCH)</b>
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitely tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 312	RB5: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

#### 14.2.23a.1.4 Test requirements

See 14.1.1 for definition of step 10 and step 15.

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

#### 14.2.23a.2 Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / TC

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.2.4.1.23a, for a turbo coding case.

See test case 14.2.23a.1 for test procedure and test requirement.

**END OF MODIFICATION**

**CHANGE REQUEST**

⌘ **34.123-1 CR 393** ⌘ rev **-** ⌘ Current version: **5.1.1** ⌘

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

<b>Title:</b>	⌘ CR to TS34.123-1: Update to clause 13 Emergency call tests as revision of T1S-020759rev1		
<b>Source:</b>	⌘ Nokia, Ericsson		
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 25/10/2002</span>		
<b>Category:</b>	⌘ <b>F</b> <span style="float: right;"><b>Release:</b> ⌘ Rel-5</span>		
	<table border="0"> <tr> <td style="vertical-align: top;"> <p><i>Use one of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </td> <td style="vertical-align: top;"> <p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> </td> </tr> </table>	<p><i>Use one of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p>
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<b>Reason for change:</b>	⌘ Emergency call test cases updated according to 06-2002 release of the core specifications and according to Ericsson comments received on T1 SIG reflector.
<b>Summary of change:</b>	⌘ <ol style="list-style-type: none"> <li>1. Clause 13.1: Applicability reference deleted, editorial changes.</li> <li>2. Clause 13.2: Applicability reference deleted.</li> <li>3. Clause 13.2.1.1.2: Conformance requirement and references updated.</li> <li>4. Clause 13.2.1.1.3: Test purpose updated.</li> <li>5. Clause 13.2.1.1.4: Related ICS/IXIT Statement(s), Test procedure and Expected Sequence updated. RRC messages removed. Added note to expected sequence step 2 to check that establishment cause is set to emergency call.</li> <li>6. Clause 13.2.1.1.5: Test requirements added.</li> <li>7. Clause 13.2.2.1.2: Conformance requirement and references updated.</li> <li>8. Clause 13.2.2.1.3: Test purpose updated.</li> <li>9. Clause 13.2.2.1.4: Related ICS/IXIT Statement(s), Test procedure and Expected Sequence updated. RRC messages removed. Added note to expected sequence step 2 to check that establishment cause is set to emergency call.</li> <li>10. Clause 13.2.2.1.5: Test requirements added.</li> <li>11. Clause 13.2.2.2.2: Conformance requirement and references updated.</li> <li>12. Clause 13.2.2.2.3: Test purpose updated.</li> <li>13. Clause 13.2.2.2.4: Related ICS/IXIT Statement(s), Test procedure and Expected Sequence updated. RRC messages removed. Added note to expected sequence step 2 to check that establishment cause is set to emergency call. Step 10 in Expected sequence not deleted since this is a</li> </ol>

		NAS requirement. Referring text in Test procedure also kept.																		
		14. Clause 13.2.2.2.5: Test requirements added.																		
<b>Consequences if not approved:</b>	⌘	Test cases in clause 13 are not according to the latest core specification.																		
<b>Clauses affected:</b>	⌘	13.1, 13.2, 13.2.1.1.2, 13.2.1.1.3, 13.2.1.1.4, 13.2.1.1.5, 13.2.2.1.2, 13.2.2.1.3, 13.2.2.1.4, 13.2.2.1.5, 13.2.2.2.2, 13.2.2.2.3, 13.2.2.2.4, 13.2.2.2.5																		
<b>Other specs affected:</b>	⌘	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> </table>	Y	N		X	X			X	<table> <tr> <td>Other core specifications</td> <td>⌘</td> <td></td> </tr> <tr> <td>Test specifications</td> <td></td> <td>34.123-3</td> </tr> <tr> <td>O&amp;M Specifications</td> <td></td> <td></td> </tr> </table>	Other core specifications	⌘		Test specifications		34.123-3	O&M Specifications		
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Test specifications		34.123-3																		
O&M Specifications																				
<b>Other comments:</b>	⌘	24.008 V3.12.0 (2002-06) used, affects R99, REL-4, REL-5																		

**How to create CRs using this form:**

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

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



## 13 General Tests

### 13.1 Emergency call / general

In this clause, the emergency call service is tested for user equipment that support Emergency speech call in the following cases:

- emergency call initiated in the MM idle state with authentication and [with security mode procedure applied](#);
- emergency call initiated in the MM idle, no IMSI state (hence without authentication and without security [mode procedure applied](#)), the network accepting the call;
- emergency call initiated in the MM idle, no IMSI state (hence without authentication and without security [mode procedure applied](#)), the network rejecting the call.

~~These tests on emergency calls are only applicable to an UE supporting Emergency speech call.~~

### 13.2 Emergency call

Emergency call establishment can be initiated by an UE whether location updating has been successful or not and whether a USIM is inserted into the UE or not; but only if the UE is equipped for speech.

If the procedures tested in this clause are not correctly implemented in the UE, establishment, maintenance and clearing of connections might fail in the essential case of emergency calls.

~~The tests of this clause are only applicable to an UE supporting Emergency speech call.~~

#### 13.2.1 Emergency call / with USIM

##### 13.2.1.1 Emergency call / with USIM / accept case

###### 13.2.1.1.1 Definition

When a USIM is present, subscriber specific emergency call set-up MMI shall be provided. The operator shall specify preferred emergency call MMI(s) (e.g. 911 for US citizens or 110, 118 and 119 for Japanese citizens) for use in any (i.e. home or visited) PLMN. This shall be stored in the USIM and the UE shall read this and use any entry of these digits to set up an emergency call. It shall be possible to store more than one instance of this field.

When a USIM containing stored emergency numbers is present, only those numbers are identified as emergency numbers, i.e. default emergency numbers stored in the UE are ignored.

###### 13.2.1.1.2 Conformance requirement

- 1) [A MM connection for an emergency call may be established in all states of the mobility management sublayer which allow MM connection establishment for a normal originating call.](#)

~~When a user requests an emergency call establishment the UE will send a CM SERVICE REQUEST message to the network with a CM service type information element indicating emergency call establishment. The UE in the "MM idle" state, as after a successful location update, after the emergency call number has been entered by user, shall send a RRC CONNECTION REQUEST message with correct establishment cause ("emergency call").~~

~~2) After assignment of a dedicated channel the first layer message sent by the UE on the assigned dedicated channel shall be a CM SERVICE REQUEST message specifying the correct CKSN and TMSI, with CM Service Type "emergency call establishment".~~

~~3) Authentication and security mode setting shall be performed successfully.~~

- 24) [Having entered the "MM connection pending" state, upon MM connection establishment, the call control entity of the UE sends a setup message to its peer entity. This setup message is](#)

- a SETUP message, if the call to be established is a basic call; and
- an EMERGENCY SETUP message, if the call to be established is an emergency call. ~~After security mode setting acceptance by the network, the UE shall send an EMERGENCY SETUP message.~~
- ~~5), 6) The emergency call shall be correctly established. The assignment procedure shall be correctly performed.~~
- 7) Upon receiving an indication that the call has been accepted, the call control entity of the network shall: through connect the traffic channel (including the connection of an interworking function, if required) and send a CONNECT message to its peer entity at the calling UE; start timer T313 and enter the "connect indication" state.  
This message indicates to the call control entity of the calling UE that a connection has been established through the network. ~~After receipt of a CONNECT ACKNOWLEDGE message during correct establishment of the emergency call the DTCH shall be through connected in both directions if an appropriate DTCH is available.~~
- 8) The call control entity of the network shall initiate clearing by: sending a DISCONNECT message; and entering the "disconnect indication" state. ~~The call shall be cleared correctly.~~

## Reference(s):

- For conformance requirement 1; ~~and 2: TS 25.331 clause 8.1.3, TS 24.008 clause 5.2.1,~~ TS 24.008 clause 4.5.1.5, TS 22.0101 clause 8.
- ~~— For conformance requirement 3: TS 25.331, clause 8.1.12, TS 24.008 clause 4.3.2.~~
- For conformance requirement 4: TS 24.008, clause 5.2.1.
- ~~— For conformance requirement 5 and 6: TS 25.331, clause 8.2.2.~~
- For conformance requirement 7: TS 24.008, clause 5.2.1.6.
- For conformance requirement 8: TS 24.008, clause 5.4.4.

## 13.2.1.1.3 Test purpose

- 1) To verify that an UE supporting speech in the state "MM idle", when made to call the emergency call number, sends ~~a RRC CONNECTION REQUEST message with establishment cause "emergency call".~~
- ~~2) To verify that after assignment of a dedicated channel the first layer message sent by the UE on the assigned dedicated channel is a CM SERVICE REQUEST message specifying the correct CKSN and TMSI, with CM Service service Type type IE "emergency call establishment".~~
- ~~3) To verify that authentication and security mode setting are performed successfully.~~
- 4) To verify that after security mode setting ~~acceptance~~ by the SS, the UE sends an EMERGENCY SETUP message.
- 5) To verify that ~~subsequently,~~ the SS having sent a CALL PROCEEDING message and then an **ALERTING** message ~~and having initiated the assignment procedure of an appropriate speech traffic channel,~~ the UE performs ~~correctly that assignment procedure.~~
- ~~6) To verify subsequent correct performance of a connect procedure.~~
- ~~7) To verify that subsequently and that the UE has through connected the DTCH in both directions.~~
- 8) To verify that the call is cleared correctly.

## 13.2.1.1.4 Method of test

~~Related ICS Statements~~

- ~~— Emergency speech call.~~

## Initial Conditions

- System Simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE is in state "MM idle" with valid TMSI and CKSN.

Related ICS/IXIT Statement(s)

- Emergency speech call yes/no

## Test procedure

The UE is made to initiate an emergency call. ~~The call is established with late assignment.~~ Having reached the active state, the call is cleared by the SS.

## Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		The " <del>called</del> emergency <del>call</del> -number" is entered. <a href="#">Number shall be one programmed in test USIM EF<sub>ECC</sub> (Emergency Call Codes), ref. 34.108 clause 8.3.2.21.</a>
2		-->	<del>RRC CONNECTION REQUEST</del> <a href="#">Void</a>	<a href="#">UE establishes RRC procedure for Establishment cause is emergency call establishment.</a>
3		←	<del>RRC CONNECTION SETUP</del> <a href="#">Void</a>	<a href="#">Establishment cause: Emergency Call</a>
4		→	<del>RRC CONNECTION SETUP COMPLETE</del> <a href="#">Void</a>	<a href="#">SS accepts the establishment of a RRC connection</a>
5		-->	CM SERVICE REQUEST	The CM service type IE indicates "emergency call establishment".
6		<--	AUTHENTICATION REQUEST	IE Authentication Parameter AUTN shall be present in the message.
7		-->	AUTHENTICATION RESPONSE	SRES specifies correct value.
8		<--	<del>SECURITY MODE COMMAND</del> <a href="#">Void</a>	SS starts <a href="#">security procedure</a> <del>deciphering after sending the message.</del>
9		→	<del>SECURITY MODE COMPLETE</del> <a href="#">Void</a>	<a href="#">Shall be sent enciphered. All following messages shall be sent enciphered.</a>
10		SS		<a href="#">SS starts ciphering.</a>
11		-->	EMERGENCY SETUP	<a href="#">If the Bearer capability IE is not included the default UMTS AMR speech version shall be assumed.</a>
12		<--	CALL PROCEEDING	
13		<--	ALERTING	
14		<--	<del>RADIO BEARER SETUP</del> <a href="#">Void</a>	<a href="#">SS sets up the radio bearer with <del>T</del>he rate of the channel is that one indicated by the EMERGENCY SETUP message, if that message did not offer a choice, and the rate is the preferred one else.</a>
15		→	<del>RADIO BEARER SETUP COMPLETE</del> <a href="#">Void</a>	
16		<--	CONNECT	
17		-->	CONNECT ACKNOWLEDGE	
18		UE		The DTCH is through connected in both directions.
19		<--	DISCONNECT	<a href="#">SS disconnects the call and associated radio bearer.</a>
20		→	<del>RELEASE</del> <a href="#">Void</a>	
21		←	<del>RELEASE COMPLETE</del> <a href="#">Void</a>	
22		←	<del>RRC CONNECTION RELEASE</del> <a href="#">Void</a>	
23		→	<del>RRC CONNECTION RELEASE COMPLETE</del> <a href="#">Void</a>	<a href="#">The main signalling link is released.</a>

## Specific Message Contents

None.

[13.2.1.1.5 Test requirements](#)[In step 2 of the Expected Sequence the UE shall establish RRC procedure with establishment cause Emergency Call.](#)[In step 5 of the Expected Sequence the UE shall send a CM SERVICE REQUEST message with CM service type emergency call establishment.](#)[In step 11 of the Expected Sequence the UE shall send an EMERGENCY SETUP message.](#)[In step 18 of the Expected Sequence the UE has through connected the DTCH in both directions.](#)[In step 19 of the Expected Sequence the call is cleared correctly.](#)

## 13.2.2 Emergency call / without USIM

### 13.2.2.1 Emergency call / without USIM / accept case

#### 13.2.2.1.1 Definition

The following emergency numbers shall be stored in the UE for use without USIM: 000, 08, 112, 110, 118, 119, 911 and 999.

#### 13.2.2.1.2 Conformance requirement

- 1) A MM connection for an emergency call may be established in all states of the mobility management sublayer which allow MM connection establishment for a normal originating call.

When a user requests an emergency call establishment the UE will send a CM SERVICE REQUEST message to the network with a CM service type information element indicating emergency call establishment.

Normally, the UE will be identified by an IMSI or a TMSI. However, if none of these identifiers is available in the UE, then the UE shall use the IMEI for identification purposes. ~~The UE in the "MM idle, no IMSI" state, as after a successful location update, after the emergency call number has been entered by user, shall send a RRC CONNECTION REQUEST message with correct establishment cause ("emergency call").~~

- ~~2) After assignment of a dedicated channel the first layer message sent by the UE on the assigned dedicated channel shall be a CM SERVICE REQUEST message specifying the correct IMEI and a non available CKSN, with CM Service Type "emergency call establishment".~~

- ~~3) As a serving network option, emergency calls may be established without the network having to apply the security mode procedure as defined in TS 24.008.~~

The following are the only cases where the "security procedure not applied" option may be used:

a) Authentication is impossible because the USIM is absent. ~~After security mode setting acceptance by the network, the UE shall send an EMERGENCY SETUP message.~~

- ~~4) 5) Having entered the "MM connection pending" state, upon MM connection establishment, the call control entity of the UE sends a setup message to its peer entity. This setup message is~~

- a SETUP message, if the call to be established is a basic call; and

- an EMERGENCY SETUP message, if the call to be established is an emergency call. ~~The emergency call shall be correctly established. The assignment procedure shall be correctly performed.~~

- ~~6) Upon receiving an indication that the call has been accepted, the call control entity of the network shall: through connect the traffic channel (including the connection of an interworking function, if required) and send a CONNECT message to its peer entity at the calling UE; start timer T313 and enter the "connect indication" state.~~

This message indicates to the call control entity of the calling UE that a connection has been established through the network. ~~After receipt of a CONNECT ACKNOWLEDGE message during correct establishment of the emergency call the DTCH shall be through connected in both directions if an appropriate DTCH is available.~~

- ~~7) The call control entity of the network shall initiate clearing by: sending a DISCONNECT message; and entering the "disconnect indication" state. ~~The call shall be cleared correctly.~~~~

#### Reference(s):

- For conformance requirement 1: ~~and 2: TS 25.331 clause 8.1.3, TS 24.008 clause 5.2.1,~~ TS 24.008 clause 4.5.1.5, TS 22.101 clause 8.
- For conformance requirement ~~3~~2: TS ~~24.008~~33.102, clause ~~6.4.9.2.1~~2.1.
- For conformance requirements ~~4~~3 ~~and 5~~: TS ~~25.331~~24.008, clause ~~8.2.2.1~~2.1.

- For conformance requirement ~~64~~: TS 24.008, clause 5.2.1.6.
- For conformance requirement ~~75~~: TS 24.008, clause 5.4.4.

#### 13.2.2.1.3 Test purpose

- 1) To verify that the UE in the "MM idle, no IMSI" state (no USIM inserted) when made to call the emergency call number, sends ~~a RRC CONNECTION REQUEST message with establishment cause "emergency call"~~.
- ~~2) To verify that after assignment of a dedicated channel the first layer message sent by the UE on the assigned dedicated channel is~~ a CM SERVICE REQUEST message in which the ~~ciphering security~~ key sequence number IE indicates "no key is available", the CM service type IE indicates "emergency ~~number call~~ establishment"; and the mobile identity IE specifies the IMEI of the UE.
- ~~3) To verify that after receipt of a CM SERVICE ACCEPT message~~ without security mode procedure applied from the SS, the UE sends an EMERGENCY SETUP message.
- ~~4) To verify that~~ subsequently, the SS having sent a CALL PROCEEDING message and then an **ALERTING** message ~~and having initiated the assignment procedure of an appropriate speech traffic channel~~, the ~~UE performs correctly that assignment procedure~~.
- ~~5) To verify subsequent~~ correct performance of a connect procedure.
- ~~6) To verify that subsequently~~ and that the UE has through connected the DTCH in both directions.
- ~~7) To verify that the call is cleared correctly.~~

#### 13.2.2.1.4 Method of test

##### ~~Related ICS Statements~~

~~— Emergency speech call~~

##### Initial Conditions

- System Simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE is in MM-state "MM idle, no IMSI", no USIM inserted.

##### Related ICS/IXIT Statement(s)

- Emergency speech call yes/no

##### Test procedure

The UE is made to initiate an emergency call. The call is established without authentication, ~~without~~ and security, ~~with late assignment~~. Having reached the active state, the call is cleared by the SS.

## Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1		UE		The "called emergency call-number" is entered. <u>One of the following emergency numbers shall be used: 000, 08, 112, 110, 118, 119, 911 or 999.</u>
2	-->		<del>RRC CONNECTION REQUEST</del> Void	<u>UE establishes RRC procedure for Establishment cause is "emergency call".</u> <u>Establishment cause: Emergency Call</u>
3	<--		<del>RRC CONNECTION SETUP</del> Void	<u>SS accepts the establishment of a RRC connection</u>
4	-->		<del>RRC CONNECTION SETUP COMPLETE</del> Void	
5	-->		CM SERVICE REQUEST	The CM service type IE indicates "emergency call establishment". The mobile identity IE specifies the IMEI of the UE. The cipher key sequence number IE indicates "no key is available".
6	<--		CM SERVICE ACCEPT	
7	-->		EMERGENCY SETUP	<u>If the Bearer capability IE is not included the default UMTS AMR speech version shall be assumed.</u>
8	<--		CALL PROCEEDING	
9	<--		ALERTING	
10	<--		<del>RADIO-BEARER SETUP</del> Void	<u>SS sets up the radio bearer with the rate of the channel is one</u> indicated by the EMERGENCY SETUP message.
11	-->		<del>RADIO-BEARER SETUP COMPLETE</del> Void	
12	<--		CONNECT	
13	-->		CONNECT ACKNOWLEDGE	
14	UE			The DTCH is through connected in both directions.
15	<--		DISCONNECT	<u>SS disconnects the call and associated radio bearer.</u>
16	-->		<del>RELEASE</del> Void	
17	<--		<del>RELEASE COMPLETE</del> Void	
18	<--		<del>RRC CONNECTION RELEASE</del> Void	
19	-->		<del>RRC CONNECTION RELEASE COMPLETE</del> Void	<u>The main signalling link is released</u>

## Specific Message Contents

None.

13.2.2.1.5 Test requirementsIn step 2 of the Expected Sequence the UE shall establish RRC procedure with establishment cause Emergency Call.In step 5 of the Expected Sequence the UE shall send a CM SERVICE REQUEST message with CM service type emergency call establishment, mobile identity IMEI and cipher key sequence number no key is available.In step 7 of the Expected Sequence the UE shall send an EMERGENCY SETUP message.In step 14 of the Expected Sequence the UE has through connected the DTCH in both directions.In step 15 of the Expected Sequence the call is cleared correctly.

## 13.2.2.2 Emergency call / without USIM / reject case

## 13.2.2.2.1 Definition

The following emergency numbers shall be stored in the UE for use without USIM: 000, 08, 112, 110, 118, 119, 911 and 999.

## 13.2.2.2.2 Conformance requirement

- 1) A MM connection for an emergency call may be established in all states of the mobility management sublayer which allow MM connection establishment for a normal originating call.

When a user requests an emergency call establishment the UE will send a CM SERVICE REQUEST message to the network with a CM service type information element indicating emergency call establishment.

Normally, the UE will be identified by an IMSI or a TMSI. However, if none of these identifiers is available in the UE, then the UE shall use the IMEI for identification purposes. The UE in the "MM idle, no IMSI" state (no USIM inserted), after the emergency call number has been entered, shall send a RRC CONNECTION REQUEST message with correct establishment cause ("emergency call").

- ~~2) After assignment of a dedicated channel the first layer message sent by the UE on the assigned dedicated channel shall be a CM SERVICE REQUEST message specifying the correct IMEI and a non-available CKSN, with CM Service Type "emergency call establishment".~~

- ~~3) If the network does not accept the emergency call request, e.g., because IMEI was used as identification and this capability is not supported by the network, the network will reject the request by returning a CM SERVICE REJECT message to the UE. In the situation at the end of test purpose 2, when the UE receives a CM SERVICE REJECT message, it shall abandon the emergency call.~~

## Reference(s):

- For conformance requirement 1: ~~and 2: TS 25.331 clause 8.1.3, TS 24.008 clause 5.2.1,~~ TS 24.008 clause 4.5.1.5, TS 22.101 clause 8.
- For conformance requirement ~~3~~2: TS 24.008 clause 4.5.1.5.

## 13.2.2.2.3 Test purpose

- 1) To verify that the UE in the "MM idle, no IMSI" state (no USIM inserted) when made to call the emergency call number, sends ~~a RRC CONNECTION REQUEST message with establishment cause "emergency call".~~

- ~~2) To verify that after assignment of a dedicated channel the first layer message sent by the UE on the assigned dedicated channel is~~ a CM SERVICE REQUEST message in which the ~~ciphering security~~ key sequence number IE indicates "no key is available", the CM service type IE indicates "emergency call establishment", and the mobile identity IE specifies the IMEI of the UE.

- ~~3) To verify that after receipt of a CM SERVICE REJECT message from the SS, the UE abandons the emergency call establishment.~~

## 13.2.2.2.4 Method of test

~~Related ICS statements~~

~~— Emergency speech call.~~

## Initial Conditions

- System Simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE is in state "MM idle, no IMSI", no USIM inserted.

Related ICS/IXIT Statement(s)

- Emergency speech call yes/no



## Test procedure

The UE is made to initiate an emergency call. The call is established without authentication, ~~without~~ security, ~~with~~ ~~early assignment~~. The SS responds to the CM SERVICE REQUEST from the UE with a CM SERVICE REJECT message specifying in the reject cause IE the reject cause value "IMEI not accepted". The SS then verifies for during 5 seconds that the UE does not send a layer 3 message. ~~Then the call is cleared by the SS. The SS verifies during 20 seconds after disconnection of the main signalling link that the UE does not initiate a RRC connection establishment.~~

## Expected Sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The "called emergency call-number" is entered. One of the following emergency numbers shall be used: 000, 08, 112, 110, 118, 119, 911 or 999.
2	-->		<del>RRC CONNECTION REQUEST</del> Void	UE establishes RRC procedure for Establishment cause is "emergency call". Establishment cause: Emergency Call
3	<--		<del>RRC CONNECTION SETUP</del> Void	SS accepts the establishment of a RRC connection
4			<del>RRC CONNECTION SETUP COMPLETE</del> Void	
5	-->		CM SERVICE REQUEST	The CM service type IE indicates "emergency call establishment". The mobile identity IE specifies the IMEI of the UE. The cipher key sequence number IE indicates "no key is available".
6	<--		CM SERVICE REJECT	<del>the</del> The reject cause IE specifies reject cause value #5, "IMEI not accepted".
7	SS			During 5 seconds, the SS verifies that the UE does not send L3 messages.
8	<--		<del>RRC CONNECTION RELEASE</del> Void	
9	-->		<del>RRC CONNECTION RELEASE COMPLETE</del> Void	The main signalling link is released.
10	SS			During 20 seconds, the SS verifies that the UE does not initiate a RRC connection establishment

## Specific Message Contents:

None.

### 13.2.2.2.5 Test requirements

In step 2 of the Expected Sequence the UE shall establish RRC procedure with establishment cause Emergency Call.

In step 5 of the Expected Sequence the UE shall send a CM SERVICE REQUEST message with CM service type emergency call establishment, mobile identity IMEI and cipher key sequence number no key is available.

In step 6 of the Expected Sequence the UE shall abandon the emergency call establishment.

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020858

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020852

CR-Form-v7

## CHANGE REQUEST

⌘ 34.123-1 CR 406 ⌘ rev - ⌘ Current version: 5.1.1 ⌘

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.1.1 SMS mobile terminated (as of T1S-020791rev1)		
<b>Source:</b>	⌘ Ericsson, Rohde&Schwarz		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 6/11/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

**Reason for change:** ⌘ The 16.1.1. test case has the purpose of verifying that an active UE is able to receive an MT SM at any time. The current test makes the indication of an SM arrival mandated. However, in TS 23.040 R99 is clearly stated that upon the receipt of an SM type 0 it is highly recommended that the UE does not indicate the receipt of the type 0 short message to the user and the message is not stored in the (U)SIM or ME. Furthermore, in TS 23.040 Rel-4 and Rel-5 is mandated not to indicate at all the receipt of the type 0 SM to the user and the SM shall neither be stored in the (U)SIM nor ME. The current test case lets the SS send the type 0 SM, so a correction is needed.

Some test requirements are missing and incorrect according to the expected sequence table.

The sentence 'the UE aborts the RRC connection' stated in the expected sequence of the test case is incorrect according to core specs. The abortion of an RRC connection by the UE follows an abnormal case, not a normal case as in the expected sequence of the test case. The normal case is if all MM connections are released by their CM entities, the UE expects the release of the RRC connection by the network. If the RRC connection is no more needed, as it's the case of the test case, then the network will request the RR sublayer to release it.

Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in

		order to be known by the TTCN implementor.
<b>Summary of change:</b>	⌘	The 16.1.1 section has been corrected following the reason for change of this CR. The expected sequence, test requirements and SMS DELIVER TPDU have been corrected.  The current CR also includes all proposed changes to 16.1.1 defined by T1S-020603; Related ICS/IXIT Statements and Reference. <b>Changes from T1S-020761 (Rohde&amp;Schwarz):</b> <b>- Changed expected message sequence in 16.1.1 to match test procedure</b>
<b>Consequences if not approved:</b>	⌘	The test cannot test the UE correctly.

<b>Clauses affected:</b>	⌘	16.1.1								
<b>Other specs affected:</b>	⌘	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> Other core specifications      ⌘ Test specifications O&M Specifications	Y	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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<b>Other comments:</b>	⌘	Affects R99, Rel-4 and Rel-5 test cases.								

**How to create CRs using this form:**

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

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

## 16.1 Short message service point to point on CS mode

All of test cases in this clause are applied to UE supporting CS mode.

### 16.1.1 SMS mobile terminated

16.1.1.1 Definition

16.1.1.2 Conformance requirements

An active UE shall be able to receive short message TPDU (SMS-DELIVER) at any time, independently of whether or not there is a speech or data call in progress. A report will always be returned to the SC, confirming that the UE has received the short message.

#### Reference

3GPP TS 23.040, clause 3.1.

16.1.1.3 Test purpose

To verify the ability of a UE to receive and decode the SMS where provided for the point to point service.

16.1.1.4 Method of test

#### Initial Conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in MM-state "Idle, updated";
  - the SMS message storage shall be empty.

#### Related ICS/IXIT Statements

Support for Short message MT/PP.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Support for call control state U10.

[Maximum number of retransmissions of an unacknowledged CP-DATA message.](#)

#### Test procedure

- a) [The UEMobile](#) terminates [the](#) establishment of Radio Resource Connection. After the completion of [the](#) RRC Connection [the](#) SS authenticates [the](#) UE.

After the SS receives SECURITY MODE COMPLETE, the SS sends a CP-DATA message. The information element of the CP-DATA message will be RP-DATA RPDU (SMS DELIVER TPDU).

- b) The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.
- c) The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates RRC Connection release.

- d) Steps a), b) and c) are repeated but the first CP-DATA message from the UE is not acknowledged. The second CP-DATA message from the UE is acknowledged by a CP-ACK within a time TC1M.
- e) Steps a) and b) are repeated. The SS is configured not to send CP-ACK. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 5 s after the last CP-DATA retransmission the SS then initiates the channel release. The 5 s is the appropriate time to wait to verify that the UE does not send more than the maximum allowed (3) CP-DATA retransmissions.
- f) The SMS message store shall be cleared manually by the operator.
- g) A data or speech call is established on a DTCH with the SS and the state U10 of call control is entered.

The SS sends a CP-DATA message. The information element of the CP-DATA message will be RP-DATA RPDU (SMS DELIVER TPDU). The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.

- h) The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates RRC Connection release. The SMS message store shall be cleared manually by the operator.
- i) Steps g) and h) are repeated but the first CP-DATA message from the UE is not acknowledged. The second CP-DATA message from the UE is acknowledged by a CP-ACK within a time TC1M.
- j) Step g) is repeated. The SS is configured not to send CP-ACK. Then maximum 3 CP-DATA retransmissions may occur. After a duration of TC1M + 15 s after the last CP-DATA retransmission the SS initiates the channel release. The 15 s is the appropriate time to wait to verify that the UE does not send more than the maximum allowed (3) CP-DATA retransmissions (during a call in progress).
- k) A data or speech call is established on a DTCH with the SS and the state U10 of call control shall be entered. The speech call is cleared by the SS with a disconnect message. (The call clearing is continued on the DCCH in parallel to the following exchange of messages related to SMS).

The SS sends a CP-DATA RPDU (SMS DELIVER TPDU) message. The information element of the CP-DATA message is RP-DATA.

The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.

The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates channel release.

The SMS message store shall be cleared manually by the operator.

- l) A data or speech call is established with the SS and the state U10 of call control is entered. The speech call shall be cleared from the UE. (The call clearing is continued in parallel to the following exchange of messages related to SMS).

The SS sends a CP-DATA message. The information element of the CP-DATA message is RP-DATA RPDU (SMS DELIVER TPDU).

The SS waits a maximum of 25 s for the CP-ACK message and then a maximum of 60 s for the CP-DATA message containing the RP-ACK RPDU.

The SS sends a CP-ACK to the UE within TC1M with no further CP-DATA messages and the SS initiates RRC Connection release.

The SMS message store shall be cleared manually by the operator.

#### Expected sequence

Step	Direction		Message	Comments
	UE	SS		

Step	Direction		Message	Comments
	UE	SS		
1			Mobile terminated establishment of Radio Resource Connection	See 3GPP TS 34.108. <a href="#">The IE "Paging cause" in the PAGING TYPE 1 message is set to "Terminating Low Priority Signalling"</a> . <a href="#">The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Terminating Low Priority Signalling"</a> .
2	-->		PAGING RESPONSE	
3	<--		AUTHENTICATION REQUEST	
4	-->		AUTHENTICATION RESPONSE	
5	<del>←SS</del>		<del>SECURITY MODE COMMAND</del>	<a href="#">The SS starts integrity protection</a>
6	<del>→</del>		<del>(void)SECURITY MODE COMPLETE</del>	
7	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
8	SS			Waits max 25 s for CP-ACK
9	-->		CP-ACK	
10	SS			Waits max 60 s for RP-ACK RPDU
11	-->		CP-DATA	Contains RP-ACK RPDU
12	<--		CP-ACK	
13	UE			There should be no further CP-DATA messages until the UE aborts the RRC connection .
14	UE			The UE shall indicate that an SM has arrived.
15			Mobile terminated establishment of Radio Resource Connection	See 3GPP TS 34.108. <a href="#">The IE "Paging cause" in the PAGING TYPE 1 message is set to "Terminating Low Priority Signalling"</a> . <a href="#">The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Terminating Low Priority Signalling"</a> .
16	-->		PAGING RESPONSE	
17	<--		AUTHENTICATION REQUEST	
18	-->		AUTHENTICATION RESPONSE	
19	<del>←SS</del>		<del>SECURITY MODE COMMAND</del>	<a href="#">The SS starts integrity protection</a>
20	<del>→</del>		<del>(void)SECURITY MODE COMPLETE</del>	
21	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
22	SS			Waits max 25 s for CP-ACK
23	-->		CP-ACK	
24	SS			Waits max 60 s for RP-ACK RPDU
25	-->		CP-DATA	First CP-DATA from UE, contains RP-ACK RPDU
26	SS			First CP-DATA message not acknowledged by SS
27	-->		CP-DATA	Retransmitted CP-DATA from UE within twice TC1M, after step 25, contains RP-ACK RPDU
28	<--		CP-ACK	Second CP_DATA message is acknowledged
29	<del>UESS</del>			<del>The SS releases the RRC connection. There should be no further CP-DATA messages until the UE aborts the RRC connection.</del>
30	UE			The UE shall indicate that an SM has arrived.
31			Mobile terminated establishment of Radio Resource Connection	See 3GPP TS 34.108. <a href="#">The IE "Paging cause" in the PAGING TYPE 1 message is set to "Terminating Low Priority Signalling"</a> . <a href="#">The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Terminating Low Priority Signalling"</a> .
32	-->		PAGING RESPONSE	
33	<--		AUTHENTICATION REQUEST	
34	-->		AUTHENTICATION RESPONSE	
35	<del>←SS</del>		<del>SECURITY MODE COMMAND</del>	<a href="#">The SS starts integrity protection</a>
36	<del>→</del>		<del>(void)SECURITY MODE COMPLETE</del>	
37	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
38	SS			Waits max 25 s for CP-ACK
39	-->		CP-ACK	
40	SS			Waits max 60 s for RP-ACK RPDU
41	-->		CP-DATA	Contains RP-ACK RPDU
42	SS			First CP-DATA message not acknowledged by SS
43	-->		CP-DATA	Retransmitted CP-DATA from UE within twice TC1M after step 41, contains RP-ACK RPDU

Step	Direction		Message	Comments
	UE	SS		
44		SS		Retransmitted CP-DATA message not acknowledged by SS
45		UE		Depending upon the maximum number of CP-DATA retransmissions implemented, step 43 and 44 may be repeated.
46		←SS	<del>RRC CONNECTION RELEASE</del>	<a href="#">The SS releases the RRC connection.</a> The RRC connection is released after a duration of TC1M + 5 s after the last CP-DATA retransmission.
47		→	<del>(void)RRC CONNECTION RELEASE COMPLETE</del>	
48		UE		The UE shall indicate that an SM has arrived.
49		SS		A data or speech call is established on a DTCH and the state U10 of call control is entered.
50			(void)	
51		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
52		SS		Waits max 25 s for CP-ACK
53		-->	CP-ACK	
54		SS		Waits max 60 s for RP-ACK RPDU
55		-->	CP-DATA	Contains RP-ACK RPDU
56		<--	CP-ACK	
57		<--	DISCONNECT	Disconnect the active call
58		-->	RELEASE	
58a		←	RELEASE COMPLETE	
58b		<del>UESS</del>		<a href="#">The SS releases the RRC connection</a> <del>There should be no further CP-DATA messages until the UE aborts the RRC connection</del>
59		UE		The UE shall indicate that an SM has arrived.
60		UE		Clear the SMS message store
61		SS		A data or speech call is established on a DTCH and the state U10 of call control is entered.
62			(void)	
63		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
64		SS		Waits max 25 s for CP-ACK
65		-->	CP-ACK	
66		SS		Waits max 60 s for RP-ACK RPDU
67		-->	CP-DATA	First CP-DATA from UE, contains RP-ACK RPDU
68		SS		First CP-DATA message not acknowledged by SS
69		-->	CP-DATA	Retransmitted CP-DATA message within twice TC1M after step 67, contains RP-ACK RPDU
70		<--	CP-ACK	Second CP-DATA message is acknowledged
71		<--	DISCONNECT	Disconnect the active call
72		-->	RELEASE	
73		←	RELEASE COMPLETE	
74		<del>UESS</del>		<a href="#">The SS releases the RRC connection</a> <del>There should be no further CP-DATA messages until the UE aborts the RRC connection</del>
75		UE		The UE shall indicate that an SM has arrived.
76		UE		Clear the SMS message store
77		SS		A data or speech call is established on a DTCH and the state U10 of call control is entered.
78			(void)	
79		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
80		SS		Waits max 25 s for CP-ACK
81		-->	CP-ACK	
82		SS		Waits max 60 s for RP-ACK RPDU
83		-->	CP-DATA	First CP-DATA from UE, contains RP-ACK RPDU
84		SS		First CP-DATA message not acknowledged by SS
85		-->	CP-DATA	Transmitted CP-DATA message within twice TC1M after step 83, contains RP-ACK RPDU
86		SS		Retransmitted CP-DATA message not acknowledged by SS
87		UE		Depending on the maximum number of CP-DATA retransmissions implemented, step 85-86 may be repeated. The maximum number of retransmissions may however not exceed three.
87a		←	DISCONNECT	Disconnect the active call

Step	Direction		Message	Comments
	UE	SS		
87b	→		RELEASE	
87c	←		RELEASE COMPLETE	
88			(void)	
89		<del>UE</del> SS		<a href="#">The SS releases the RRC connection</a> <del>UE aborts the RRC connection</del>
90	UE			The UE shall indicate that an SM has arrived.
91	UE			Clear the SMS message store
92	SS			A data or speech call is established on a DTCH and the state U10 of call control is entered.
93			(void)	
94	<--		DISCONNECT	The speech call is cleared by the SS. The call clearing is continued in parallel to the following exchange of messages related to SMS.
95	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
96	SS			Waits max 25 s for CP-ACK
96a	→		RELEASE	<del>UE releases the connection</del>
96b	←		RELEASE COMPLETE	<del>SS completes the connection release (see also step 97b)</del>
97	-->		CP-ACK	
97b	←		RELEASE COMPLETE	<del>Alternatively to step 96b SS completes the connection release now.</del>
98	SS			Waits max 60 s for RP-ACK RPDU
99	-->		CP-DATA	Contains RP-ACK RPDU
100	<--		CP-ACK	
101	UE			There should be no further CP-DATA messages until the UE aborts the RRC connection.
102	UE			The UE shall indicate that an SM has arrived.
103	UE			Clear the SMS message store
104	SS			A data or speech call is established on a DTCH and the state U10 of call control is entered.
105			(void)	
106	-->		DISCONNECT	The speech call is cleared from the UE. The call clearing is continued in parallel to the following exchange of messages related to SMS.
107	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
108	<--		RELEASE	This message is likely to be sent before all of the CP-DATA message has been sent on the DCCH.
109	-->		RELEASE COMPLETE	
110	-->		CP-ACK	shall be sent before 25 s after the start of step 107
111	SS			Waits max 60 s for RP-ACK RPDU
112	-->		CP-DATA	Contains RP-ACK RPDU
113	<--		CP-ACK	
114		<del>UE</del> SS		<a href="#">The SS releases the RRC connection</a> <del>There should be no further CP-DATA messages until the UE aborts the RRC connection.</del>
115	UE			The UE shall indicate that an SM has arrived.
116	UE			Clear the SMS message store
NOTE:	Time values for SS wait time are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.			

## Specific Message Contents

SMS DELIVER TPDU [\(not containing a type 0 message\)](#)

Information element	Comment Value
<a href="#">TP-PID</a>	<a href="#">Different from Type 0: "01000000"B</a>
TP-UJDL	160
TP-UD (140 octets)	text of message (160 characters)
NOTE:	The 160 characters in TP-UD shall include at least one occurrence of each character in the default alphabet (see 3GPP TS 23.038, clause 6.2.1).



## 16.1.1.5 Test requirements

After step 7 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 14 UE shall indicate that an SM has arrived.](#)

After step 25 UE shall retransmit CP-DATA containing RP-ACK within twice TC1M.

After step 30 UE shall indicate that an SM has arrived.

After step 43 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 48 UE shall indicate that an SM has arrived.

After step 51 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 59 UE shall indicate that an SM has arrived.](#)

After step 67 UE shall retransmit CP-DATA containing RP-ACK within twice TC1M.

After step 75<sup>4</sup> UE shall indicate that an SM has arrived.

After step 79 UE shall repeat CP-DATA retransmissions as many times as the decided maximum number.

After step 90 UE shall indicate that an SM has arrived.

After step 95 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 102 UE shall indicate that an SM has arrived.](#)

After step 107 UE shall receive SMS-DELIVER TPDU and send CP-ACK within 25 s and CP-DATA containing RP-ACK within 60 s.

[After step 115 UE shall indicate that an SM has arrived.](#)

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020859

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020853

CR-Form-v7

## CHANGE REQUEST

⌘ 34.123-1 CR 395 ⌘ rev - ⌘ Current version: 5.1.1 ⌘

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.2.10 Test of capabilities of simultaneously receiving an SM whilst sending an MO SM (as of T1S-020751rev1)
<b>Source:</b>	⌘ Ericsson, Rohde&Schwarz
<b>Work item code:</b>	⌘ TEI <b>Date:</b> ⌘ 6/11/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .
<b>Release:</b>	⌘ <b>REL-5</b> Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ The 16.1.10 test has the purpose of verifying the capability of an MS of receiving SM while sending an MO SM. The conformance requirements section of the test case is incorrect stating "An active UE shall be able to receive short message TPDU (SMS-SUBMIT)", because an SMS-SUBMIT TPDU is for MO SM only. Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in order to be known by the TTCN implementor.
<b>Summary of change:</b>	⌘ The 16.2.10 section has been corrected following the reason for change of this CR. Test requirements section and expected sequence have been corrected. The current CR conflicts with the proposed changes to Test requirements defined by T1S-020603, though the current CR includes the changes proposed to 'Reference' <b>Changes from T1S-020761 (Rohde&amp;Schwarz):</b> -Conformance requirement reworded

**Consequences if not approved:** ☼ The test prose cannot test the UE correctly.

**Clauses affected:** ☼ 16.2.10

	Y	N		
<b>Other specs affected:</b>	☼	X	Other core specifications	☼
		X	Test specifications	
		X	O&M Specifications	

**Other comments:** ☼ Affects R99, Rel-4 and Rel-5 test cases.

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

## 16.2.10 Test of capabilities of simultaneously receiving a short message whilst sending a mobile originated short message

16.2.10.1 Definition

16.2.10.2 Conformance requirements

~~An active UE shall be able to receive short message TPDU (SMS-SUBMIT) at any time, independently of whether or not there is in SMS mobile originated.~~

An active UE shall be able to receive a short message TPDU (SMS-DELIVER) at any time, independently of whether or not there is an SMS mobile originated call (SMS-SUBMIT or SMS-COMMAND) in progress.

### References

3GPP TS 23.040 clause 3.1, [9.2.3.16](#).

[3GPP TS 24.011 clause 3.2](#).

16.2.10.3 Test purpose

The test verifies that the UE is capable of simultaneously receiving a network originated SM whilst sending a mobile originated SM.

16.2.10.4 Method of test

### Initial Conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in GMM-state "GMM-REGISTERED";
  - the SMS message storage shall be empty.

### Related ICS/IXIT Statements

Support for Short message MO/PP and MT/PP.

Support for state PDP-ACTIVE of session management.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Maximum length (characters) of a mobile originated short message.

### Test procedure

- a) The SS is configured to receive a mobile originated SM. In clause 16.2.2 steps a) and b) are repeated and, using the end of the CP-DATA message from the UE as a trigger, the SS sends a SM to the UE. In this case a new transaction identifier shall be used in the CP messages of SMS mobile terminated.

### Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	<a href="#">UE</a>	<a href="#">←</a>	SYSTEM INFORMATION	<a href="#">The UE is set up to send an SM BCCH</a>

Step	Direction		Message	Comments
	UE	SS		
2	<u>SS</u> →		<del>RRC CONNECTION REQUEST</del>	<del>CCCH</del> <u>The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".</u>
3		←	<del>(void)RRC CONNECTION SETUP</del>	<del>CCCH</del>
4		→	<del>(void)RRC CONNECTION SETUP COMPLETE</del>	<del>DCCH</del>
5		-->	SERVICE REQUEST	
6		<--	AUTHENTICATION AND CIPHERING REQUEST	
7		-->	AUTHENTICATION AND CIPHERING RESPONSE	
8	<u>SS</u> ←		<del>SECURITY MODE COMMAND</del>	<u>The SS starts integrity protection</u>
9		→	<del>SECURITY MODE COMPLETE</del>	
10		-->	CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
11		SS		The SS sends an SM to the UE triggered by the end of the CP-DATA message from the UE
12		<--	CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
13		UE		The UE shall correctly receive the SM and indicate that a message has arrived. In the MO case the UE shall send the CP-ACK message with transaction identifier assigned to this transfer. In the MT case the UE shall send a CP-ACK message and a CP-DATA message containing the RP-ACK RPDU. The transaction identifier shall be the same as chosen by the SS for the MT transfer.
NOTE: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.				

### Specific Message Contents

#### SMS SUBMIT TPDU

Information element	Comment Value
TP-UDL TP-UD (140 octets max)	as applicable maximum number of characters (text of message) as defined by the manufacturer (see ICS/IXIT)

#### 16.2.10.5 Test requirements

After step 12 UE shall correctly receive the SM and indicate that a message has arrived.

<End of modified text>

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020860

3GPP TSG- T1 SIG Meeting #26  
Luton, 4<sup>th</sup> – 6<sup>th</sup> Nov 2002

Tdoc # T1S-020854

CR-Form-v7

## CHANGE REQUEST

⌘ 34.123-1 CR 396 ⌘ rev - ⌘ Current version: 5.1.1 ⌘

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

<b>Title:</b>	⌘ CR to TS 34.123-1 [REL-5]; Correction to package 3 test case 16.1.10 Test of capabilities of simultaneously receiving an SM whilst sending an MO SM (as of T1S-020797rev1)
<b>Source:</b>	⌘ Ericsson
<b>Work item code:</b>	⌘ TEI <b>Date:</b> ⌘ 6/11/2002
<b>Category:</b>	⌘ <b>F</b> <b>Release:</b> ⌘ REL-5
Use <u>one</u> of the following categories:	
<b>F</b> (correction)	
<b>A</b> (corresponds to a correction in an earlier release)	
<b>B</b> (addition of feature),	
<b>C</b> (functional modification of feature)	
<b>D</b> (editorial modification)	
Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	
Use <u>one</u> of the following releases:	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
Rel-4 (Release 4)	
Rel-5 (Release 5)	
Rel-6 (Release 6)	

<b>Reason for change:</b>	⌘ The 16.1.10 test has the purpose of verifying the capability of an MS of receiving SM while sending an MO SM. The conformance requirements section of the test case is incorrect stating "An active UE shall be able to receive short message TPDU (SMS-SUBMIT)", because an SMS-SUBMIT TPDU is for MO SM only. Finally, T1 agreed that the specification of NAS test cases should be focus on the NAS signalling and in general, not show the lower layer signalling (e.g. RRC specific signalling). When certain actions are needed in the lower layers to make the test run correctly, these actions should be indicated in the 'comments' field in order to be known by the TTCN implementor.
<b>Summary of change:</b>	⌘ The 16.1.10 section has been corrected following the reason for change of this CR.  Test requirements section and expected sequence have been corrected.  The current CR conflicts with the proposed changes to Test requirements defined by T1S-020603, though the current CR includes the changes proposed to 'Reference'  <b>Changes from T1S-020761 (Rohde&amp;Schwarz):</b>  -Conformance requirement reworded

**Consequences if not approved:** ☼ The test prose cannot test the UE correctly.

**Clauses affected:** ☼ 16.1.10

	Y	N		☼
<b>Other specs affected:</b>		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

**Other comments:** ☼ Affects R99, Rel-4 and Rel-5 test cases.

**How to create CRs using this form:**

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

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

## 16.1.10 Test of capabilities of simultaneously receiving a short message whilst sending a mobile originated short message

16.1.10.1 Definition

16.1.10.2 Conformance requirements

~~An active UE shall be able to receive short message TPDU (SMS-SUBMIT) at any time, independently of whether or not there is in SMS mobile originated.~~

An active UE shall be able to receive a short message TPDU (SMS-DELIVER) at any time, independently of whether or not there is an SMS mobile originated call (SMS-SUBMIT or SMS-COMMAND) in progress.

### References

3GPP TS 23.040 clauses 3.1, [9.2.3.16](#).

[3GPP TS 24.011 clause 3.2](#).

16.1.10.3 Test purpose

The test verifies that the UE is capable of simultaneously receiving a network originated SM whilst sending a mobile originated SM.

16.1.10.4 Method of test

### Initial Conditions

- System simulator:
  - 1 cell, default parameters.
- User Equipment:
  - the UE shall be in MM-state "Idle, updated";
  - the SMS message storage shall be empty.

### Related ICS/IXIT Statements

Support for Short message MO/PP and MT/PP.

Support for state U10 of call control.

The value of timer TC1M.

Whether SMS messages are stored in the USIM and/or the ME.

Maximum length (characters) of a mobile originated short message.

### Test procedure

- a) The SS is configured to receive a mobile originated SM. In clause 16.1.2 steps a) and b) are repeated and, using the end of the CP-DATA message from the UE as a trigger, the SS sends a SM to the UE. In this case a new transaction identifier shall be used in the CP messages of SMS mobile terminated.



Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE ←		SYSTEM INFORMATION	The UE is set up to send an SM BCGH
2	SS →		RRC CONNECTION REQUEST	CCCH The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Originating Low Priority Signalling".
3	←		(void)RRC CONNECTION SETUP	CCCH
4	→		(void)RRC CONNECTION SETUP COMPLETE	DCCH
5	-->		CM SERVICE REQUEST	CM service type set to "short message transfer"
6	<--		AUTHENTICATION REQUEST	
7	-->		AUTHENTICATION RESPONSE	
8	SS ←		SECURITY MODE COMMAND	The SS starts integrity protection
9	→		(void)SECURITY MODE COMPLETE	
10	-->		CP-DATA	Contains RP-DATA RPDU (SMS SUBMIT TPDU)
11	SS			The SS sends an SM to the UE triggered by the end of the CP-DATA message from the UE
12	<--		CP-DATA	Contains RP-DATA RPDU (SMS DELIVER TPDU)
13	UE			The UE shall correctly receive the SM and indicate that a message has arrived. In the MO case the UE shall send the CP-ACK message with transaction identifier assigned to this transfer. In the MT case the UE shall send a CP-ACK message and a CP-DATA message containing the RP-ACK RPDU. The transaction identifier shall be the same as chosen by the SS for the MT transfer.
NOTE: Time values for SS wait times are chosen sufficiently high to be sure that the UE has enough time to respond to the different messages.				

Specific Message Contents

SMS SUBMIT TPDU

Information element	Comment Value
TP-UDL TP-UD (140 octets max)	as applicable maximum number of characters (text of message) as defined by the manufacturer (see ICS/IXIT)

16.1.10.5 Test requirements

After step 12 UE shall correctly receive the SM and indicate that a message has arrived.

3GPP TSG-T1 Meeting #17

T1-020863

3GPP TSG- T1 SIG Meeting #26  
Luton, 4th – 8th November 2002

T1S020867

CR-Form-v6.1

**CHANGE REQUEST**

⌘ **TS 34.123-1 CR 399** ⌘ rev **-** ⌘ Current version: **5.1.1** ⌘  
**Spec Title:** User Equipment (UE) conformance specification;  
 Part 1: Protocol conformance specification

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

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

<b>Title:</b>	⌘ Addition of new test case for RRC Connection Release following network authentication failure requested by upper layers (Revision of T1S-020629, T1S020699, T1S020817, T1S020845)		
<b>Source:</b>	⌘ Panasonic		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 5/11/2002
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ <b>REL-5</b> Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ Add new test cases to cover the scenarios in which UE RRC is requested by the NAS layer to initiate RRC connection release because of a network authentication failure.
<b>Summary of change:</b>	⌘ Clause 8.1.3.8 has been added to test UE releases RRC connection when network authentication fails and UE is in CELL_FACH state.  Clause 8.1.3.9 has been added to test UE releases RRC connection when network authentication fails and UE is in CELL_DCH state.  In the revision of T1S-020579,  There are spelling errors "AUTHENTICATION" is several places. These have been replaced by "AUTHENTICATIO".  In the conformance requirement, [4] is replaced by "TS 25.304" and "TS 25.331" is added before subclause 8.5.2 to provide more precise references.  In step 2 of clause 8.1.3.8 and step 5 of clause 8.1.3.9, in the specific message content, the PS NAS message should be "AUTHENTICATIO AND CIPHERING FAILURE".  In the test requirement of clause 8.1.3.8, in the second statement, "TRANSFER message" is missing. After step 5, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 2.

In the test requirement of clause 8.1.3.9, in the fourth statement, "TRANSFER message" is missing. After step 8, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 3.

In the initial condition of clause 8.1.3.9, cell 2 and 3 are set to inactive. Then a statement is included in the start of the test procedure to indicate that the SS configures the downlink power of the 3 cells according to table 8.1.3.9.

Table 8.1.3.8 is clause 8.1.3.9 is re-numbered to table 8.1.3.9.

Message content of step 1 in clause 8.1.3.9 has been revised to include measurement report for cell 3 and also editorial corrections.

**In the revision of T1S-020629,**

It is revised such that the sending of SIGNALLING CONNECTION RELEASE INDICATION message by the UE after network authentication failure is not expected in the test cases.

**In the revision of T1S020699,**

In TC 8.1.3.8, some sentences are missing in the Test Procedure and are added now.

In TC 8.1.3.9 Test Procedure, MEASUREMENT REPORT message sent by the UE in step 1 should include cell 2 and 3 primary scrambling code.

**In the revision of T1S020817,**

In TC 8.1.3.9 Specific Message Content (step 1), the sentence "Checked that this IE is absent" is removed from the IE "Event results".

**In the revision of T1S020845,**

1. Table 8.1.3.9 is revised to include column "T0" and "T1", so as to avoid ambiguity.
2. In TC 8.1.3.9, the subclause number of the Test Requirement is corrected.

**Consequences if not approved:** ☒ Insufficient test coverage.

**Clauses affected:** ☒

**Other specs affected:** ☒  Other core specifications ☒  Test specifications  O&M Specifications

**Other comments:** ☒ Affects R99, REL-4, REL-5

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

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

### 8.1.3.8 RRC Connection Release in CELL\_FACH state (Network Authentication Failure): Success

#### 8.1.3.8.1 Definition

#### 8.1.3.8.2 Conformance requirement

If the upper layers request the release of the RRC connection, the UE shall:

1> release all its radio resources;

1> enter idle mode;

1> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;

1> if the UE was in CELL\_FACH or CELL\_PCH or URA\_PCH state prior to entering idle mode:

2> consider the cell on which the UE was camped prior to entering idle mode to be barred according to TS 25.304; and

2> consider the barred cell as using the value "allowed" in the IE "Intra-frequency cell re-selection indicator", and the maximum value in the IE "T<sub>barred</sub>".

#### Reference

3GPP TS 25.331 clause 8.1.4a.2.

#### 8.1.3.8.3 Test purpose

To confirm that when the upper layers request the release of the RRC connection, the UE releases signalling radio bearer and its radio resources and goes back to the idle.

To confirm that the UE enters into idle mode by performing cell-selection to a non-barred cell.

#### 8.1.3.8.4 Method of test

##### Initial Condition

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

UE: "CS-CELL\_FACH\_Initial" (state 6-2) or "PS-CELL\_FACH\_Initial" (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

##### Test Procedure

**Table 8.1.3.8**

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>
		<u>T0</u>	<u>T0</u>
<u>UTRA_RF_Channel Number</u>		<u>Ch. 1</u>	<u>Ch. 1</u>
<u>CPICH_Ec</u>	<u>dBm/3.84 MHz</u>	<u>-60</u>	<u>-65</u>

Table 8.1.3.8 illustrates the downlink power to be applied for the 2 cells during the test execution. The UE is in CELL\_FACH mode of cell 1. The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain or AUTHENTICATION AND CIPHERING

REQUEST for PS domain) and an invalid SQN. The UE shall transmit an UPLINK DIRECT TRANSFER message using AM on DCCH. After SS acknowledges the UPLINK DIRECT TRANSFER message, SS shall wait for T3216 or T3320 to expire in the UE. The SS shall wait for 5s, and then transmit PAGING TYPE 1 message to the UE. The UE shall respond with RRC CONNECTION REQUEST message. SS then transmit RRC CONNECTION REJECT message back to UE. SS then waits for 22 minutes before SS execute generic procedure C.1 in cell 1 to check that UE is in idle mode in cell 1.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	<u>DOWNLINK DIRECT TRANSFER</u>	Depending on supported CN domain, <u>AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message.</u> An invalid SQN is provided in this message.
2		→	<u>UPLINK DIRECT TRANSFER</u>	After SS acknowledged this message, SS waits for T3216 or T3320 to expire.
3				The SS waits for 5s
4		←	<u>PAGING TYPE 1</u>	SS sends this message in cell 2.
5		→	<u>RRC CONNECTION REQUEST</u>	
6		←	<u>RRC CONNECTION REJECT</u>	
7				SS waits 22 minutes for <u>T<sub>barred</sub> to expire.</u>
8		↔	<u>CALL C.1</u>	SS execute this generic procedure in cell 1. If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.

#### Specific Message Content

##### DOWNLINK DIRECT TRANSFER (Step 1)

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

<u>Information Element</u>	<u>Value/remark</u>
<u>CN domain identity</u> <u>NAS message</u>	<u>CS domain or PS domain</u> <u>AUTHENTICATION REQUEST (CS domain) or</u> <u>AUTHENTICATION AND CIPHERING REQUEST</u> <u>(PS domain)</u>

#### UPLINK DIRECT TRANSFER (Step 2)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Integrity check info</u>	<u>The presence of this IE is dependent on IXIT</u> <u>statements in TS 34.123-2. If integrity protection is</u> <u>indicated to be active, this IE shall be present with</u> <u>the values of the sub IEs as stated below. Else, this</u> <u>IE and the sub-IEs shall be absent.</u>
<u>- Message authentication code</u>	<u>This IE is checked to see if it is present. The value is</u> <u>compared against the XMAC-I value computed by</u> <u>SS.</u>
<u>- RRC Message sequence number</u>	<u>This IE is checked to see if it is present. The value is</u> <u>used by SS to compute the XMAC-I value.</u>
<u>CN domain identity</u> <u>NAS message</u>	<u>CS domain or PS domain</u> <u>AUTHENTICATION FAILURE(CS domain) or</u> <u>AUTHENTICATION AND CIPHERING FAILURE (PS</u> <u>domain)</u>
<u>Measured results on RACH</u>	<u>Not checked</u>

#### 8.1.3.8.5 Test requirement

After step 1 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 4, the UE shall transmit RRC CONNECTION REQUEST message using **TM RLC** on **CCCH** in cell 2.

After step 7 the UE shall be in idle mode of cell 1.

### 8.1.3.9 RRC Connection Release in CELL\_DCH state (Network Authentication Failure): Success

#### 8.1.3.9.1 Definition

#### 8.1.3.9.2 Conformance requirement

If the upper layers request the release of the RRC connection, the UE shall:

1> release all its radio resources;

1> enter idle mode;

1> perform other actions when entering idle mode from connected mode as specified in subclause 8.5.2;

1> if the UE was in CELL\_DCH state prior to entering idle mode:

2> consider all cells that were in the active set prior to entering idle mode to be barred according to [4]; and

2> consider the barred cells as using the value "allowed" in the IE "Intra-frequency cell re-selection indicator",  
and the maximum value in the IE "T<sub>barred</sub>".

#### Reference

3GPP TS 25.331 clause 8.1.4a.2.

### 8.1.3.9.3 Test purpose

To confirm that when the upper layers request the release of the RRC connection, the UE releases signalling radio bearer and its radio resources and goes back to the idle.

To confirm that the UE enters into idle mode by performing cell-selection to a non-barred cell.

### 8.1.3.9.4 Method of test

#### Initial Condition

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

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

#### Test Procedure

Table 8.1.3.9 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

**Table 8.1.3.9**

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 2</u>	<u>Cell 3</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>	<u>Ch. 1</u>	<u>Ch. 1</u>
<u>CPICH Ec</u>	<u>dBm/3.84 MHz</u>	<u>-60</u>	<u>-65</u>	<u>-70</u>

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>		<u>Cell 2</u>		<u>Cell 3</u>	
		<u>T0</u>	<u>T1</u>	<u>T0</u>	<u>T1</u>	<u>T0</u>	<u>T1</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>		<u>Ch. 1</u>		<u>Ch. 1</u>	
<u>CPICH Ec</u>	<u>dBm/3.84 MHz</u>	<u>-60</u>	<u>-60</u>	<u>-85</u>	<u>-65</u>	<u>-85</u>	<u>-70</u>

SS set up switches the downlink transmission power of the 3 cells according to the columns "T1" in Table 8.1.3.9. UE transmits a MEASUREMENT REPORT message which includes the primary scrambling code for cell 2 and 3 according to IE "Intra-frequency event identity", which is set to '1a' in the SYSTEM INFORMATION BLOCK TYPE 11. After the MEASUREMENT REPORT message is received, the SS configures the new radio link to be added from cell 2 and then the SS transmits to the UE in cell 1 an ACTIVE SET UPDATE message which includes IE "Radio Link Addition Information", indicating the addition of cell 2 into the active set, on DCCH using AM RLC.

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

The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain or AUTHENTICATION AND CIPHERING REQUEST for PS domain) and an invalid SQN. The UE shall transmit an UPLINK DIRECT TRANSFER message using AM on DCCH. After SS acknowledges the UPLINK DIRECT TRANSFER message, SS shall wait for T3216 or T3320 to expire in the UE. Then SS wait for 5 s. SS transmits PAGING TYPE 1 message in cell 3. The UE shall respond with RRC CONNECTION REQUEST message. SS then transmit RRC CONNECTION REJECT message back to UE. SS then waits for 22 minutes before SS execute generic procedure C.1 in cell 1 to check that UE is in idle mode in cell 1.



## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		→	MEASUREMENT REPORT	See specific message contents for this message
2		←	ACTIVE SET UPDATE	The SS transmit this message on downlink DCCH using AM RLC which includes IE "Radio Link Addition Information" for cell 2.
3		→	ACTIVE SET UPDATE COMPLETE	The UE adds the radio link in cell 2.
4		←	DOWNLINK DIRECT TRANSFER	Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.
5		→	UPLINK DIRECT TRANSFER	After SS acknowledged this message, SS waits for T3216 or T3320 to expire.
6				The SS waits for 5s
7		←	PAGING TYPE 1	SS sends this message in cell 3.
8		→	RRC CONNECTION REQUEST	
9		←	RRC CONNECTION REJECT	
10				SS waits 22 minutes for T <sub>barred</sub> to expire.
11		↔	CALL C.1	SS execute this generic procedure in cell 1. If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.



ACTIVE SET UPDATE (Step 2)

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

<u>Information Element</u>	<u>Value/remark</u>
<u>Radio link addition information</u> <u>- Primary CPICH Info</u> <u>- Primary Scrambling Code</u> <u>- Downlink DPCH info for each RL</u> <u>- DPCH frame offset</u>	<u>Set to same code as assigned for cell 2</u>  <u>Calculated value from Cell synchronisation information</u>

ACTIVE SET UPDATE COMPLETE (Step 3)

Only the message type of this message is checked.

DOWNLINK DIRECT TRANSFER (Step 4)

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

<u>Information Element</u>	<u>Value/remark</u>
<u>CN domain identity</u> <u>NAS message</u>	<u>CS domain or PS domain</u> <u>AUTHENTICATION REQUEST (CS domain) or</u> <u>AUTHENTICATION AND CIPHERING REQUEST</u> <u>(PS domain)</u>

UPLINK DIRECT TRANSFER (Step 5)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Integrity check info</u>  <u>- Message authentication code</u>  <u>- RRC Message sequence number</u>  <u>CN domain identity</u> <u>NAS message</u>  <u>Measured results on RACH</u>	<u>The presence of this IE is dependent on IXIT</u> <u>statements in TS 34.123-2. If integrity protection is</u> <u>indicated to be active, this IE shall be present with</u> <u>the values of the sub IEs as stated below. Else, this</u> <u>IE and the sub-IEs shall be absent.</u> <u>This IE is checked to see if it is present. The value is</u> <u>compared against the XMAC-I value computed by</u> <u>SS.</u> <u>This IE is checked to see if it is present. The value is</u> <u>used by SS to compute the XMAC-I value.</u> <u>CS domain or PS domain</u> <u>AUTHENTICATION FAILURE(CS domain) or</u> <u>AUTHENTICATION AND CIPHERING FAILURE (PS</u> <u>domain)</u> <u>Not checked</u>

3.3.4.3.68.1.3.9.5 Test requirement

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

After step 2 the UE shall transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH.

After step 4 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 7, the UE shall transmit RRC CONNECTION REQUEST message using TM RLC on CCCH in cell 3.

After step 10 the UE shall be in idle mode of cell 1.

3GPP TSG- T1 Meeting #17  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

Tdoc # T1-020864

3GPP TSG-T1/SIG Meeting #26  
Luton, UK, 4<sup>th</sup> – 8<sup>th</sup> November 2002

T1S-020882

CR-Form-v4	
<b>CHANGE REQUEST</b>	
⌘	34.123-1 CR 381
⌘	ev -
⌘	Current version: 5.1.1

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

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

<b>Title:</b>	⌘ CR to TS34.123-1 REL-5; Corrections to package 3 Measurement test cases as revision of T1S-020781.
<b>Source:</b>	⌘ Ericsson
<b>Work item code:</b>	⌘ TEI
<b>Date:</b>	⌘ 07/11/2002
<b>Category:</b>	⌘ <b>F</b>
Use <u>one</u> of the following categories:	
<b>F</b> (correction)	<b>2</b> (GSM Phase 2)
<b>A</b> (corresponds to a correction in an earlier release)	<b>R96</b> (Release 1996)
<b>B</b> (addition of feature),	<b>R97</b> (Release 1997)
<b>C</b> (functional modification of feature)	<b>R98</b> (Release 1998)
<b>D</b> (editorial modification)	<b>R99</b> (Release 1999)
Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>REL-4</b> (Release 4)
	<b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ To correct errors in sections 8.4.1.24, 8.4.1.25, 8.4.1.26, 8.4.1.28, 8.4.1.29, 8.4.1.30.
<b>Summary of change:</b>	⌘ Changes in this version compared to last version marked in yellow.
General:	
1. For 2X events "Hysteresis Inter Frequency" should be "Hysteresis".	
The following changes to section 8.4.1.24 are proposed:	
1. Table 8.4.1.24-1 The CPICH Ec should be stated in steps of 5.	
2. Conformance requirement updated in 8.4.1.24.2.	
3. Physical Channel Reconfiguration (Step 2), ITP value Mode 10 should be Mode 0.	
4. Section 8.4.1.24.4. Relocate the "Important note" after the text describing the sequence.	
5. Measurement Control (Step 4 and Step 8). The "Used frequency threshold" is not required to be present for Event 2A.	
6. Physical Channel Reconfiguration (Step 2). When ""Fixed or flexible position" is set to Flexible then "TFCI existence" must be set to TRUE.	
7. Table formatting change in Expected sequence. Some text in the Comment field for Step 3 is not visible due to incorrect cell size in the table. Adjust the cell size in this table. This does not constitute a real change as the missing	

text was there it just was not visible, hence this text is not shown as added/changed text.

8. The Power offset PPilot-DPDCH in Physical Channel reconfiguration (Step 2) is set to TBD. Insert a value instead.
9. Increase the Hysteresis value from 10 to 14.5 to avoid the possibility of Event 2A being generated at T1 values.
10. Change some CPICH Ec values in Table 8.4.1.24-1 to ensure correct triggering and non-triggering of events. Take note of tolerance levels : RSCP +/- 3dBm, SS accuracy +/- 2dBm.
11. Physical Channel Reconfiguration (Step 2). Include Uplink only Compressed Mode information.
12. TGD changed from 0 to undefined after RAN CR1624.

The following changes to section 8.4.1.25 are proposed:

1. Table 8.4.1.25-1 The CPICH Ec should be stated in steps of 5.
2. Measurement Control (Step 1) and Table 8.4.1.25-1. Change CPICH Ec values in the Table and threshold values in Step1 for events 2B and 2E to ensure correct handling of the events. Take note of tolerance levels: RSCP +/- 3dBm, SS accuracy +/- 2dBm
3. Physical Channel Reconfiguration (Step 2). When "Fixed or flexible position" is set to Flexible then "TFCI existence" must be set to TRUE.
4. Measurement Report (Step 8). An absent check should be done for CPICH EC/No while a present check should be done for CPICH RSCP. See data in Measurement Control (Step 1).
5. Measurement Control (Step 2). Change Reporting Cell Status for Event 2 B to "Report cells within active set or within virtual active set or of the other RAT" as when after T1 Cell 4 is in the active set or virtual active set for Cell 1.
6. The Power offset PPilot-DPDCH in Physical Channel reconfiguration (Step 2) is set to TBD. Insert a value instead.
7. Physical Channel Reconfiguration (Step 2). Include Uplink only Compressed Mode information.
8. Added some information about Layer 3 Filtering.
9. TGD changed from 0 to undefined after RAN CR1624.

The following changes to section 8.4.1.26 are proposed:

1. Table 8.4.1.26-1 The CPICH Ec should be stated in steps of 5.
2. Table 8.4.1.26-1. Ensure that the CPICH Ec values in the Table allow for the events to be triggered when expected. Take note of tolerance levels: RSCP +/- 3dBm, SS accuracy +/- 2dBm
3. Measurement Report (Step 4 and Step 6). Information relating to Inter-Frequency Cells should not be included for Events 2D and 2F. See description of UE behavior, in section 8.4.1.26.2, when events 2D and 2F are configured.
4. Step numbers in the Expected Sequence and the message descriptions do not match.
5. Remove references to compressed mode and Physical Channel Reconfiguration, compressed mode is not used in this case, events 2D and 2F relate to the currently used frequency.
6. Title changed as event 2D and 2F are not related to Inter Frequency measurements but instead to the used frequency.
7. ICS/IXIT statement about CM removed.

The following changes to section 8.4.1.28 are proposed:

1. The statement (Check to see if set to "FDD") is in the incorrect place.

2. Step 5 and Step 7 need to be rephrased to indicate that the RX-TX time difference changes gradually over time until the thresholds are reached. The UE can drift for 5 microseconds for every 200 ms. This equates to 19.2 chips for every 200 ms. Use 15 chips in the test case.
3. Editorial correction, 2 cells added in the initial condition.

The following changes to section 8.4.1.29 are proposed:

1. In Measurement Control (Step 2), the value of the IE Measurement Validity: UE State should be changed to "all states except CELL\_DCH".
2. In Expected Sequence, Step 4, the time after which the UE repeats the message should be 1100 ms.
3. Measurement Report (Step 3 and Step 4). For the RLC Buffers Payload, instead of stating, "Check to see if the value is reasonable", state "Check to see if the value is above the threshold".

The following changes to section 8.4.1.30 are proposed:

1. In Expected Sequence, Step 5 and Step 7, the time after which the UE repeats the message should be 2100 ms.
2. Section 8.4.1.30.4. Events 4a and 4b can be included in one Measurement Control message.
3. Measurement Report (Step 4 and Step 5). According to section 8.1.2 of 34.123 (this section refers to Section 9 of 34.108 and the description of the contents of the RRC Connection Setup message), the SRBs are mapped to an UL Transport Channel with ID equal to 5 for all four SRBs. Therefore the SRBs should not be visible in the Measurement Report message as only Transport Channel with ID equal to 1 is specified in the Measurement Control message for Event 4A. The RB specified in the Test Procedure has a Transport Channel Identity of 1 and an RB Identity of 20.
4. Measurement Report (Step 6 and Step 7). According to Section 9.1.1 (Contents of Radio Bearer Setup message: AM or UM (Packet to CELL\_DCH from CELL\_DCH in PS) the value for the RB Identity is 20.
5. Measurement Report (Step 4 and Step 5). For the RLC Buffers Payload, instead of stating, "Check to see if the value is reasonable", state "Check to see if the value is above the threshold".
6. Measurement Report (Step 6 and Step 7). For the RLC Buffers Payload, instead of stating, "Check to see if the value is reasonable", state "Check to see if the value is below the threshold".

**Consequences if not approved:**   ⌘ Errors remain in Test cases.

**Clauses affected:**   ⌘ Sections 8.4.1.24, 8.4.1.25, 8.4.1.26, 8.4.1.28, 8.4.1.29, 8.4.1.30

**Other specs affected:**   ⌘  Other core specifications   ⌘  
 Test specifications                   ⌘ TS 34.123-2  
 O&M Specifications

**Other comments:**   ⌘ Affects R99, Rel 4 and Rel 5 UEs.

## 8.4.1.24 Measurement Control and Report: Inter-frequency measurement for event 2A

### 8.4.1.24.1 Definition

### 8.4.1.24.2 Conformance requirement

When event 2a is configured in the UE within a measurement, the UE shall:

- 1> when the measurement is initiated or resumed:
  - 2> store the used frequency in the variable BEST\_FREQUENCY\_2A\_EVENT.
- 1> if equation 1 below has been fulfilled for a time period indicated by "Time to trigger" for a frequency included for that event and which is not stored in the variable BEST\_FREQUENCY\_2A\_EVENT:
  - 2> send a measurement report with IEs set as below:
    - 3> set in "inter-frequency measurement event results":
      - 4> "inter-frequency event identity" to "2a"; and
      - 4> "Frequency info" to the frequency that triggered the event; and
      - 4> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cells parameters ID" of the best primary CCPCH for TDD cells on that frequency; [not taking into account the cell individual offset](#);
    - 3> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2; [not taking into account the cell individual offset](#);
  - 2> update the variable BEST\_FREQUENCY\_2A\_EVENT with that frequency.

Equation 1:

$$Q_{NotBest} \geq Q_{Best} + H_{2a} / 2$$

The variables in the formula are defined as follows:

$Q_{NotBest}$  is the quality estimate of a frequency not stored the "best frequency" in the variable BEST\_FREQUENCY\_2A\_EVENT.

$Q_{Best}$  is the quality estimate of the frequency stored in "best frequency" in the variable BEST\_FREQUENCY\_2A\_EVENT.

$H_{2a}$  is the hysteresis parameter for the event 2a in that measurement.

Reference

3GPP TS 25.331 clause 14.2.1.1

### 8.4.1.24.3 Test Purpose

- 1.A To confirm that the UE sends MEASUREMENT REPORT message if event 2A is configured, and if any of the non- used frequencies quality estimate becomes better than the currently used frequency quality estimate.

1.B To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if hysteresis condition is not fulfilled.

1.C To confirm that the UE does not send MEASUREMENT REPORT message indicating event 2A if time to trigger condition is not fulfilled.

#### 8.4.1.24.4 Method of test

##### Initial Condition

System Simulator: 2 cells – The initial configurations of the 2 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.24-1. The table is found in "Test Procedure" clause. UE: CS-DCCH+DTCH\_DCH (State 6-9) or PS-DCCH+DTCH\_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

##### Related ICS/IXIT statements

- Compressed mode required yes/no

##### Test Procedure

Table 8.4.1.24-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1", "T2", "T3", "T4" and "T5" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

**Table 8.4.1.24-1**

Parameter	Unit	Cell 1						Cell 4					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
UTRA RF Channel Number		Ch. 1						Ch. 2					
CPICH Ec	DB m/3. 84 Mhz	-66 -65	-66 -65	-66 -65	-66 -70	-66 -65	-66 -70	-75	-60	-75	-60 -55	-75	-60 -55

The UE is initially in CELL\_DCH state of cell 1. SS commands the UE to perform measurements of transmitted power using MEASUREMENT CONTROL message. This measurement is setup to confirm that while sending MEASUREMENT REPORT message, the UE sets IE "Additional measured results" correctly. If UE requires compressed mode, SS performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS then commands the UE to perform Inter-frequency measurements and report event 2A by sending MEASUREMENT CONTROL message. In MEASUREMENT CONTROL message, IE "Hysteresis" is set to ~~10~~ 14.5 dB and IE "Additional measurement list" is set to id of "UE Internal measurements" configured earlier. SS then configures itself according to the values in columns "T1" shown above. Even though quality estimate for Cell 4 has become better than that of Cell 1, event 2A will not be triggered since hysteresis condition is not fulfilled. SS then configures itself according to the values in columns "T2" shown above. SS sends MEASUREMENT CONTROL message to modify parameter "Hysteresis" of Inter-frequency measurements to 1 dB. SS then configures Cell 1 and Cell 4 raises power level of Cell 4 according to columns "T3" for short duration (less than 5 seconds), and then configures itself according to columns "T4" shown above. The UE will not send MEASUREMENT REPORT message because time to trigger condition is not fulfilled. SS then configures itself according to the values in columns "T5" shown above. The UE sends MEASUREMENT REPORT message reporting even 2A as well as measurement of transmitted power.



~~Important Note: Duration between time instant "T3" and "T4" (between steps 9 and 10 of expected sequence) must be less than 5 seconds.~~

SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

Important Note: Duration between time instant "T3" and "T4" (between steps 9 and 10 of expected sequence) must be less than 5 seconds.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	To setup UE Internal measurement. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2A.
5				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.24-1.
6				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as hysteresis condition is not fulfilled.
7				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.24-1.
8		←	MEASUREMENT CONTROL	Modify hysteresis parameter for event 2A.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.24-1.
10				SS re-adjusts the downlink transmission power settings according to columns "T4" in table 8.4.1.24-1. This step should be completed within 5 seconds after completing step 9.
11				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message, as time to trigger condition is not fulfilled.
12				SS re-adjusts the downlink transmission power settings according to columns "T5" in table 8.4.1.24-1.
13		→	MEASUREMENT REPORT	This message should come at least 5 seconds later after changing power setting of Cell 4.
14		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

### Specific Message Contents

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

#### MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE transmitted power
- Filter Coefficient	4
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE mode	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE report criteria	No reporting
Measurement reporting mode	Not present
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/remark
Downlink information common for all radio links <ul style="list-style-type: none"> <li>- Downlink DPCH info common for all RL</li> <li>- Timing Indication</li> <li>- Downlink DPCH power control information</li> <li>- DPC mode</li> <li>- CHOICE Mode</li> <li>- Power offset PPilot-DPDCH</li> <li>- DL rate matching restriction information</li> <li>- Spreading factor</li> <li>- Fixed or flexible position</li> <li>- TFCI existence</li> <li>- Number of bits for Pilot bits (SF=128, 256)</li> <li>- DPCH compressed mode info</li> <li>- TGPSI</li> <li>- TGPS status flag</li> <li>- TGCFN</li> <li>- Transmission gap pattern sequence configuration parameters               <ul style="list-style-type: none"> <li>- TGMP</li> <li>- TGPRC</li> <li>- TGSN</li> <li>- TGL1</li> <li>- TGL2</li> <li>- TGD</li> <li>- TGPL1</li> <li>- TGPL2</li> <li>- RPP</li> <li>- ITP</li> </ul> </li> <li>- CHOICE UL/DL mode               <ul style="list-style-type: none"> <li>- Downlink compressed mode method</li> <li>- Uplink compressed mode method</li> <li>- Downlink frame type</li> <li>- DeltaSIR1</li> <li>- DeltaSIRAfter1</li> <li>- DeltaSIR2</li> <li>- DeltaSIRAfter2</li> <li>- N identify abort</li> <li>- T Reconfirm abort</li> <li>- TX diversity mode</li> <li>- SSDT information</li> <li>- Default DPCH offset value</li> </ul> </li> </ul>	Maintain  0 (Single) FDD TBD_0 Not present Refer to the parameter set in TS 34.108 Flexible FALSE TRUE Not present  1 Activate (Current CFN+(256 – TTI/10msec)) mod 256  FDD Measurement Infinity 4 7 Not Present Undefined0 3 Not Present Mode 0 Mode 40_0 UL and DL or DL only <u>or UL only</u> depending on UE capability SF/2 SF/2 or Not present depending on UE capability B 2.0 1.0 Not present Not present Not present Not present None Not present 0

## MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- 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	No report
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- Inter-frequency SET UPDATE	
- UE autonomous update mode	On with no reporting
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Used frequency threshold	<del>-72 dBm</del> <a href="#">Not present</a>
- Used frequency W	0
- Hysteresis <del>Inter-frequency</del>	<del>40</del> <a href="#">14.5 dB</a>
- 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	<del>-72 dBm</del> <a href="#">Not present</a>
- Used frequency W	0
- Hysteresis Inter Frequency	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non-used frequency parameter list	
- Non-used frequency threshold	-72 dBm
- Non-used frequency W	0
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

## MEASUREMENT REPORT (Step 13)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present
- UE RX TX report entry list	Check to see if it is absent
Event results	Inter-frequency <a href="#">measurement</a> event results, 2A
- <a href="#">Inter-frequency event identity</a> <a href="#">Event ID</a>	
- 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

When event 2b is configured in the UE within a measurement, the UE shall:

1> if equations 1 and 2 below have been fulfilled for a time period indicated by "Time to Trigger" from the same instant, respectively for one or several non-used frequencies included for that event and for the used frequency:

2> if any of those non-used frequency is not stored in the variable TRIGGERED\_2B\_EVENT:

3> store the non-used frequencies that triggered the event and that were not previously stored in the variable TRIGGERED\_2B\_EVENT into that variable;

3> send a measurement report with IEs set as below:

4> set in "inter-frequency measurement event results":

5> "inter-frequency event identity" to "2b"; and

5> for each non-used frequency that triggered the event, beginning with the best frequency:

6> "Frequency info" to that non-used frequency; and

6> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cell parameters ID" of the best primary CCPCH for TDD cells on that non-used frequency; not taking into account the cell individual offset;

4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2; not taking into account the cell individual offset;

1> if equation 3 below is fulfilled for a non-used frequency stored in the variable TRIGGERED\_2B\_EVENT:

2> remove that non-used frequency from the variable TRIGGERED\_2B\_EVENT.

1> if equation 4 below is fulfilled for the used frequency:

2> clear the variable TRIGGERED\_2B\_EVENT.

Triggering conditions:

Equation 1:

$$Q_{Non\ used} \geq T_{Non\ used\ 2b} + H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency that becomes better than an absolute threshold.

$T_{Non\ used\ 2b}$  is the absolute threshold that applies for this non-used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

Equation 2:

$$Q_{Used} \leq T_{Used\ 2b} - H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2b}$  is the absolute threshold that applies for the used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

Leaving triggered state condition:

Equation 3:

$$Q_{Non\ used} < T_{Non\ used\ 2b} - H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency that is stored in the variable TRIGGERED\_2B\_EVENT.

$T_{Non\ used\ 2b}$  is the absolute threshold that applies for this non-used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

Equation 4:

$$Q_{Used} > T_{Used\ 2b} + H_{2b} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2b}$  is the absolute threshold that applies for the used frequency in that measurement.

$H_{2b}$  is the hysteresis parameter for the event 2b.

...

When event 2e is configured in the UE within a measurement, the UE shall:

1> if equation 1 below has been fulfilled for one or several non-used frequencies included for that event during the time "Time to trigger":

2> if any of those non-used frequencies is not stored in the variable TRIGGERED\_2E\_EVENT:

3> store the non-used frequencies that triggered the event and that were not previously stored in the variable TRIGGERED\_2E\_EVENT into that variable;

3> send a measurement report with IEs set as below:

4> set in "inter-frequency measurement event results":

5> "inter-frequency event identity" to "2e"; and

5> for each non-used frequency that triggered the event, beginning with the best frequency:

6> "Frequency info" to that non-used frequency; and

6> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cell parameters ID" of the best primary CCPCH for TDD cells on that non-used frequency, not taking into account the cell individual offset;

4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2, not taking into account the cell individual offset;

1> if equation 2 below is fulfilled for a non-used frequency stored in the variable TRIGGERED\_2E\_EVENT:

2> remove that non-used frequency from the variable TRIGGERED\_2E\_EVENT.

Triggering condition:

Equation 1:

$$Q_{Non\ used} \leq T_{Non\ used\ 2e} - H_{2e} / 2$$

The variables in the formula are defined as follows:



$Q_{Non\ used}$  is the quality estimate of a non-used frequency that becomes worse than an absolute threshold.

$T_{Non\ used\ 2e}$  is the absolute threshold that applies for that non-used frequency for that event.

$H_{2e}$  is the hysteresis parameter for the event 2e.

Leaving triggered state condition:

Equation 2:

$$Q_{Non\ used} > T_{Non\ used\ 2e} + H_{2e} / 2$$

The variables in the formula are defined as follows:

$Q_{Non\ used}$  is the quality estimate of a non-used frequency stored in the variable TRIGGERED\_2E\_EVENT.

$T_{Non\ used\ 2e}$  is the absolute threshold that applies for that non-used frequency for that event.

$H_{2e}$  is the hysteresis parameter for the event 2e.

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

#### Related ICS/IXIT statements

- Compressed mode required            yes/no

#### Test Procedure

Table 8.4.1.25-1 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	DB m/3. 84 MHz	-60 <u>-55</u>	-63 <u>-55</u>	-74 <u>-85</u>	-74 <u>-85</u>	-60 <u>-55</u>	-60 <u>-55</u>

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. [Note that the Filter Coefficient IE has a value of 4 so Layer 3 Filtering applies in this case.](#)

If UE requires compressed mode, SS 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.

SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2B and 2E. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		→	MEASUREMENT 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. <a href="#">Layer 3 Filtering causes an additional delay.</a>
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. <a href="#">Layer 3 Filtering causes an additional delay. For Cell 1 the CPICH Ec value of 80 dBm would have to be reported at least three times from the Physical Layer to cause the Cell 1 frequency threshold to be reached. Depending on tolerance values this number will be greater (CPICH Ec is +/- 3 dBm, SS set Hysteresis value is +/- 2dB)</a>
9		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

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	No report
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- Inter-frequency SET UPDATE	
- UE autonomous update mode	On with no reporting
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis <del>Inter-Frequency</del>	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non used frequency parameter list	
- Non used frequency threshold	<del>-15</del> <u>-70</u> dBm
- Non used frequency W	0
- Inter-frequency event identity	2B
- Used frequency threshold	<del>-16</del> <u>-70</u> dBm
- Used frequency W	0.4
- Hysteresis <del>Inter-Frequency</del>	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	<del>Within monitored set non used frequency</del> <u>Within active set or within virtual active set or of the other RAT</u>
- Maximum number of reporting cells	1
- Non used frequency parameter list	
- Non used frequency threshold	<del>-15</del> <u>-70</u> 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
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## 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/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Maintain
- Timing Indication	0 (Single)
- Downlink DPCH power control information	FDD
- DPC mode	<del>TBD</del> 0
- CHOICE Mode	Not present
- Power offset PPilot-DPDCH	Refer to the parameter set in TS 34.108
- DL rate matching restriction information	Flexible
- Spreading factor	<del>FALSE</del> TRUE
- Fixed or flexible position	Not present
- TFCI existence	
- Number of bits for Pilot bits (SF=128, 256)	
- DPCH compressed mode info	1
- TGPSI	Activate
- TGPS status flag	(Current CFN+(256 – TTI/10msec)) mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	<del>Undefined</del> 0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL mode	UL and DL or DL only <u>or UL only</u> depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	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/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 <b>measurement</b> event results, 2E
- <b>Inter-frequency event identity</b> Event ID	
- 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/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 for cell 4
- Primary scrambling code	Check to see if it is <b>present</b> <b>absent</b>
- CPICH Ec/No	Check to see if it is <b>absent</b> <b>present</b>
- 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 <b>measurement</b> event results, 2B
- <b>Inter-frequency event identity</b> Event ID	
- 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 m**Measurement for events 2D and 2F

##### 8.4.1.26.1 Definition

#### 8.4.1.26.2 Conformance requirement

When event 2d is configured in the UE within a measurement, the UE shall:

- 1> if equation 1 below has been fulfilled for the used frequency during the time "Time to trigger":
  - 2> if the variable TRIGGERED\_2D\_EVENT is set to FALSE:
    - 3> set the variable TRIGGERED\_2D\_EVENT to TRUE;
    - 3> send a measurement report with IEs set as below:
      - 4> set in "inter-frequency event results": "inter-frequency event identity" to "2d" and no IE "Inter-frequency cells";
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
  - 1> if the variable TRIGGERED\_2D\_EVENT is set to TRUE and if equation 2 is fulfilled for the used frequency:
    - 2> set the variable TRIGGERED\_2D\_EVENT to FALSE.

Triggering condition:

Equation 1:

$$Q_{Used} \leq T_{Used\ 2d} - H_{2d} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2d}$  is the absolute threshold that applies for the used frequency and event 2d.

$H_{2d}$  is the hysteresis parameter for the event 2d.

Leaving triggered state condition:

Equation 2:

$$Q_{Used} > T_{Used\ 2d} + H_{2d} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2d}$  is the absolute threshold that applies for the used frequency and event 2d.

$H_{2d}$  is the hysteresis parameter for the event 2d.

...

When event 2f is configured in the UE within a measurement, the UE shall:

- 1> if equation 1 below has been fulfilled for the used frequency during the time "Time to trigger":
  - 2> if the variable TRIGGERED\_2F\_EVENT is set to FALSE:
    - 3> set the variable TRIGGERED\_2F\_EVENT to TRUE;
    - 3> send a measurement report with IEs set as below:
      - 4> set in "inter-frequency event results": "inter-frequency event identity" to "2f", and no IE "Inter-frequency cells";
      - 4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2.
  - 1> if the variable TRIGGERED\_2F\_EVENT is set to TRUE and if equation 2 is fulfilled for the used frequency:

2> set the variable TRIGGERED\_2F\_EVENT to FALSE.

Triggering condition:

Equation 1:

$$Q_{Used} \geq T_{Used\ 2f} + H_{2f} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2f}$  is the absolute threshold that applies for the used frequency and event 2f.

$H_{2f}$  is the hysteresis parameter for the event 2f.

Leaving triggered state condition:

Equation 2:

$$Q_{Used} < T_{Used\ 2f} - H_{2f} / 2$$

The variables in the formula are defined as follows:

$Q_{Used}$  is the quality estimate of the used frequency.

$T_{Used\ 2f}$  is the absolute threshold that applies for the used frequency and event 2f.

$H_{2f}$  is the hysteresis parameter for the event 2f.

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

Related ICS/4XIT statements

Compressed mode required — yes/no

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	DB m/3. 84 MHz	-60 -55	-72 -85

The UE is initially in CELL\_DCH state of cell 1. **If UE requires compressed mode, 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. 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 <a href="#">void</a>				<b>If Compressed Mode not required (refer ICS/IXIT) go to step 4</b>
2 <a href="#">void</a>		←	<b>PHYSICAL CHANNEL RECONFIGURATION</b>	<b>SS instructs UE to begin compressed mode operation.</b>
3 <a href="#">void</a>		→	<b>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</b>	
4		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2D and 2F.
5		→	MEASUREMENT REPORT	The UE shall report event 2F
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.26-1.
7		→	MEASUREMENT REPORT	The UE shall report event 2D.
8		↔	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:

**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/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
TFCH existence	FALSE
Number of bits for Pilot bits (SF=128, 256)	Not present
DPCH compressed mode info	
TGPSI	1
TGPS status flag	Activate
TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
Transmission gap pattern sequence	
configuration parameters	
TGMP	FDD Measurement
TGPRC	Infinity
TGSN	4
TGL1	7
TGL2	Not Present
TGD	0
TGPL1	3
TGPL2	Not Present
RPP	Mode 0
ITP	Mode 0
CHOICE UL/DL mode	UL and DL or DL only depending on UE capability
Downlink compressed mode method	SF/2
Uplink compressed mode method	SF/2 or Not present depending on UE capability
Downlink frame type	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 3.4)

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	No report
indicator	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- 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	<del>-66</del> -70 dBm
- Used frequency W	0
- Hysteresis <del>Inter-Frequency</del>	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Inter-frequency event identity	2F
- Used frequency threshold	<del>-66</del> -70 dBm
- Used frequency W	0
- Hysteresis <del>Inter-Frequency</del>	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 4.5)

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 <u>measurement</u> event results, 2F
- <u>Inter-frequency event identity</u> Event ID	
- <del>Cell measurement event results</del>	
- <del>Frequency info</del>	Frequency of Cell 1
- <del>Primary CPICH info</del>	
- <del>Primary scrambling code</del>	Primary scrambling code of Cell 1

#### MEASUREMENT REPORT (Step 6.7)

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 <u>measurement</u> event results, 2D
- <u>Inter-frequency event identity</u> Event ID	
- <del>Cell measurement event results</del>	
- <del>Frequency info</del>	Frequency of Cell 1
- <del>Primary CPICH info</del>	
- <del>Primary scrambling code</del>	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.

#### 8.4.1.28 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 event 6F is ordered by UTRAN in a MEASUREMENT CONTROL message, the UE shall send a MEASUREMENT REPORT message when the UE Rx-Tx time difference becomes larger than the threshold defined by the IE "UE Rx-Tx time difference threshold".

When event 6G is ordered by UTRAN in a MEASUREMENT CONTROL message, the UE shall send a MEASUREMENT REPORT when the UE Rx-Tx time difference becomes less than the threshold defined by the IE "UE Rx-Tx time difference threshold".

##### Reference

3GPP TS 25.331, clauses 14.6.2.6 and 14.6.2.7.

#### 8.4.1.28.3 Test Purpose

1. 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: 2+ cells – The initial configuration of the cells 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. 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				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				<del>SS switches Tx timing of cell 2 to a delay of -192 chips with respect to cell 1.</del> <u>SS switches the Tx timing of Cell 2, with respect to Cell 1 to a delay of - 15 chips for every 200 ms. SS repeats this operation until the threshold is reached.</u>
6		→	MEASUREMENT REPORT	UE shall send 6F event measurement report.
7				<del>SS switches Tx timing of cell 2 to a delay of -192 chips with respect to cell 1.</del> <u>SS switches the Tx timing of Cell 2 with respect to Cell 1 to a delay of 15 chips for every 200 ms. SS repeats this operation until the threshold is reached.</u>
8		→	MEASUREMENT REPORT	UE shall send 6G event measurement report.
9		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message 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

#### 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 <i>mode</i>	FDD
- Measurement quantity	UE Rx-Tx time difference
- Filter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	FALSE
- CHOICE <i>mode</i>	FDD
- UE Rx-Tx time difference	TRUE
- CHOICE <i>report criteria</i>	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/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE <i>mode</i>	Check to see if set to "FDD"
UE Rx-Tx report entries	<del>Check to see if set to "FDD"</del>
- 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 <i>event result</i>	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6F"
-CHOICE <i>mode</i>	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/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE <i>mode</i>	Check to see if set to "FDD"
UE 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 <i>event result</i>	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6G"
-CHOICE <i>mode</i>	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

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



The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
  - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
  - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":  
...  
2> for measurement type "UE positioning measurement":  
...  
2> for any other measurement type:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> begin measurements according to the stored control information for this measurement identity.

...

For traffic volume measurements in the UE only one quantity is compared with the thresholds. This quantity is Transport Channel Traffic Volume (which equals the sum of Buffer Occupancies of RBs multiplexed onto a transport channel) in number of bytes. Every TTI, UE measures the Transport Channel Traffic Volume for each transport channel and compares it with the configured thresholds. If the monitored Transport Channel Traffic Volume exceeds an absolute threshold, i.e. if  $TCTF > \text{Reporting threshold}$ , this is an event (event 4a) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

In CELL\_FACH state, the UE shall:

- 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT\_IDENTITY are met for any ongoing traffic volume measurement or UE positioning measurement that is being performed in the UE;
- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

## Reference

3GPP TS 25.331, clause 14.4.2.1, 3GPP TS 25.331, clause 8.4.1.3, 8.4.2.2.

### 8.4.1.29.3 Test Purpose

1. 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.
2. To confirm that the UE includes in the MEASUREMENT REPORT message, measurement report in IE "Measurement results on RACH" as specified in System Information Block type 12.

#### 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. The System Information Block type 12 is modified compared to the default settings so that CPICH RSCP is reported for intra-frequency reporting when transmitting RACH messages. After this modification, 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. 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 brought to the CELL_FACH state in the cell 1.
1a		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	System Information Block type 12 is different from the default settings (see specific message contents)
1b		←	SYSTEM INFORMATION CHANGE INDICATION	To notify the modification of SYSTEM INFORMATION BLOCK TYPE 12, this message is transmitted.
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 <del>4000</del> 1100 ms.
5		↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

##### Specific Message Content

##### System Information Block type 12 (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
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	0
- 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 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

Information Element	Value/Remark
- 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

#### 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 Value tag	2

#### SYSTEM INFORMATION CHANGE INDICATION (Step 1b)

Information Element	Value/remark
Message Type	
BCCH modification info	
MIB Value Tag	2
BCCH Modification time	Not Present

#### 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
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- Measurement validity	
- UE state	<del>All states</del> <a href="#">All states except CELL_DCH</a>
- 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/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	1
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	2
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	3
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	4
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	20
- RLC Buffers Payload	Check to see if the value is <a href="#">reasonable above the threshold</a>
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
Measured Results on RACH	
- Measurement result for current cell	Check to see if set to 'CPICH RSCP'
- CHOICE measurement quantity	Checked to see if set to within an acceptable range.
- CPICH RSCP	Checked to see if this IE is absent
- Measurement results for monitored cells	Check to see if set to 'CPICH RSCP'
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. The IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP shall be included in this message.

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

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

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
  - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
  - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
    - ...
  - 2> for measurement type "UE positioning measurement":
    - ...
  - 2> for any other measurement type:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> begin measurements according to the stored control information for this measurement identity.

...

For traffic volume measurements in the UE only one quantity is compared with the thresholds. This quantity is Transport Channel Traffic Volume (which equals the sum of Buffer Occupancies of RBs multiplexed onto a transport channel) in number of bytes. Every TTI, UE measures the Transport Channel Traffic Volume for each transport channel and compares it with the configured thresholds.

If the monitored Transport Channel Traffic Volume exceeds an absolute threshold, i.e. if  $TCTF > \text{Reporting threshold}$ , this is an event (event 4a) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

If the monitored Transport Channel Traffic Volume becomes smaller than an absolute threshold, i.e. if  $TCTF < \text{Reporting threshold}$ , this is an event (4b) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

## Reference

3GPP TS 25.331, clause 14.4.2.2, 3GPP TS 25.331, clause 8.4.1.3.

### 8.4.1.30.3 Test Purpose

1. 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2		←	MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias (event 4a <u>and event 4b</u> ) to UE.
3		←	<del>MEASUREMENT CONTROL</del> <u>Void</u>	<del>SS provides Traffic Volume measurement criterias (event 4b) to UE.</del>
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 <del>2000</del> <u>2100</u> 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 <del>2000</del> <u>2100</u> ms.
8		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity Measurement Command Measurement Reporting Mode - Measurement Reporting Transfer Mode - Periodic Reporting / Event Trigger Reporting Mode Additional measurements list CHOICE measurement type - Traffic volume measurement objects - Uplink transport channel type - UL target transport channel ID - Traffic volume measurement quantity - Measurement quantity - Traffic volume reporting quantity - RLC Buffer Payload for each RB - Average of RLC Buffer Payload for each RB - Variance of RLC Buffer Payload for each RB - Measurement validity - UE state - Traffic volume measurement reporting criteria - <a href="#">Uplink transport channel type</a> - <a href="#">UL Transport Channel ID</a> - Traffic volume event identity - Reporting threshold - Time to trigger - Pending time after trigger - Tx interruption after trigger - <a href="#">Traffic volume event identity</a> - <a href="#">Reporting threshold</a> - <a href="#">Time to trigger</a> - <a href="#">Pending time after trigger</a> - <a href="#">Tx interruption after trigger</a>	15 Setup  Acknowledged Mode RLC Event Trigger Not Present  DCH 1  RLC buffer payload  TRUE FALSE FALSE  CELL_DCH  <a href="#">Not present</a> <a href="#">Not present</a> 4a 256 100 2000 Not present <a href="#">4b</a> <a href="#">32</a> <a href="#">100</a> <a href="#">2000</a> <a href="#">Not present</a>



### 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
— Average of RLC Buffer Payload for each RB	FALSE
— Variance of RLC Buffer Payload for each RB	FALSE
— 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/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	
<del>RB Identity</del>	1
<del>RLC Buffers Payload</del>	<del>Check to see if this IE is present</del>
<del>Average of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>Variance of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>RB Identity</del>	2
<del>RLC Buffers Payload</del>	<del>Check to see if this IE is present</del>
<del>Average of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>Variance of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>RB Identity</del>	3
<del>RLC Buffers Payload</del>	<del>Check to see if this IE is present</del>
<del>Average of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>Variance of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>RB Identity</del>	4
<del>RLC Buffers Payload</del>	<del>Check to see if this IE is present</del>
<del>Average of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
<del>Variance of RLC Buffer Payload</del>	<del>Check to see if this IE is absent</del>
- RB Identity	20
- RLC Buffers Payload	Check to see if the value is <del>reasonable</del> <u>above the threshold</u>
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
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/remark
Measurement identity	Check to see if set to <del>44</del> <u>15</u>
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 <del>correct</del> <u>20</u>
- RLC buffers payload	Check that value is <del>reasonable</del> <u>below the threshold</u>
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.



3GPP TSG-T1 Meeting #17

T1-020867

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CR-Form-v7

**CHANGE REQUEST**⌘ **34.123-1 CR 401** ⌘ rev **-** ⌘ Current version: **5.1.1** ⌘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 

<b>Title:</b>	⌘ CR to 34.123-1 clause 8.2 (Non-package 1&2) Rel-5: Correction from CRs approved in RP17meeting (T1S020742rev1)		
<b>Source:</b>	⌘ Panasonic		
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ 28/10/2002</span>		
<b>Category:</b>	⌘ <b>F</b> <span style="float: right;"><b>Release:</b> ⌘ REL-5</span>		
	<table border="0"> <tr> <td style="vertical-align: top;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </td> <td style="vertical-align: top;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> </td> </tr> </table>	<p><i>Use <u>one</u> of the following categories:</i></p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p>
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<b>Reason for change:</b> ⌘	<ol style="list-style-type: none"> <li>1. From CR1680 The use of synchronization procedures A and B is clarified wherever applicable.</li> <li>2. From CR1573 UE report of "SFN-SFN observed time difference" measurement in Intra- and Inter-frequency measurement report is not needed from a functional point of view.</li> <li>3. From CR 1624 The current semantics description states that under only one transmission gap in the transmission gap pattern, TGD should be set to "0", but this is not a possible value for this parameter.</li> <li>4. From CR1529 It is clarify that the UE behaviour is unspecified if the UE is in CELL_FACH state and the value of the IE "Activation time" is different from "Now" in FDD.</li> </ol>
<b>Summary of change:</b> ⌘	<ol style="list-style-type: none"> <li>1. The conformance requirement was revised.</li> <li>2. Change to 8.2.6.29 IE "SFN-SFN observed time difference" and IE "SFN-SFN observed time difference reporting indicator" is deleted.</li> </ol>

<p>3. Change to 8.2.6.29 The value of TGD shall be revised from "0" to "undefined" under this situation.</p> <p>4. IE"Activation time " included in message using for transition form CELL_FACH is set to "Not present".</p> <p><b>Revision to T1S020742</b></p> <p>1. TC 8.2.2.20 belongs to Package 2, but was mistakenly included in this CR. This test case is thus removed from this CR.</p>
<p><b>Consequences if not approved:</b> ⌘ The test specifications are not aligned with the core specification.</p>

<p><b>Clauses affected:</b> ⌘ 8.2.1.14, 8.2.1.18, 8.2.1.19, 8.2.1.20, 8.2.1.23, 8.2.1.24, 8.2.2.14, <del>8.2.2.20</del>, 8.2.2.21, 8.2.2.22, 8.2.2.23, 8.2.2.24, 8.2.2.25, 8.2.2.31, 8.2.3.13, 8.2.3.17, 8.2.3.24, 8.2.3.29, 8.2.4.1a, 8.2.4.14, 8.2.4.19, 8.2.4.20, 8.2.4.22, 8.2.4.23, 8.2.4.24, 8.2.4.25, 8.2.4.29, 8.2.6.13, 8.2.6.18, 8.2.6.23, 8.2.6.24, 8.2.6.26, 8.2.6.27, 8.2.6.28, 8.2.6.29, 8.2.6.30, 8.2.6.37</p>																
<table border="1"> <tr> <td></td> <td>Y</td> <td>N</td> <td></td> </tr> <tr> <td><b>Other specs Affected:</b></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>Other core specifications ⌘</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>Test specifications</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>O&amp;M Specifications</td> </tr> </table>		Y	N		<b>Other specs Affected:</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications ⌘		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications
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<p><b>Other comments:</b> ⌘ Affects R99, REL-4, REL-5</p>																

**How to create CRs using this form:**

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

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

**<Start of Modifications>****8.2.1.14 Radio Bearer Establishment for transition from CELL\_FACH to CELL\_DCH: Failure (Incompatible simultaneous reconfiguration)**

8.2.1.14.1 Definition

8.2.1.14.2 Conformance requirement

If the received message is any of the messages:

- RADIO BEARER SETUP; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or

...

- 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:

...

- 3> else:

- 4> reject the transaction; and

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

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

...

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

- 1> not apply the configuration contained in the received reconfiguration message;

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

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

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

- 2> clear that entry;

- 2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

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

The UE shall:

- 1> in case of reception of a RADIO BEARER SETUP message:

...

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

#### Reference

3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, clause 8.6.3.11.

#### 8.2.1.14.3 Test purpose

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

#### 8.2.1.14.4 Method of test

#### Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in CELL\_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER SETUP message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER SETUP message, the UE shall keep its current configuration as if it had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER SETUP FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	<del>Including IE "Activation Time"</del>
2		←	RADIO BEARER SETUP	<del>The SS send this message before the expiry of activation time specified in the message of step 1.</del>
3		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration because of the RADIO BEARER SETUP message, and transmit this message on its uplink DCCH using the same RLC-AM mode radio bearer before step 1.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

#### Specific Message Contents

#### RADIO BEARER RECONFIGURATION (Step 1) (FDD)

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

Information Element	Value/remark
Activation Time	Not present <del>Current CFN-[current CFN mod 8 + 8]</del>
Uplink DPCH Info - Scrambling code number	1

#### RADIO BEARER RECONFIGURATION (Step 1) (TDD)

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

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

#### RADIO BEARER SETUP (for Step 2) (FDD)

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

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

#### RADIO BEARER SETUP (for Step 2) (TDD)

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

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

#### RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	
Failure cause	Incompatible simultaneous reconfiguration

#### 8.2.1.14.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall configure the new configuration on the activation time and transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

**<End of Modifications>**

**<Start of Modifications>**



### 8.2.1.18 Radio Bearer Establishment for transition from CELL\_FACH to CELL\_DCH: Success (Subsequently received)

#### 8.2.1.18.1 Definition

#### 8.2.1.18.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER SETUP; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL\_UPDATE\_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL\_ERROR\_REJECT to be set to TRUE:
  - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
    - 4> ignore the transaction; and
    - 4> continue with any ongoing processes and procedures as the message was not received;
    - 4> and end the procedure.
  - 3> else:

#### Reference

3GPP TS 25.331 clause 8.6.3.11.

#### 8.2.1.18.3 Test purpose

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

#### 8.2.1.18.4 Method of test

##### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH\_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

##### Test Procedure

The UE is in CELL\_FACH state. The SS transmits a RADIO BEARER SETUP message, requesting the UE to setup radio bearers using DPCH physical channels. SS transmits another RADIO BEARER SETUP message before the

activation time of the first message has lapsed. The UE ignores the new RADIO BEARER SETUP message and configures the radio bearers according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The "Secondary scrambling code is set to "1" for FDD mode.
2		←	RADIO BEARER SETUP	<del>SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1.</del> 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 is used.
3		→	RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and confirms configuration according to the RADIO BEARER SETUP message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

#### Specific Message Contents

##### RADIO BEARER SETUP (Step 1) (FDD)

For this message, use the message sub-type entitled "Packet to CELL\_DCH from CELL\_FACH in PS" in Annex A.

Information element(s) to be changed are listed below:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	<del>Not present</del> [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.

**<End of Modifications>****<Start of Modifications>**

## 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

If the UE receives:

- a RADIO BEARER SETUP message; or

it shall:

[1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+](#)> perform the physical layer synchronisation procedure [A](#) as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
    - 2> select a suitable UTRA cell according to TS 25.304 on that frequency.
  - 1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
  - 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
    - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.
  - 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
    - 2> set the variable INVALID\_CONFIGURATION to TRUE.
- ...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

- 1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

### 8.2.1.19.3 Test purpose

To conform that the UE transmits a RADIO BEARER SETUP COMPLETE message and enters CELL\_PCH state after it received a RADIO BEARER SETUP message for the transition from CELL\_DCH to CELL\_PCH from SS. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

### 8.2.1.19.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

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

#### Test Procedure

The UE is in CELL\_DCH state. The SS transmits a RADIO BEARER SETUP message. The UE transmits RADIO BEARER SETUP COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

#### RADIO BEARER SETUP (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	100

#### RADIO BEARER SETUP (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	4

#### 8.2.1.19.5 Test requirement

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

After step 2, the UE shall enter CELL\_PCH state.

#### 8.2.1.20 Radio Bearer Establishment from CELL\_DCH to URA\_PCH: Success

##### 8.2.1.20.1 Definition

##### 8.2.1.20.2 Conformance requirement

If the UE receives:

- a RADIO BEARER SETUP message; or

it shall:

- [1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

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

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

### 8.2.1.20.3 Test purpose

To confirm that the UE transmits a RADIO BEARER SETUP COMPLETE message and enters URA\_PCH state after it received a RADIO BEARER SETUP message for the transition from CELL\_DCH to URA\_PCH from SS.

### 8.2.1.20.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: PS-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. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	
2		→	RADIO BEARER SETUP COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

#### RADIO BEARER SETUP (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	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.

**<End of Modifications>**

**<Start of Modifications>**

#### 8.2.1.23 Radio Bearer Establishment for transition from CELL\_FACH to CELL\_DCH (Frequency band modification): Success

##### 8.2.1.23.1 Definition

##### 8.2.1.23.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

21> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_DCH state, the UE shall, after the state transition:

1> remove any C-RNTI from MAC;

1> clear the C\_RNTI.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

### 8.2.1.23.3 Test purpose

1. To confirm that the UE transits from CELL\_FACH to CELL\_DCH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

### 8.2.1.23.4 Method of test

#### Initial Condition

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

UE: CS-DCCH\_FACH (state 6-6) or PS\_DCCH\_FACH (state 6-8) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

#### Test Procedure

**Table 8.2.1.23**

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



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) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	350

##### 8.2.1.23.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL\_DCH state of cell 6.

## 8.2.1.24 Radio Bearer Establishment for transition from CELL\_DCH to CELL\_DCH (Frequency band modification): Success

### 8.2.1.24.1 Definition

### 8.2.1.24.2 Conformance requirement

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

21> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

### 8.2.1.24.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_DCH according to the RADIO BEARER SETUP message.
2. To confirm that the UE transmits the RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

### 8.2.1.24.4 Method of test

#### Initial Condition

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

CS-DCCH\_DCH (state 6-5) or PS\_DCCH\_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

#### Test Procedure

Table 8.2.1.24

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.1.24 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.24. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell. The UE selects cell 6 and establish a radio access bearer after receiving this message, and then remains CELL\_DCH state. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC after completes configuration according to receiving RADIO BEARER SETUP message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.24.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.24.
3		←	RADIO BEARER SETUP	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
4				The UE select cell 6 and establish a radio access bearer.
5		→	RADIO BEARER SETUP COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

#### Specific Message Contents

##### RADIO BEARER SETUP (Step 3)

The contents of RADIO BEARER SETUP message in this test case is identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_DCH in PS" or "Speech in CS" in TS34.108 clause 9 Default Message Contents, or identical the message sub-type indicated by "Non speech in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

#### 8.2.1.24.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL\_DCH state of cell 6.

### <End of Modifications>

### <Start of Modifications>

#### 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 received message is any of the messages:

- RADIO BEARER RECONFIGURATION; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or

...

- 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:

...

- 3> else:

- 4> reject the transaction; and

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

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

...

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

- 1> not apply the configuration contained in the received reconfiguration message;
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
  - 2> include the IE "RRC transaction identifier"; and
  - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and
  - 2> clear that entry;
  - 2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

- 1> in case of reception of a RADIO BEARER RECONFIGURATION message:
  - ...
  - 2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, 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 RECONFIGURATION 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. 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		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	RADIO BEARER RECONFIGURATION	<del>Sent before the elapse of the "Activation Time" indicated in the previous message.</del>
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
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

#### 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 Uplink DPCH Info - Scrambling code number	<del>Not Present</del> Current CFN-[current CFN mod 8 + 8] 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.

### <End of Modifications>

### <Start of Modifications>

## 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

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

[1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+](#)> perform the physical layer synchronisation procedure [A](#) as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
  - 2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

#### 8.2.2.21.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL\_PCH state after it receives a RADIO BEARER RECONFIGURATION, which invoke the UE to transit from CELL\_DCH to CELL\_PCH, from SS.

#### 8.2.2.21.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in CELL\_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.



## Specific Message Contents

## RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	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

## 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.

## 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

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

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

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

## 8.2.2.22.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE and enters URA\_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL\_DCH to URA\_PCH, from SS.

## 8.2.2.22.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: PS-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. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

## Specific Message Contents

## RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	100

## RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL\_FACH from CELL\_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	4

## 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"

## 8.2.2.22.5 Test requirement

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

## 8.2.2.23 Radio Bearer Reconfiguration from CELL\_FACH to CELL\_PCH: Success

## 8.2.2.23.1 Definition

## 8.2.2.23.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

[1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+](#)> perform the physical layer synchronisation procedure [A](#) as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

### 8.2.2.23.3 Test purpose

To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message and enters CELL\_PCH state after it received a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL\_FACH to CELL\_PCH. To check that the UE does not transmit periodical RLC status in CELL\_PCH state after it has been activated.

### 8.2.2.33.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in CELL\_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3		SS		The UE is in CELL_PCH state. The SS verifies that no periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers during at least 5 seconds.
4		←→	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
RB information to reconfigure list	
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4

- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DTCH)
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600
- RB mapping info	Not Present
- RB stop/continue	Not Present
Maximum allowed UL TX power	Not Present
Downlink information per radio link list	
- Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1



## RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL\_FACH from CELL\_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info -Cell parameters ID	4

## 8.2.2.23.5 Test requirement

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

After step 2, the UE shall not transmit any periodical RLC STATUS PDUs.

## 8.2.2.24 Radio Bearer Reconfiguration from CELL\_FACH to URA\_PCH: Success

## 8.2.2.24.1 Definition

## 8.2.2.24.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

[1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+](#)> perform the physical layer synchronisation procedure [A](#) as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

## Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

### 8.2.2.24.3 Test purpose

To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message and enters URA\_PCH state after it receives a RADIO BEARER RECONFIGURATION message, which invoke the UE to transit from CELL\_FACH to URA\_PCH. To check that the UE does not transmit periodical RLC status in URA\_PCH state after it has been activated.

### 8.2.2.24.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in CELL\_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message. The UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enters URA\_PCH state. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Periodical RLC status transmission is activated.
2		→	RADIO BEARER RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state. The SS verifies that no periodic RLC STATUS PDUs are received from the UE on AM RLC radio bearers during at least 5 seconds.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

#### Specific Message Contents

##### RADIO BEARER RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
URA identity	0000 0000 0001B
RB information to reconfigure list	
- RB information to reconfigure	(AM DCCH for RRC)
- RB identity	2
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT High priority)
- RB identity	3
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600

- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DCCH for NAS_DT Low priority)
- RB identity	4
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	Not Present
- RB stop/continue	Not Present
- RB information to reconfigure	(AM DTCH)
- RB identity	20
- PDCP info	Not Present
- PDCP SN info	Not Present
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	600
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	250
- Timer_poll	250
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	600
- RB mapping info	Not Present
- RB stop/continue	Not Present
Maximum allowed UL TX power	Not Present

Downlink information per radio link list - Downlink information for each radio link - Primary CPICH info - Primary scrambling code	Set to same code as used for cell 1
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### RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL\_FACH from CELL\_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	4

#### 8.2.2.24.5 Test requirement

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

After step 2, the UE shall not transmit any periodical RLC STATUS PDUs.

### 8.2.2.25 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

If the UE receives:

- a RADIO BEARER RECONFIGURATION message; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

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

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.

#### 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.
- d) SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Initiates the transition from CELL_FACH to CELL_DCH
2		→	RADIO BEARER RECONFIGURATION 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 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.

**<End of Modifications>**

**<Start of Modifications>**

### 8.2.2.31 Radio Bearer Reconfiguration for transition from CELL\_FACH to CELL\_DCH (Frequency band modification): Success

#### 8.2.2.13.1 Definition

#### 8.2.2.31.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

If after state transition the UE enters CELL\_DCH state, the UE shall, after the state transition:

1> remove any C-RNTI from MAC;

1> clear the C\_RNTI.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.2.31.3 Test purpose

1. To confirm that the UE transits from CELL\_FACH to CELL\_DCH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

#### 8.2.2.31.4 Method of test

#### Initial Condition

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

UE: PS\_DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.



## Test Procedure

Table 8.2.2.31

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-60	-60	Off	-60

Table 8.2.2.31 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. The UE shall select cell 6 and then enter CELL\_DCH state according to receiving RADIO BEARER RECONFIGURATION message. Finally the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.31.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.31.
3		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
4		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
5		↔	Call C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## RADIO BEARER RECONFIGURATION (Step 3)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

#### 8.2.2.31.5 Test requirement

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 4 the UE shall be in CELL\_DCH state in cell 6.

### <End of Modifications>

### <Start of Modifications>

#### 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 received message is any of the messages:

- RADIO BEARER RELEASE; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or

...

- 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:

...

- 3> else:

- 4> reject the transaction; and

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

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

...

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

- 1> not apply the configuration contained in the received reconfiguration message;

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
  - 2> include the IE "RRC transaction identifier"; and
  - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and
  - 2> clear that entry;
  - 2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

- 1> in case of reception of a RADIO BEARER RELEASE message:
  - ...
  - 2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, 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 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". 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The UE receives any message other than RADIO BEARER RELEASE. (e.g. RADIO BEARER SETUP)
2		←	RADIO BEARER RELEASE	<del>Sent before the expiry of IE "Activation Time" stated in message in step 1.</del>
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.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

#### RADIO BEARER RECONFIGURATION (Step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case 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	<del>Current CFN-[current CFN mod 8 + 8]</del> <u>Not present</u>
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	Not Present
Uplink DPCH Info - Scrambling code number	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.

## <End of Modifications>

## <Start of Modifications>

### 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 IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER RELEASE; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL\_UPDATE\_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL\_ERROR\_REJECT to be set to TRUE:
  - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
    - 4> ignore the transaction; and

4> continue with any ongoing processes and procedures as the message was not received;

4> and end the procedure.

3> else:

## Reference

3GPP TS 25.331 clause 8.6.3.11.

### 8.2.3.17.3 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. SS calls for generic procedure C.3 2 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	For FDD, the SS sets its UL scrambling code to "1".
2		←	RADIO BEARER RELEASE	<del>Sent before the expiry stated in IE "Activation Time" of RADIO BEARER RELEASE message in step 1.</del> 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.
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) (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	<del>[256+Current CFN-[current CFN mod 8 + 8]]MOD 256</del> Not present
- 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 "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	[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 "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	Not Present
- Uplink DPCH Info	
- Secondary scrambling code	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	Not Present
- Uplink DPCH timeslots and codes	
- First timeslot code list	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.

**<End of Modifications>**

**<Start of Modifications>**

### 8.2.3.24 Radio Bearer Release for transition from CELL\_DCH to CELL\_DCH (Frequency band modification): Success

#### 8.2.3.24.1 Definition

#### 8.2.3.24.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

[1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+>](#) perform the physical layer synchronisation procedure [A](#) as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE as response message on the uplink DCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

#### 8.2.3.24.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_DCH according to the RADIO BEARER RELEASE message.
2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

#### 8.2.3.24.4 Method of test

##### Initial Condition

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

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



## Test Procedure

Table 8.2.4.24

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-72

Table 8.2.3.24 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.24. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. The UE shall select cell 6 and release the radio access bearer after receiving this message, and then remain in CELL\_DCH state. The UE transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC after it completes reconfiguration according to received RADIO BEARER RELEASE message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.24.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.24.
3		←	RADIO BEARER RELEASE	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6.
4				The UE select cell 6.
5		→	RADIO BEARER RELEASE COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## RADIO BEARER RELEASE (Step 3)

The contents RADIO BEARER RELEASE message in this test case is identical the message sub-type indicated by "Packet to CELL\_DCH from CELL\_DCH in PS" or "Speech in CS" or "Non speech in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

#### 8.2.3.24.5 Test requirement

After step 4 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL\_DCH state in cell 6.

### <End of Modifications>

### <Start of Modifications>

#### 8.2.3.29 Radio Bearer Release for transition from CELL\_DCH to CELL\_DCH: Associated with signalling connection release during multi call for PS and CS services

##### 8.2.3.29.1 Definition

##### 8.2.3.29.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message:

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+ perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE message as response message on the uplink DCCH using AM RLC.

1> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.3.

## 8.2.3.29.3 Test purpose

To confirm that the UE releases the existing radio access bearer and signaling connection according to a RADIO BEARER RELEASE message.

## 8.2.3.29.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH\_DCH (state 6-9) as specified in clause 7.4 of TS 34.108

## Test Procedure

The UE is in CELL\_DCH state of cell 1. The UE initiates a session setup to establish a PS signalling connection for multi call. Then UE and SS enter to multi call state. The SS transmits a DISCONNECT message to release a CS domain signalling connection. After the CC procedure, SS transmit a RADIO BEARER RELEASE message which includes IE "Signalling Connection release indication" set to "CS domain" and new configuration for remained service to the UE. The UE shall configure the specified channel and transmit a RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1.
2		→	INITIAL DIRECT TRANSFER (SERVICE REQUEST)	GMM ( Session setup is initiated for multi call from UE side.)
3		←	DOWNLINK DIRECT TRANSFER (AUTHENTICATION AND CIPHERING REQUEST)	GMM
4		→	UPLINK DIRECT TRANSFER (AUTHENTICATION AND CIPHERING RESPONSE)	GMM
5		←	SECURITY MODE COMMAND	
6		→	SECURITY MODE COMPLETE	
7		→	UPLINK DIRECT TRANSFER (ACTIVATE PDP CONTEXT REQUEST)	SM
8		←	RADIO BEARER SETUP	
9		→	RADIO BEARER SETUP COMPLETE	
10		←	DOWNLINK DIRECT TRANSFER (ACTIVE PDP CONTEXT ACCEPT)	SM
11		←	DOWNLINK DIRECT TRANSFER (DISCONNECT)	CC
12		→	UPLINK DIRECT TRANSFER (RELEASE)	CC
13		←	DOWNLINK DIRECT TRANSFER (RELEASE COMPLETE)	CC
14		←	RADIO BEARER RELEASE	Including IE "signalling connection indication" set to "CS domain"
15		→	RADIO BEARER RELEASE COMPLETE	

## Specific Message Contents

## RADIO BEARER RELEASE (STEP 14)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type titled as "Non speech in CS" or "Speech in CS" as found in Annex.A, with the following exceptions

Information Element	Value/remark
Signalling Connection release indication - CN domain identity	CS domain

## 8.2.3.29.5 Test requirement

After step 14 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message.

**<End of Modifications>****<Start of Modifications>**

## 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

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATIONmessage; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

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

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

#### 8.2.4.1a.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 radio bearer is placed into UE test loop mode 1 described in 34.109 clause 5.3 and the UL RLC\_SDU size for the loopback scheme is set to the maximum size possible when the maximum uplink TFS, as indicated in RADIO BEARER SETUP message during radio bearer establishment procedure, is used. The SS transmits a 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. UL MAC restriction is imposed on the SS so that SS can only received using the maximum TFS and minimum TFS. Both TFSs belong to the restricted TFCS(i.e. the TFCS after reconfiguration). In this procedure SS transmits a RLC\_SDU whose size is the same as the UL RLC\_SDU size for the loopback scheme . The UE shall selects the maximum uplink TFS in the restricted TFCS(i.e. the TFCS after reconfiguration) on the radio access bearer. The SS should receive the expected data as a RLC\_SDU that is sent back by UE. 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. 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		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
2a		←	DOWNLINK RLC SDU	
2b		→	UPLINK RLC SDU	
3		←	TRANSPORT CHANNEL RECONFIGURATION	
4		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
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

## 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 DCCCH using AM RLC.

After step 2a the UE shall transmit a RLC\_SDU that is same as the transmitted data from SS in step 2a on the radio access bearer.

After step 3 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCCH using AM RLC.

**<End of Modifications>****<Start of Modifications>**

## 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 received message is any of the messages:

- TRANSPORT CHANNEL RECONFIGURATION; or

...

the UE shall:

2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:

...

3> else:

4> reject the transaction; and

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

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

...

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

1> not apply the configuration contained in the received reconfiguration message;

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

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

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

2> clear that entry;

2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

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

The UE shall:

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

...

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

## Reference

3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, 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. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		←	TRANSPORT CHANNEL RECONFIGURATION	<del>Sent before the elapse of the Activation time specified in step 1.</del>
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.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## RADIO BEARER RECONFIGURATION (Step 1) (FDD)

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	<del>Not Present</del> 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 - Uplink DPCH timeslots and codes - First timeslot code list	Not Present  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.

### <End of Modifications>

### <Start of Modifications>

#### 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 IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- TRANSPORT CHANNEL RECONFIGURATION; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL\_UPDATE\_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL\_ERROR\_REJECT to be set to TRUE:
  - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
    - 4> ignore the transaction; and
    - 4> continue with any ongoing processes and procedures as the message was not received;
    - 4> and end the procedure.
  - 3> else:

#### Reference

3GPP TS 25.331 clause 8.6.3.11.

#### 8.2.4.19.3 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. 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		←	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	<del>Sent before the elapse of the activation time specified in step 1.</del> 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.
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

## 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	<del>Not Present</del> [256+Current CFN-[current CFN mod 8 + 8 ]]MOD 256
- Uplink DPCH Info - Scrambling code number	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	Not Present
- Uplink DPCH timeslots and codes - First timeslot code list	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.

**<End of Modifications>****<Start of Modifications>**

## 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

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

[1> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+](#)> perform the physical layer synchronisation procedure [A](#) as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4.

#### 8.2.4.20.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters CELL\_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL\_DCH to CELL\_PCH.

#### 8.2.4.20.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in CELL\_DCH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invoke the UE to transit from CELL\_DCH to CELL\_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

#### Specific Message Contents

#### TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	100

#### TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_DCH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
- Primary CCPCH info - Cell parameters ID	4

#### 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
<del>Paging record list</del>	
<del>Paging record</del>	
<del>CHOICE Used paging identity</del>	UTRAN identity
<del>U-RNTI</del>	
<del>SRNC Identity</del>	Previously assigned SRNC identity
<del>S-RNTI</del>	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
<del>Cell Update Cause</del>	"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.

#### <End of Modifications>

#### <Start of Modifications>

#### 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

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

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

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

## 8.2.4.22.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters CELL\_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL\_FACH to CELL\_PCH state.

## 8.2.4.22.4 Method of test

## Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH(state 6-11) as specified in clause 7.4 of TS 34.108.

## Test Procedure

The UE is in CELL\_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL\_FACH to CELL\_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in CELL_PCH state.
4		↔	CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

## Specific Message Contents

## TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

~~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
<del>Paging record list</del>	
<del>Paging record</del>	
<del>CHOICE Used paging identity</del>	<del>UTRAN identity</del>
<del>U-RNTI</del>	
<del>SRNC Identity</del>	<del>Previously assigned SRNC identity</del>
<del>S-RNTI</del>	<del>Previously assigned S-RNTI</del>

~~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.

#### 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

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message; or

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

- +> perform the physical layer synchronisation procedure [A](#) as specified in TS 25.214;

1> act upon all received information elements as specified in TS 25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS 25.331 subclause 8.6.3.3.

If after state transition the UE enters URA\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

- 2> select a suitable UTRA cell according to TS 25.304 on that frequency.

1> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

- 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS 25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

- 2> set the variable INVALID\_CONFIGURATION to TRUE.

...

The UE shall transmit a response message as specified in TS 25.331 subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

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

1> clear that entry;

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2.3, 8.2.2.4

#### 8.2.4.23.3 Test purpose

To confirm that the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message and enters URA\_PCH state after it receives a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL\_FACH to CELL\_PCH.

#### 8.2.4.23.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_FACH(state 6-11) as specified in clause 7.4 of TS 34.108.

#### Test Procedure

The UE is in CELL\_FACH state. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message which invokes the UE to transit from CELL\_FACH to CELL\_PCH. The UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters URA\_PCH state. SS calls for generic procedure C.5 to check that UE is in URA\_PCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	
2		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
3				The UE is in URA_PCH state.
4		↔	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

#### Specific Message Contents

##### TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL\_FACH from CELL\_FACH in PS" in Annex A with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Physical channel information	Not Present

##### ~~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
<del>Paging record list</del>	
<del>Paging record</del>	
<del>CHOICE Used paging identity</del>	<del>UTRAN identity</del>
<del>U-RNTI</del>	
<del>SRNC Identity</del>	<del>Previously assigned SRNC identity</del>
<del>S-RNTI</del>	<del>Previously assigned S-RNTI</del>

### ~~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
<del>Cell Update Cause</del>	<del>"paging response"</del>

#### 8.2.4.23.5 Test requirement

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

#### 8.2.4.24 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> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a 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	FDD
- CHOICE mode	
- 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	FDD
- CHOICE mode	
- 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> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If after state transition the UE enters CELL\_DCH state, the UE shall, after the state transition:

1> remove any C-RNTI from MAC;

1> clear the C\_RNTI.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, using the new configuration after the state transition.

1> the procedure ends.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

##### 8.2.4.25.3 Test purpose

1. To confirm that the UE transits from CELL\_FACH to CELL\_DCH according to TRANSPORT CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits TRANSPORT CHANNEL RECONFIGURATION message on the uplink DCCH using AM RLC on dedicated physical channel in a different frequency.

##### 8.2.4.25.4 Method of test

#### Initial Condition

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

UE: PS-DCCH+DTCH\_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

## Test Procedure

Table 8.2.4.25

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

Table 8.2.4.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.25. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes new frequency information leading to a state transition from CELL\_FACH to CELL\_DCH in cell 6. The UE shall reconfigure transport channel parameter and frequency band according to this message. Finally, the UE transmits a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC in cell 6. The SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.25.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.25.
3		←	TRANSPORT CHANNEL RECONFIGURATION	
4				Reconfiguration of transport channel.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## TRANSPORT CHANNEL RECONFIGURATION (Step 3)

Use the message sub-type titled "Packet to CELL\_DCH from CELL\_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6  350

#### 8.2.4.25.5 Test requirement

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL\_DCH state of cell 6.

### <End of Modifications>

### <Start of Modifications>

#### 8.2.4.29 Transport Channel Reconfiguration for transition from CELL\_DCH to CELL\_DCH (Frequency band modification): Success

##### 8.2.4.29.1 Definition

##### 8.2.4.29.2 Conformance requirement

If the UE receives:

- a TRANSPORT CHANNEL RECONFIGURATION message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure;

2+> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a TRANSPORT CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.



## 8.2.4.29.3 Test purpose

1. To confirm that the UE transits from CELL\_DCH to CELL\_DCH according to the TRANSPORT CHANNEL RECONFIGURATION message.
2. To confirm that the UE transmits the TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel in a different frequency.

## 8.2.4.29.4 Method of test

## Initial Condition

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

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

## Test Procedure

Table 8.2.4.29

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-55	-72	Off	-55

Table 8.2.4.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.29. The SS switches its downlink transmission power settings to columns "T1" and transmits a TRANSPORT CHANNEL RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code which is assigned to P-CPICH of cell 6. The UE shall select cell 6 and reconfigure its transport channel parameters after receiving this message, and then remain in CELL\_DCH state. The UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message using AM RLC after completes configuration according to receiving TRANSPORT CHANNEL RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.4.29.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.4.29.
3		←	TRANSPORT CHANNEL RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6
4				The UE select cell 6.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE sends this message on a dedicated physical channel in cell 6.
6		↔	<u>CALL C.3</u>	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

#### TRANSPORT CHANNEL RECONFIGURATION (Step 3)

The contents TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical the message subtype indicated by "Packet to CELL\_DCH from CELL\_DCH in PS" or "Speech in CS" or "Non speech from in CS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

#### 8.2.4.29.5 Test requirement

After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 5 the UE shall be in CELL\_DCH state in cell 6.

**<End of Modifications>**

**<Start of Modifications>**

### 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 received message is any of the messages:

- PHYSICAL CHANNEL RECONFIGURATION; or
- ...

the UE shall:

2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:

...

3> else:

4> reject the transaction; and

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

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

...

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

1> not apply the configuration contained in the received reconfiguration message;

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

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

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

2> clear that entry;

2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

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

The UE shall:

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

...

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

#### Reference

3GPP TS 25.331 clauses 8.2.2.9, 8.2.2.12, 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. 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. 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		←	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.
8		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## PHYSICAL CHANNEL RECONFIGURATION (Step 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	<del>Current CFN-[current CFN mod 8 + 8]</del> Not present
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.

**<End of Modifications>****<Start of Modifications>**

## 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 IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- PHYSICAL CHANNEL RECONFIGURATION; or

...

the UE shall:

- 2> if the variable ORDERED\_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL\_UPDATE\_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL\_ERROR\_REJECT to be set to TRUE:
  - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
    - 4> ignore the transaction; and
    - 4> continue with any ongoing processes and procedures as the message was not received;
    - 4> and end the procedure.
  - 3> else:

## Reference

3GPP TS 25.331 clause 8.6.3.11.

## 8.2.6.18.3 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. 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		←	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	<del>SS send this message before the expiry of "activation time" specified in PHYSICAL CHANNEL RECONFIGURATION message of step 4.</del> 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.
7		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message 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	Not Present
- Uplink DPCH info	<del><math>[256 + \text{Current CFN} - [\text{current CFN mod } 8 + 8]] \text{MOD } 256</math></del>
- Scrambling code number	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	<del><math>[256 + \text{Current CFN} - [\text{current CFN mod } 8 + 8]] \text{MOD } 256</math></del>
- Uplink DPCH timeslots and codes	
- First timeslot code list	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	Not Present
- Uplink DPCH info	
- Scrambling code number	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	Not Present
- Uplink DPCH timeslots and codes	
- First timeslot code list	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.



**<End of Modifications>****<Start of Modifications>**

8.2.6.23 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Hard handover to another frequency with timing maintain):  
Success

8.2.6.23.1 Definition

8.2.6.23.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

1> the procedure ends.

**Reference**

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.23.3 Test purpose

To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC, on a dedicated physical channel in a different frequency band.

## 8.2.6.23.4 Method of test

## Initial Condition

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

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

## Test Procedure

Table 8.2.6.23

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

Table 8.2.6.23 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.23. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes new frequency information and IE "Timing indicator" set to maintain. The UE shall reconfigure the physical channel parameters according to PHYSICAL CHANNEL RECONFIGURATION message and establish a radio link with the SS using a dedicated physical channel in cell 6. The UE then transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message in cell 6 on the uplink DCCH AM RLC after its transition. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.23.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.23.
3		←	PHYSICAL CHANNEL RECONFIGURATION	Including new frequency information. IE "Timing indicator" is set to maintain.
4				The UE remains in CELL_DCH state after connecting to the SS on a dedicated physical channel in cell 6.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message in cell 6.
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## PHYSICAL CHANNEL RECONFIGURATION (Step 3)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8 ]
Uplink DPCH info	
- Scrambling code number	1
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Maintain
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	350

## 8.2.6.23.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 6.

## 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> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

[2+>](#) perform the physical layer synchronisation procedure [A](#) as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

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

#### Reference

3GPP TS 25.331 clause 8.2.2 and 8.5 and 8.6

#### 8.2.6.24.3 Test purpose

To confirm that the UE modifies uplink physical channel rate according to a PHYSICAL CHANNEL RECONFIGURATION message and transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

#### 8.2.6.24.4 Method of test

#### Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH\_DCH (state 6-10) as specified in clause 7.4 of TS 34.108.

NOTE: Transmission rate shall be set to the maximum rate for the UE during the radio bearer establishment procedure.

#### Test Procedure

The UE is in CELL\_DCH state of cell 1. The radio bearer is placed into UE test loop mode 1 described in 34.109 clause 5.3 and the UL RLC\_SDU size for the loopback scheme is set to the maximum size possible when the maximum uplink TFS, as indicated in RADIO BEARER SETUP message during radio bearer establishment procedure, is used. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which assign a new UL puncture limit and minimum spreading factor to the UE to modify uplink physical channel rate. The UE shall reconfigure the physical channel according to this message and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH AM RLC. UL MAC restriction is imposed on the SS so that SS can only received using the maximum TFS and minimum TFS. Both TFSs belong to the restricted TFS(i.e. the TFS after reconfiguration) by the specified spreading factor. In this procedure SS transmits a RLC\_SDU whose size is the same as the UL RLC\_SDU size for the loopback scheme. The UE shall selects the maximum uplink TFS in the restricted TFS(i.e. the TFS after reconfiguration) on the radio access bearer. The SS should receive the expected data as a RLC\_SDU that is sent back by UE. SS calls for generic procedure C.3 to check that UE is in CELL\_DCH state.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state of cell 1.
2		←	PHYSICAL CHANNEL RECONFIGURATION	This message is including new IE "Uplink DPCH info" and don't include IE "Downlink information for each radio link".
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	DOWNLINK RLC SDU	
5		→	UPLINK RLC SDU	
6		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

## Specific Message Contents

## PHYSICAL CHANNEL RECONFIGURATION (Step 2)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
CHOICE channel requirement - Uplink DPCH power control info	Uplink DPCH info Same contents as a RADIO BEARER SETUP message used in initial procedure
- CHOICE mode	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.

After step 4 the UE shall transmit a RLC\_SDU that is same as the transmitted data from SS in step 4 on the radio access bearer.

**<End of Modifications>****<Start of Modifications>**8.2.6.26 Physical Channel Reconfiguration from CELL\_DCH to CELL\_PCH  
(Frequency band modification): Success

## 8.2.6.26.1 Definition

## 8.2.6.26.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+> perform the physical layer synchronisation procedure A as specified in TS25.214;

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
  - 2> select a suitable UTRA cell according to TS5.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C\_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
  - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the UE enters CELL\_PCH state from CELL\_DCH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":
  - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
  - 2> when the cell update procedure completed successfully:
    - 3> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

### 8.2.6.26.3 Test purpose

1. To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink 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: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

## Test Procedure

Table 8.2.6.26

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26. The SS modifies the contents of System information block 11 in cell 1, so that include IE "Inter frequency measurement system information" about cell 6. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message, which invokes the UE to transit from CELL\_DCH to CELL\_PCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enters CELL\_PCH state. The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL\_PCH state.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.26.
1a	←→		SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
1b	←→		SS executes procedure) P9 (clause 7.4.2.4.2) specified in TS 34.108..	
1c	←→		SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.26.
3			Void	
4		←	PHYSICAL CHANNELRECONFIGURATION	Not including IE "frequency info" and IE "Primary CPICH info"
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmit this message in cell 1.
6		→	CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_PCH".
8				The SS waits for 5 s.
9	←→		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.



## Specific Message Contents

## System Information Block type 11 (Step 1)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	This IE don't include information of cell 6
- Intra-frequency cell info list	
- Inter-frequency measurement system information	1
- Inter-frequency cell info list	
- New inter-frequency cell id	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- Inter frequency cell id	
- Frequency info	0dB
- UARFCN uplink(Nu)	Not present
- UARFCN downlink(Nd)	FALSE
- Cell info	FDD
- Cell individual offset	Set to same code as used for cell 6
- Reference time difference to cell	
- Read SFN indicator	Not present
- CHOICE mode	0dB
- Primary CPICH info	Not Present
- Primary scrambling code	Reference to table 6.1.1
- Primary CPICH Tx power	Not present
- Cell Selection and Re-selection Info	FDD
- Qoffset1 <sub>s,n</sub>	Reference to table 6.1.1
- Qoffset2 <sub>s,n</sub>	Reference to table 6.1.1
- Maximum allowed UL TX power	Not present
- HCS neighbouring cell information	FDD
- CHOICE mode	Reference to table 6.1.1
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Not present
- Cell for measurement	

## 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	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
- UARFCN uplink (Nu)	
- UARFCN downlink (Nd)	

## CELL UPDATE (Step 6)

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

Information Element	Value/remark
Cell Update Cause	"cell reselection"

## CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

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

#### 8.2.6.26.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection" in cell 6.

After step 8 the UE shall be in CELL\_PCH state in cell 6.

### 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> if the UE will enter the CELL\\_DCH state from any state other than CELL\\_DCH state at the conclusion of this procedure:](#)

➤ perform the physical layer synchronisation procedure [A](#) as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

The UE shall then:

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL\_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to 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.

#### 8.2.6.28 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Downlink channelisation code modification): Success

##### 8.2.6.28.1 Definition

##### 8.2.6.28.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

~~12~~> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

#### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6..

##### 8.2.6.28.3 Test purpose

1. To confirm that the UE change assigned downlink channelisation code by SS according to a PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC

## 8.2.6.28.4 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 of cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes IE " DL channelisation code " set to New DL channelisation code. The UE shall change its downlink channelisation code for a dedicated physical channel, and then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH AM RLC. The SS transmits UE CAPABILITY ENQUIRY message to confirm whether the UE correctly reconfigure the DL DPCH The UE shall respond with UE CAPABILITY INFORMATION message.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The initial state of UE is in CELL_DCH state of cell 1. .
2		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE " DL channelisation code " set to New DL channelisation code
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4		←	UE CAPABILITY ENQUIRY	The SS transmits this message to confirm whether the UE can correctly reconfigure the DL DPCH.
5		→	UE CAPABILITY INFORMATION	
6		←	UE CAPABILITY INFORMATION CONFIRM	

## 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 "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information for each radio link list - Downlink information for each radio link - Downlink DPCH info for each RL - DL channelisation code - Spreading factor  - Code number	Same value as a RADIO BEARER SETUP message used in initial procedure. Different value as a RADIO BEARER SETUP message used in initial procedure

## 8.2.6.28.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 4 the UE shall transmit a UE CAPABILITY INFORMATION message on the uplink DCCH using AM RLC.

## 8.2.6.29 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Compressed mode initiation): Success

### 8.2.6.29.1 Definition

### 8.2.6.29.2 Conformance requirement

If the UE receives:

-a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+> perform the physical layer synchronisation procedure A as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration; 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

### Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6..

### 8.2.6.29.3 Test purpose

1. To confirm that the UE activates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is activated.
3. To confirm that the UE deactivates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
4. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is deactivated..

### 8.2.6.29.4 Method of test

#### Initial Condition

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

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

### Test Procedure

**Table 8.2.6.29**

Parameter	Unit	Cell 1				Cell 6			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 2			
CPICH Ec	dBm/3 .84MH z	-60	-60	-60	-60	Off	-60	-90	-60

Table 8.2.6.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1" or "T1" to "T2" or "T2" to "T3", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29. The SS transmits MEASUREMENT CONTROL message in order for the UE to perform Inter-frequency measurements and report event 2c. The SS switches its downlink transmission power setting according to columns "T1" in table 8.2.6.29, but the UE shall not transmit any MEASUREMENT REPORT messages. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed mode info" with "TGPS Status Flag" set to "Activate". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. The UE shall transmit MEASUREMENT REPORT message to report event 2c with the measured CPICH RSCP value for cell 6 to the SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed mode info" with "TGPS Status Flag" set to "deactivate". The UE shall respond with the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. After the SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29 and 10s is passed, the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29. The UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH because the UE cannot measure the CPICH RSCP on non used frequency as the compressed mode operation has been deactivated.

## Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29.
2		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2c.
3				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.29.
4				The SS checks that no MEASUREMENT REPORT messages receives for 10 s.
5		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to activate.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	MEASUREMENT REPORT	The UE shall report event 2c with the measured CPICH RSCP value for cell 6.
8		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to deactivate.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10				The SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29.
11				After 10 s is passed ,the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29.
12				The SS checks that no MEASUREMENT REPORT messages receives for 10 s..



## Specific Message Contents

## MEASUREMENT CONTROL (Step 2)

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

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 6
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
<del>SFN-SFN observed time difference reporting indicator</del>	<del>No report</del>
- 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
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	10 [ms]
- Reporting cell status	
- CHOICH reported cell	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per	1

reported non-used frequency - Parameters required for each non-used frequency - Threshold non used frequency - W non-used frequency DPCH compressed mode status info	-68dbm 0 Not present
--	----------------------------

## PHYSICAL CHANNEL RECONFIGURATION (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- CFN-target SFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE Mode	FDD
-DPC Mode	0 (Single)
- CHOICE Mode	FDD
- Power offset Pilot-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
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	<a href="#">undefined</a>
- TGPL1	3
- TGPL2	Not Present
- RPP	mode 0
- ITP	mode 0
- CHOICE UL/DL Mode	DL and UL
- Downlink compressed mode method	SF/2
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

## MEASUREMENT REPORT (Step 7)

The contents of MEASUREMENT REPORT message is the same as them found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	Check to see if set to 15
Measured Results	
- CHOICE Measurement	
- Inter frequency measured results list	Check to see if set to "Inter-frequency measured results list"
- Inter frequency measurement results	
- Frequency info	
- CHOICE	FDD
- UARFCN uplink (Nu)	Check to see if set to the UARFCN of the uplink

- UARFCN downlink (Nd)	frequency for cell 6 Check to see if set to the UARFCN of the downlink frequency for cell 6
- UTRA carrier RSSI	Not checked
- Inter frequency cell measurement results	
- Cell measured results	
- Cell Identity	Not checked
- <del>SFN-SFN observed time difference</del>	<del>Not checked</del>
- Cell synchronisation information	Not checked
- CHOICE Mode	FDD
- Primary CPICH Info	Not checked
- CPICH Ec/No	Not checked
- CPICH RSCP	Check to see if it is present
- Pathloss	Not checked
Measured Results on RACH	Not checked
Additional Measured results	Not checked
- Measured Result	
Event results	Not checked

### PHYSICAL CHANNEL RECONFIGURATION (Step 8)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	Not present

#### 8.2.6.29.5 Test requirement

After step 3 the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH.

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

After step 6 the UE shall transmit a MEASUREMENT REPORT message containing the IE "measured results" reporting cell 6's CPICH RSCP value, also report the triggering of event '2c' included in IE "Event results".

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After 11 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.

#### 8.2.6.30 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Modify active set cell): Success

##### 8.2.6.30.1 Definition

##### 8.2.6.30.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

1> if the UE will enter the CELL\_DCH state from any state other than CELL\_DCH state at the conclusion of this procedure:

2+> perform the physical layer synchronisation procedure as specified in TS25.214;

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL\_DCH state upon reception of the reconfiguration message and remains in CELL\_DCH state, the UE shall:

1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;

1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

1> the procedure ends.

## Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

### 8.2.6.30.3 Test purpose

To confirm that the UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a dedicated physical channel of same frequency in another cell.

### 8.2.6.30.4 Method of test

## Initial Condition

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

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

## Test Procedure

**Table 8.2.6.30**

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

Table 8.2.6.30 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 2.

The UE is in CELL\_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.30. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE, which includes IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 2 and IE "Timing indicator" set to "initialise".. The UE shall reconfigure the physical channel parameters according to PHYSICAL CHANNEL RECONFIGURATION message and initiate to synchronise with new dedicated physical channel in cell 2. The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message in cell 2 on the uplink DCCH AM RLC after synchronization.

#### Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.30.
2				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.30.
3		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 2 and IE "Timing indicator" which is set to 'initialise'.
4				The UE remains in CELL_DCH state after connecting to the SS on a dedicated physical channel in cell 2.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message in cell 2.

#### Specific Message Contents

##### PHYSICAL CHANNEL RECONFIGURATION (Step 3)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL\_DCH from CELL\_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8 ]
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indicator	Initialise
- Default DPCH Offset Value	0
Downlink information for each radio links	
- Primary CPICH info	
- Primary Scrambling Code	Set to same code as used for cell 2

#### 8.2.6.30.5 Test requirement

After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC in cell 2.

**<End of Modifications>**

**<Start of Modifications>**

### 8.2.6.37 Physical channel reconfiguration for transition from CELL\_DCH to CELL\_DCH (Hard handover to another frequency with timing re-initialised)

#### 8.2.6.37.1 Definition

#### 8.2.6.37.2 Conformance requirement

In case the reconfiguration procedure is used to remove all existing RL(s) in the active set while new RL(s) are established the UE shall:

[1> perform the physical layer synchronisation procedure A as specified in TS25.214](#)

1> apply the hard handover procedure as specified (below);

1> be able to perform this procedure even if no prior UE measurements have been performed on the target cell and/or frequency.

...

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

...

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

1> stop all intra-frequency and inter-frequency measurements on the cells listed in the variable CELL\_INFO\_LIST until a MEASUREMENT CONTROL message is received from UTRAN.

...

When the UE is in CELL\_DCH state and receives any of the messages causing the UE to perform a hard handover, the UE shall check the IE "Timing indication" in that message and:

1> if IE "Timing indication" has the value "initialise" (i.e. timing re-initialised hard handover):

2> read SFN on target cell identified by the first radio link listed in the IE "Downlink information per radio link list" included in that message;

2> set the CFN according to the following formula:

3> for FDD:

$$\text{CFN} = (\text{SFN} - (\text{DOFF} \text{ div } 38400)) \text{ mod } 256$$

where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN.

...

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS\_IDENTITY):

2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

- 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" received in this message, when the new configuration received in this message is taken into use;

...

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell\_DCH to Cell\_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

- 1> set the 20 MSB of the HFN component of COUNT-C for TM-RLC to the value of the latest transmitted IE "START" or "START List" for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and
- 1> set the remaining LSBs of the HFN component of COUNT-C to zero;
- 1> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN;
- 1> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now" for this IE;
- 1> calculate the START value according to subclause 8.5.9;
- 1> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;
- 1> at the CFN value as indicated in the response message in the IE "COUNT-C activation time":
  - 2> set the 20 MSB of the HFN component of the COUNT-C variable to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and
  - 2> set the remaining LSBs of the HFN component of COUNT-C to zero;
  - 2> increment the HFN component of the COUNT-C variable by one;
  - 2> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;
  - 2> step the COUNT-C variable, as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

## Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.3.5, 8.5.15.2, 8.6.6.15, 8.6.6.28

### 8.2.6.37.3 Test Purpose

To confirm that the UE is able to perform a hard-handover with change of frequency, with and without prior measurements on the target frequency.

To confirm that the UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message when the procedure has been initiated with the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE stops intra-frequency measurements after the inter-frequency handover has been performed, until a MEASUREMENT CONTROL message is received from the SS.

To confirm that the UE computes as it shall the CFN to be used after the handover.

To confirm that the UE deactivates compressed mode when it has been ordered to do so in the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE includes the IE "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info") in the response message if ciphering is active for any radio bearer using RLC-TM.



## 8.2.6.37.4 Method of test

## Initial Condition

System Simulator: 5 cells – Cell 1 and cell 2 on frequency  $f_1$ , cell 3 and cell 4 on frequency  $f_2$ , and cell 5 on frequency  $f_3$ . Cells 2 and 4 shall have the same primary scrambling code.

UE: "CS-DCCH+DTCH\_DCH" (state 6-9) or "PS-DCCH+DTCH\_DCH" (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the test case shall be run twice, once starting from state 6-9, once starting from state 6-10. Ciphering shall be activated.

## Test Procedure

Table 8.2.6.37-1 illustrates the downlink power to be applied for the 4 cells, as well as the frequency and scrambling code for each cell.

Table 8.2.6.37-1

Parameter	Unit	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5		
Frequency		$f_1$			$f_1$			$f_2$			$f_2$			$f_3$		
Scrambling code		Scrambling code 1			Scrambling code 2			Scrambling code 3			Scrambling code 2			Scrambling code 4		
		T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2
CPICH Ec	dBm/3.8 4 MHz	-60	-60	-75	-95	-	-	-	-	-	-60	-60	-	-50	-	-50
						60	75	60	60	60		62		50		

The UE is initially in CELL\_DCH, and has only cell 1 in its active set.

At instant T1, the downlink power is changed according to what is shown in table 8.2.6.37 -1. Cell 2 should then trigger event 1a as has been configured through the default System Information Block Type 11. The UE shall thus send a MEASUREMENT REPORT to the SS, triggered by cell 2.

The SS adds then cell 2 to the active set of the Ue, by sending an ACTIVE SET UPDATE message to the UE. The UE shall answer with an ACTIVE SET UPDATE COMPLETE message.

The SS configures then compressed mode, to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message.

At instant T2, the downlink power is changed according to what is shown in table 8.2.6.37-1. Frequency  $f_2$  shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 3 on frequency  $f_2$ . The UE is also ordered to stop compressed mode after the handover.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH\_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering. The SS shall restart incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

The SS then waits for 20 seconds, and checks that no MEASUREMENT REPORT is received from the UE.

The SS sends then a MEASUREMENT CONTROL message to the UE, to modify the intra-frequency cell info list of the UE. About 640 ms after, a MEASUREMENT REPORT message shall be received from the UE, triggered by cell 4. Subsequent MEASUREMENT REPORT messages shall be received at 4 seconds interval.

The SS sends then a MEASUREMENT CONTROL message to the UE that sets up inter-frequency measurements, but does not activate compressed mode in that message. It waits then for 20 seconds, and checks that no MEASUREMENT REPORT message triggered by cell 5 is received.

The SS then sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 5 on frequency  $f_3$ .

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH\_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering.

#### Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS changes the power of the cells according to column T1 in table 8.2.6.37-1
2		→	MEASUREMENT REPORT	Event 1a is triggered by cell 2 in the UE, which sends a MEASUREMENT REPORT message to the SS
3		←	ACTIVE SET UPDATE	The SS adds cell 2 to the active set of the UE.
4		→	ACTIVE SET UPDATE COMPLETE	The UE answers with an ACTIVE SET UPDATE COMPLETE message to the SS
5		←	PHYSICAL CHANNEL RECONFIGURATION	The SS downloads the compressed mode parameters in the UE.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of the compressed mode parameters.
7		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE, and activates compressed mode.
8				The SS changes the power of the cells according to column T2 in table 8.2.6.37-1.
9		→	MEASUREMENT REPORT	Frequency $f_2$ triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
10		←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 3 on frequency $f_2$ .

11	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.
12			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
13	←	MEASUREMENT CONTROL	The SS updates the list of intra-frequency cells in the UE.
14	→	MEASUREMENT REPORT	Cell 4 triggers event 1a in the UE, which sends a MEASUREMENT REPORT message to the SS. Subsequent MEASUREMENT REPORT messages shall be received from the UE at 4 seconds interval.
15	←	MEASUREMENT CONTROL	The SS sets up an inter-frequency measurement in the UE, but does not activate compressed mode.
16			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
17	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 5 on frequency $f_3$ .
18	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.

### Specific Message Content

FFS

#### 8.2.6.37.5 Test Requirement

After step 1, the UE shall send a MEASUREMENT REPORT message triggered by event 1a for cell 2.

After step 3, the UE shall send an ACTIVE SET UPDATE COMPLETE message to acknowledge that it has added cell 2 to its active set.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters that were sent in the PHYSICAL CHANNEL RECONFIGURATION message of step 4.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency  $f_2$ . In that message, cell 3 shall be the only cell included in the IE event results.

After step 10, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 3 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message. The UE shall also start incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

After step 11, the UE shall not send any MEASUREMENT REPORT message triggered by event 1a for cell 4.

After step 13, the UE send a MEASUREMENT REPORT message triggered by event 1a for cell 4.

After step 15, the UE shall not send any MEASUREMENT REPORT message triggered by event 2c for frequency 1.

After step 17, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 3 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message.

**<End of Modifications>**