3GPP TSG RAN Meeting #28 **RP-050273**

Quebec, Canada, 1 - 3 June 2005

Title **CRs to 34.123-1 for approval Batch 3**

Source **3GPP TSG RAN WG5 (Testing)**

Agenda Item **7.6.5**

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R5-050974	34.123-1	1179	-	F	Rel-5	5.11.1	CR to 34.123-1 Rel-5: Addition of SIB 12 contents to section 8.3.9	TEI
R5-050978	34.123-1	1180	-	F	Rel-5	5.11.1	CR to 34.123-1 Rel-5: Correction to WI-010 P4 IR_U test case 8.3.9.1	TEI
R5-050979	34.123-1	1181	-	F	Rel-5	5.11.1	CR to 34.123-1 Rel-5: Correction to WI-010 P4 IR_U test case 8.3.9.5	TEI
R5-050934	34.123-1	1182	-	F	Rel-5	5.11.1	Correction to GCF WI-10 IR_U Test Cases 8.3.7.12 (approved)	TEI
R5-050611	34.123-1	1183	-	F	Rel-5	5.11.1	Correction to MIB, PLMN and Cell Value Tag Value Definition to 8.4	TEI
R5-050624	34.123-1	1184	-	F	Rel-5	5.11.1	CR to 34.123-1 Rel-5; Removal of Release 5 test case 8.4.1.46	TEI
R5-050634	34.123-1	1185	-	F	Rel-5	5.11.1	Corrections to GCF WI-010 (P2) approved test case 8.4.1.7	TEI
R5-050646	34.123-1	1186	-	F	Rel-5	5.11.1	Correction to Package 4 RRC test case 8.4.1.41	TEI
R5-050753	34.123-1	1187	-	F	Rel-5	5.11.1	CR to 34.123-1: Correction to GCF WI-012 RRC test case 8.4.1.6.	TEI
R5-050792	34.123-1	1188	-	F	Rel-5	5.11.1	Correction to GCF WI-10 RRC Test Cases 8.4.1.29	TEI
R5-050794	34.123-1	1189	-	F	Rel-5	5.11.1	Correction to GCF WI-10 RRC Test Cases 8.4.1.25	TEI
R5-050795	34.123-1	1190	-	F	Rel-5	5.11.1	Correction to GCF WI-10 Inter-RAT Test Cases 8.4.1.31, 8.4.1.33, 8.4.1.34, 8.4.1.35, 8.4.1.36, 8.4.1.40 (Revision of R5-050598)	TEI
R5-050929	34.123-1	1191	-	F	Rel-5	5.11.1	Removal of TGPL2 from section 8.4	TEI
R5-050935	34.123-1	1192	-	F	Rel-5	5.11.1	Correction to Package 3 RRC test case 8.4.1.37	TEI
R5-050642	34.123-1	1193	-	F	Rel-5	5.11.1	Clarification of Cell 3 CPICH level for “Measurement Control and Report: Intra-frequency measurement for	TEI

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
							transition from CELL_DCH to CELL_FACH state (FDD)", Test 8.4.1.5	
R5-050524	34.123-1	1194	-	F	Rel-5	5.11.1	Correction to NAS MM test case 9.4.2.4 (GCF Work Item 12)	TEI
R5-050659	34.123-1	1195	-	F	Rel-5	5.11.1	Corrections to low priority MM test case 9.4.5.4.3	TEI
R5-050936	34.123-1	1196	-	F	Rel-5	5.11.1	Correction to GCF WI-10 NAS Test Cases 9.2.2	TEI
R5-050946	34.123-1	1197	-	F	Rel-5	5.11.1	Correction to GCF WI-12 MM Test Case 9.4.3.3	TEI
R5-050952	34.123-1	1198	-	F	Rel-5	5.11.1	Correction to GCF WI-10 NAS Test Case 9.4.1	TEI

3GPP RAN-5 Meeting #27
Bath, 18st April - 22th April 2005

Tdoc ⌘R5-050974

CR-Form-v7.1

CHANGE REQUEST

⌘ **34.123-1** **CR** 1179 ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	CR to 34.123-1 Rel-5: Addition of SIB 12 contents to section 8.3.9
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	This test group needs special SIB 12 values, which are currently not all provided.
Summary of change:	⌘	Add complete SIB12 tables at the beginning of test group 8.3.9.
Consequences if not approved:	⌘	The test specification is incomplete.

Clauses affected:	⌘	8.3.9			
Other specs affected:	⌘	Y / N ☐ / ☒ Other core specifications ☒ / ☐ Test specifications ☐ / ☒ O&M Specifications	⌘	34.123-3	
Other comments:	⌘	Affects R99, Rel-4 and Rel-5.			

How to create CRs using this form:
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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

<START OF MODIFIED SECTION 8.3.9>

8.3.9 Inter system cell reselection from UTRAN

If not specified differently in the individual tests of this group, the Contents of System Information Block type 12 (FDD) shall be as specified in the following table:

- FACH measurement occasion info	Not Present
- Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	NULL
removeNoIntraFreqCells:	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0dB
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of 3GPP TS 34.108.
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present For neigbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Intra-frequency cell id	3
- Cell info	Same content as specified for Intra-frequency cell id=2 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4 of 3GPP TS 34.108.
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter coefficient	Not present Absence of this IE is equivalent to the default value 0
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronization information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	

- Cell synchronization information reporting indicator	TRUE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	3 kinds
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	5dB
- Cells forbidden to affect Reporting range	Not Present
- W	1.0
- Hysteresis	0.0
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	2
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4 000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	3
- Intra-frequency event identity	1b
- Triggering condition 1	Active set cells
- Triggering condition 2	Not Present
- Reporting Range Constant	5dB
- Cells forbidden to affect Reporting range	Not Present
- W	1.0
- Hysteresis	0.0
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	3
- Intra-frequency event identity	1c
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	Not Present
- Cells forbidden to affect Reporting range	Not Present
- W	Not Present
- Hysteresis	0.0
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	3
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4 000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information	

- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not present (This IE shall be ignored by the UE for SIB11)
- 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 3GPP TS 25.101 [11]
- UARFCN downlink(Nd)	Reference to table 6.1.2 of 3GPP TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not present Absence of this IE is equivalent to default value 0 dB
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of 3GPP TS 34.108.
- Primary CPICH Tx power	Not present
- TX Diversity Indicator	FALSE
- Cell Selection and Re-selection Info	Not present (same values as for serving cell applies)
- Inter frequency cell id	5
- 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 3GPP TS 25.101 [11]
- UARFCN downlink(Nd)	Reference to table 6.1.2 of 3GPP TS 34.108 for Cell 5
- Cell info	Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.5 (FDD)" in clause 6.1.4 of 3GPP TS 34.108.
- 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 3GPP TS 25.101 [11]
- UARFCN downlink(Nd)	Reference to table 6.1.2 of 3GPP TS 34.108 for Cell 6
- Cell info	Same content as specified for Inter-frequency cell id=4 with the exception that value for Primary scrambling code shall be according to clause titled "Default settings for cell No.6 (FDD)" in clause 6.1.4
- Cell for measurement	Not present
- Inter-RAT measurement system information	Not Present
- Inter-RAT measurement system information	
- Inter-RAT cell info list	
- CHOICE *Inter-RAT cell removal*	Not Present (This IE shall be ignored by the UE for SIB11)
- New inter-RAT cells	
- Inter-RAT cell id	9
- CHOICE *Radio Access Technology*	GSM
- GSM	
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	
- Base transceiver Station Identity Code (BSIC)	Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9
- Band indicator	According to PICS/PIXIT

	- BCCH ARFCN	Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 9
	- Inter-RAT cell id	10
	- CHOICE *Radio Access Technology*	GSM
	- GSM	
	- Cell individual offset	0
	- Cell selection and re-selection info	Not Present
	- BSIC	
	- Base transceiver Station Identity Code (BSIC)	Reference to table 6.1.10 for Cell 10
	- Band indicator	According to PICS/PIXITs
	- BCCH ARFCN	Reference to table 6.1.10 of 3GPP TS 34.108. for Cell 10
	- Cell for measurement	Not present

<END OF MODIFIED SECTION>

3GPP RAN-5 Meeting #27
Bath, 18st April - 22th April 2005

Tdoc ⌘R5-050978

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CHANGE REQUEST

⌘ **34.123-1** **CR** 1180 ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.123-1 Rel-5: Correction to WI-010 P4 IR_U test case 8.3.9.1
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	27/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

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Ph2 (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)
Rel-7 (Release 7)

Reason for change:	⌘	SIB11 and SIB12 do not contain fach_MeasurementOccasionInfo although the UE is in the cell FACH state when it is expected to read the Sysinfo.
Summary of change:	⌘	Add Specific Message Contents for SIB11 and SIB12 to contain fach_MeasurementOccasionInfo.
Consequences if not approved:	⌘	The test purpose as defined in 8.3.9.1.3 will not be achieved and erroneous test case results will be obtained.

Clauses affected:	⌘	8.3.9.1.4			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	34.123-3
		N / X	Test specifications		
		X /	O&M Specifications		
		/ X			
Other comments:	⌘	Affects R99, Rel-4 and Rel-5.			

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<START OF MODIFIED SECTION 8.3.9.1.4>

8.3.9.1.4 Method of test

Initial conditions

System Simulator: 3 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS and Cell 3 is GSM. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2. 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 3.

All cells belong to the same PLMN . UTRAN and GPRS cells belong to different location area.

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

The 3G Neighbour Cell Description of Cell 2 (GPRS) and Cell 3 (GSM) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxlevmin	dBm	-101
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 2 (GPRS)
Test Channel		1
RF Signal Level	dBm	-75
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	25
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Parameter	Unit	Cell 3 (GSM)
Test Channel		2
RF Signal Level	dBm	-85
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	15
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Step d-f:

Parameter	Unit	Cell 1 (UTRAN)
CellBarred		Not barred -> Barred
Tbarred	S	80

Step i:

Parameter	Unit	Cell 1 (UTRAN)
Qrxlevmin	DB	-101 -> -41
Srxlev*	DB	41 -> -19

Test procedure

a) The SS activates cells 1, 2, and 3. The SS monitors cells 1, 2 and 3 for random access requests from the UE.

b) The UE is switched on.

c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11).

d) The SS sets Cell 1 to be barred.

e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

f) The SS waits for channel request from the UE SS sends an IMMEDIATE ASSIGNMENT REJECT to bring the UE to idle mode..

g) The SS pages the UE with PAGING TYPE 2 in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.

h) The UE is switched off.

i) Step a-e) is repeated with the same initial conditions except that in step d), Qrxlevmin is increased, so S will become negative instead of being barred.

Specific Message Contents

System Information Block type 11 (Step d)

Use the message type reference found in clause 6.1.0b~~8.3.9~~ of TS 34.108~~23.1~~, with the exception defined above for step e), and with the following additions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	gsm

System Information Block type 12 (Step d)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the exception defined above for step e), and with the following additions:

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	gsm

<END OF MODIFIED SECTION>

CR-Form-v7.1

CHANGE REQUEST

⌘ 34.123-1 CR 1181 ⌘rev - ⌘ Current version: 5.11.1 ⌘

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

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

Title:	⌘	CR to 34.123-1 Rel-5: Correction to WI-010 P4 IR_U test case 8.3.9.5
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	27/04/2005
Category:	⌘	F
Release:	⌘	Rel-5

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R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change:	⌘	A) The test purpose (8.3.9.5.3) says: "To verify that the UE performs reselection correctly considering the Qoffset value broadcast in SIB 11." Before step d) Qoffset1s,n is not transmitted in SIB11, i.e. the default value 0 applies. In order to achieve that the GSM cell looks better in step d), the value of $Qoffset1_{s,n}$ must be decreased and not increased. Also in step f) of the Test procedure the SS should not increase the signal level on Cell 2, because then it is not clear that the reselection occurs due to the change of $Qoffset1_{s,n}$ only. B) SIB11 and SIB12 do not contain fach_MeasurementOccasionInfo although the UE is in the cell FACH state when it is expected to read the Sysinfo.
Summary of change:	⌘	A) Change the value of q_Offset1S_N from 20 to -25. Delete the table under 'step f) and also delete the contents of step f) in the Test procedure. B) Add Specific Message Contents for SIB11 and SIB12 to contain fach_MeasurementOccasionInfo.
Consequences if not approved:	⌘	The test purpose as defined in 8.3.9.5.3 will not be achieved and erroneous test case results will be obtained.

Clauses affected:	⌘	8.3.9.5.4

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
		X		Test specifications		34.123-3
			X	O&M Specifications		
Other comments:	⌘	Affects R99, Rel-4 and Rel-5.				

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

<START OF MODIFIED SECTION 8.3.9.5.4>

8.3.9.5.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN . UTRAN and GPRS cells belong to different location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN).

UE: Power-Off (State 1) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Step a-c:

Parameter	Unit	Cell 1 (UTRAN)
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxlevmin	dBm	-101
Srxlev*	dBm	41
CellBarred		Not barred

Parameter	Unit	Cell 2 (GPRS)
Test Channel		1
RF Signal Level	dBm	-70
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	30
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Step d:

Parameter	Unit	Cell 1 (UTRAN)
$Qoffset1_{s,n}$	dBm	~~20~~ 25

~~Step f:~~

~~Parameter~~	~~Unit~~	~~Cell 2 (GPRS)~~
~~RF Signal Level~~	~~dBm~~	~~-70 -> -50~~
~~C1*~~	~~dBm~~	~~30 -> 50~~

Test procedure

a) The SS activates cells 1 and 2. The SS monitors cells 1and 2 for random access requests from the UE.

b) The UE is switched on.

c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11).

d) Q_{offset} value is modified at UTRAN such that it makes the GSM cell look the best.

e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

f) ~~The SS increases signal level on Cell 2 to -50 dBm~~Void.

g) The SS monitors for random access requests from the UE.

h) The SS pages the UE with PAGING TYPE 2 and PAGING TYPE 1 messages in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.

Specific Message Contents

System Information Block type 11 (Step d)

Use the message type reference found in clause 6.1.0b~~8.3.9~~ of TS 34.108~~23.1~~, with the exception defined above for step d), and with the following additions:

Information Element	**Value/remark**
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	gsm

System Information Block type 12 (Step d)

Use the message type reference found in clause 8.3.9 of TS 34.123-1, with the exception defined above for step d), and with the following additions:

Information Element	**Value/remark**
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	3
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	gsm

<END OF MODIFIED SECTION>

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1182** ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to GCF WI-10 IR_U Test Cases 8.3.7.12 (approved)
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	14/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	In the specific message contents of CELL UPDATE CONFIRM in step 7, the Default DPCH Offset Value is specified as an arbitrary set to value 0.306688 by step of 512; but the Frame offset is set to 0. This is inconsistent because the frame offset is based on the Default DPCH offset value (see 25.402 clause 8.2.1).
Summary of change:	⌘	The value of the field Frame offset shall be set to Default DPCH Offset value (as currently stored in SS) mod 38400. Also some editorial corrections in clauses 8.3.7.12.4 and 8.3.7.12.5.
Consequences if not approved:	⌘	The prose and TTCN will not be aligned.

Clauses affected:	⌘	8.3.7.12.4 and 8.3.7.12.5
Other specs affected:	⌘	Y / N ☐ / ☒ Other core specifications ☐ / ☒ Test specifications ☐ / ☒ O&M Specifications
Other comments:	⌘	This CR does not have impact on the TTCN.

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.

8.3.7.12 Inter system handover from UTRAN/To GSM/Speech/Failure (Physical channel Failure and Reversion Failure)

8.3.7.12.1 Definition

8.3.7.12.2 Conformance requirement:

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

1> revert back to the UTRA configuration;

1> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND;

1> if the UE does not succeed to establish the UTRA physical channel(s):

2> perform a cell update procedure according to subclause 8.3.1 in TS 25.331with cause "Radio link failure";

2> when the cell update procedure has completed successfully:

3> proceed as below.

1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:

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

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

2> clear that entry;

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

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

2> the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.7.5

8.3.7.12.3 Test purpose

The UE shall perform a cell update when the UE fails to revert to the old configuration after the detection of physical channel failure in the target RAT cell as given in the HANDOVER FROM UTRAN COMMAND message. After the UE completes the cell update procedure, the UE shall transmit a HANDOVER FROM UTRAN FAILURE message on the DCCH using AM RLC, including IE "failure cause" set to "physical channel failure".

8.3.7.12.4 Method of test

Initial conditions

System Simulator : 2 cells - Cell 1 is UTRAN, Cell 9 is GSM. GSM 51.010 section 40 shall be referenced for the default parameters, and clause 26.6.5.1 shall be referenced for cell allocation of cell 9.

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

Related ICS/IXIT statement(s)

UE supports both GSM and UTRAN Radio Access Technologies,

UE supports GSM FR,

UE supports UTRAN AMR,

UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

Foreseen final state of the UE

The UE is in CC state U10 on cell 1.

Test Procedure

The SS and brings the UE into call active state (CC state U10) with AMR on the UTRAN cell. The SS configures a target dedicated channel on the GSM cell. The SS sends a HANDOVER FROM UTRAN COMMAND indicating a dedicated channel of the target GSM cell to the UE through DCCH using the UTRAN configuration. The UE receives the command and configures itself accordingly but cannot complete the handover and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS released the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit CELL UPDATE CONFIRM message on downlink DCCH after receiving CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits the HANDOVER FROM UTRAN FAILURE message to the SS using the new UTRA configuration, on the DCCH using AM RLC, setting the value of IE "failure cause" to " physical channel failure".

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into UTRAN U10 state in cell 1
2	SS			The SS configures a dedicated GSM FR channel on the GSM cell.
3	←		HANDOVER FROM UTRAN COMMAND-GSM	Send using the UTRA configuration and the message indicates: the target channel for GSM FR.
4	UE			The UE accepts the handover command and switches to the GSM traffic channel specified in the HANDOVER COMMAND message that is contained within the HANDOVER FROM UTRAN COMMAND -GSM message
4a	SS			SS removes the UTRAN physical channel (DPCH) allocated to the mobile to ensure UE will not be able to revert back to the old UTRAN configuration when handover failed
5	→		HANDOVER ACCESS	The SS receives this burst on the traffic channel of cell 9 (GSM cell) It implies that the UE has switched to GSM cell. Upon receiving this burst, SS removes the target GSM Traffic Channel. As a result not only the handover will fail, but also the reversion to the old UTRA configuration.
6	→		CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
7	←		CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
8				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10	→		HANDOVER FROM UTRAN FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific message contents

Same as the message contents of clause 8.3.7.1 for Execution 3.

CELL UPDATE (Step 6)

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

Information Element	Value/remark
U-RNTI	

- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 7) (FDD)

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

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
CHOICE channel requirement	Uplink DPCH info
-UplinkDPCH Info	Same as specified in "Contents of RADIO BEARER SETUP message: AM or UM" for condition A2 (Speech CS) in TS 34.108 clause 9.1
- DPCCH power offset	-80dB (i.e. ASN.1 IE value of –40)
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- Number of FBI bit	Reference to TS34.108 clause 6.10 Parameter Set
- Puncturing Limit	Reference to TS34.108 clause 6.10 Parameter Set
Downlink information common for all radio links	Same as specified in "Contents of RADIO BEARER SETUP message: AM or UM" for condition A2 (Speech CS) in TS 34.108 clause 9.1
CHOICE Mode	FDD

- Downlink DPCH info common for all RL - Timing indicator	Initialise
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset PPilot-DPDCH	0
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Arbitrary set to value 0..306688 by step of 512
Downlink information for each radio links	
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	~~0 chips~~Set to value: Default DPCH Offset value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	2
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to TS34.108 clause 6.10 Parameter Set)
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

CELL UPDATE CONFIRM (Step 7) (3.84 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to TS34.108 clause 5.1 Test frequencies
Maximum allowed UL TX power	30dBm
CHOICE Mode	TDD
Downlink information for each radio links	
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	Not Present
- Cell Parameters ID	Not Present
- Block STTD indicator	FALSE
- Downlink DPCH info for each RL	
- CHOICE mode	TDD
- DL CCTrCh List	
- TFCS ID	1
- Time info	
- Activation time	Not Present (default)
- Duration	Not Present (default)
- Common timeslot info	Not Present (default)
- Downlink DPCH timeslots and codes	Not Present (default)
- UL CCTrCH TPC List	Not Present (default)

CELL UPDATE CONFIRM (Step 7) (1.28 Mcps TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS34.108, clause 9, with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3

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

HANDOVER FROM UTRAN COMMAND

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

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

HANDOVER COMMAND

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

HANDOVER FROM UTRAN FAILURE

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

8.3.7.12.5 Test requirement

After step 5 the SS shall receive a~~n~~ CELL UPDATE message.

After step 8 the SS shall receive a~~n~~ PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

After step 9 the SS shall receive an INTER-SYSTEM HANDOVER FAILURE message via the new UTRA configuration.

3GPP RAN WG5 Meeting #27
Bath, England, 25-29 April, 2005

Tdoc ⌘R5-050611

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1183** ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to MIB, PLMN and Cell Value Tag Value Definition to 8.4
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	10/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	To remove the definition of specific value for the MIB, PLMN and Cell value tag.
Summary of change:	⌘	Replaced the specific value for MIB, PLMN and Cell value tag with general definition based on TS 25.331
Consequences if not approved:	⌘	The prose will be incorrect and inconsistent with the TTCN.

Clauses affected:	⌘	Value sections, see change details.

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

Other comments:	⌘	No impact to TTCN as the TTCN is already implemented this way. This is part of a set of CRs, R5-050608, R5-050609, R5-050610, R5-050611

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

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

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

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

8.4.1.5A Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)

8.4.1.5A.1 Definition

8.4.1.5A.2 Conformance requirement

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

1> stop intra-frequency type measurement reporting;

1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or

1> if the transition is not due to a reconfiguration message:

2> delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY.

1> begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331).

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5A.3 Test Purpose

1. To confirm that the UE stops performing intra-frequency measurement reporting specified in a MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state.

2. To confirm that the UE reads the System Information Block type 11 or 12 messages when it enters CELL_FACH state from CELL_DCH state, and starts to monitor the cells listed in the IE "intra-frequency cell info list".

3 To confirm that the UE performs measurements on uplink RACH transmissions and appends the measured results in RACH messages, when it receives IE "intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" in the System Information Block type 11 or 12 messages.

4. To confirm that the UE applies the reporting criteria in IE "intra-frequency reporting criteria" in System Information Block Type 11 or 12 messages following a state transition from CELL_FACH to CELL_DCH, if no intra-frequency measurements applicable to CELL_DCH are stored.

8.4.1.5A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, while cell 3 is switched off.

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For MASTER IFORMATION BLOCK and system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

MASTER INFORMATION BLOCK

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

Information Element	Value/Remarks
MIB Value Tag	~~1~~ A valid MIB value tag as defined in TS 25.331

System Information Block type 11

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

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present

- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.5A-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while column marked as "T1" will be applied during the test.

Table 8.4.1.5A-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
PCCPCH RSCP	dBm	-60	-60	-70	-75	-85	-85	-122	-70	-60

The UE is initially in CELL_DCH state. The System Information Block type 11 message is modified compared to the default message contents, in order to prevent the reporting of "Cell synchronisation information". No measurement to be applied by the UE in CELL_DCH state is specified in any of the System Information Block type 11 or 12 messages.

SS sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement for the measurement of cell 2's PCCPCH RSCP. At the same time, reporting of PCCPCH RSCP values of active set cells and monitored set cells are requested with the reporting criteria set to "periodic reporting" and "reporting interval" set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message to move the UE to CELL_FACH. After receiving this message, the UE shall reconfigure itself and reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS monitors the uplink channels to verify that no MEASUREMENT REPORT messages are received.

SS reconfigures itself according to the settings in columns marked "T1" in table 8.4.1.5A-1. SS transmits System Information Block type 12 messages in cell 1, which include cell 3 into the IE "intra-frequency cell info list" and modifies SIB11 to indicate that SIB12 is now being broadcast. IEs "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in the System Information Type 12 messages. Event type 1g reporting criterion is specified for intra-frequency measurements. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits until T305 has expired. The UE shall respond with a CELL UPDATE message, which comprises IE "Measured results on RACH" to report the readings of PCCPCH RSCP for cell 1 and cell 3. SS replies with CELL UPDATE CONFIRM message on the downlink DCCH. This message does not change the physical resources nor allocate any new RNTI identities. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, and configures dedicated physical channel for both uplink and downlink directions. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages.

SS reconfigures itself according to the settings in columns marked "T2" in table 8.4.1.5A-1. Event 1g is triggered since the best cell is changed to cell 3 from cell 1.

SS shall receive the MEASUREMENT REPORT messages.

SS verifies that it includes PCCPCH RSCP values of the cells 1, 2 and 3 in IE "Cell measured results" and the triggering of event '1g' on cell 3 in IE "Event results".

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in PS-DCCH+DTCH_DCH (state 6-10) in cell 1.
2	←		MEASUREMENT CONTROL	SS requests for measurement of cell 2´s PCCPCH RSCP value and reporting of PCCPCH RSCP values of active cell and monitored set cell.
3	→		MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval.
4	←		PHYSICAL CHANNEL RECONFIGURATION	SS moves the UE to CELL_FACH state.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE reaches CELL_FACH state.
6	←		Master Information Block System Information Block type 11, 12	SS reconfigures itself according to the settings stated in column "T1" of table 8.4.1.5A-1. SIB 11 is modified to indicate that SIB12 is now broadcast and includes cell 2 as a neighbour cell. SIB 12 indicates that cell 3 is included in the IE "intra-frequency cell info list". Event 1g is also configured for cell 3. SS waits for 1 minute and verifies that no MEASUREMENT REPORT messages are detected on the uplink.
7	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits until T305 has expired.
8	→		CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and cell 3 present in this message.
9	←		CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
11a				SS reconfigures itself according to the settings stated in column “T2” of table 8.4.1.5A-1.

Step	Direction		Message	Comment
	UE	SS		
12	→		MEASUREMENT REPORT	The UE shall report event 1G for change to best cell, cell3.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 2
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE mode	TDD
- Measurement quantity list - Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE

CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent

- CHOICE mode - Cell parameters Id - Proposed TGSN - Primary CCPCH RSCP - Pathloss - Timeslot list - Cell measured results - Cell Identity - Cell synchronisation information - CHOICE mode - Cell parameters Id - Proposed TGSN - Primary CCPCH RSCP - Pathloss - Timeslot list Measured Results on RACH Additional measured result list Event results	TDD Check to see if it's the same for cell 1 Check to see if this IE is absent Check to see if this IE is present Check to see if this IE is absent Check to see if this IE is absent Check to see if it is absent Check to see if this IE is absent TDD Check to see if it's the same for cell 2 Check to see if this IE is absent Check to see if this IE is present Check to see if this IE is absent Check to see if this IE is absent Check to see if this IE is absent Check to see if this IE is absent Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

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

MASTER INFORMATION BLOCK (Step 6)

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

Information Element	Value/Remarks
MIB Value Tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 11 (Step 6)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1

- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103 dBm
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info	Not Present

Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	6
- Intra-frequency cell cells	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.3 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	30dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE mode - Measurement list - Measurement quantity	TDD PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	TDD
- Reporting quantity	PCCPCH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	

- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
- Reporting range constant	20.0 dB
- W	0.0
- Hysteresis	1.0 dB
- Time to trigger	60 ms
- Amount of reporting	absent
- Reporting Interval	absent
- Reporting cell status	
- CHOICE *reported cell*	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not present

SYSTEM INFORMATION CHANGE INDICATION (Step 7)

Information Element	Value/Remarks
BCCH modification info - MIB Value tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to the same value assigned during the execution of procedure P3 or P5.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if it is set to "Periodical cell update"
Failure case	Check to see if it is absent
Measured results on RACH	
- Measurement result for current cell	
- SFN-SFN observed time difference - CHOICE mode - Cell parameters Id - PCCPCH RSCP	Not Checked TDD Check to see if the same as cell 1. Check to see if it is present
- Measurement results for monitored cells	
- SFN-SFN observed time difference	Not Checked
- CHOICE mode - Cell parameters Id	TDD Check to see if the same as cell 3.
- PCCPCH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

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

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results list	

- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 3
- Proposed TGSN	Check to see if this IE is absent
- Primary CCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Timeslot list	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 1
- Proposed TGSN Reporting required	Check to see if this IE is absent
- Primary CCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Timeslot list	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Cell parameters Id	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1g'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'TDD'
- Cell parameters id	Check to see if it's the same for cell 3

8.4.1.5A.5 Test Requirement

After step 2, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's PCCPCH RSCP value.

After step 5, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 2.

After step 7, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values PCCPCH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".

After step 12, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 6. It shall send MEASUREMENT REPORT messages. In these messages, triggering of event '1g' shall be reported in IE "Event results" with IE " Cell parameters Id " containing the same for cell 3.

The message shall contain IE "measured result" to report PCCPCH RSCP values of cell 1, 2 and 3.

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)

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

Specific Message contents

For system information block 12 for Cell1 (gives IEs which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATIONmessage to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
			Void	
2			Void	If compresed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8	←		MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9	→		MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12	←		Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15	→		CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16	←		CELL UPDATE CONFIRM	See message content.

17	→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL_DCH"

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 8)

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

- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	4
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE

- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_-quality_measure	CPICH_Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to TS 25.101
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH Tx power	Not Present
- TX diversity indicator	FALSE
- Cell selection and re-selection info	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks

BCCH modification info - MIB Value tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI	Check to see if same to value assigned in P3 or P5
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

8.4.1.6A Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)

8.4.1.6A.1 Definition

8.4.1.6A.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

8.4.1.6A.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.

8.4.1.6A.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.

Test Procedure

Table 8.4.1.6A-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 8.4.1.6A-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
PCCPCH RSCP	dBm	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE.

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 PCCPCH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATIONmessage to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6A-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink

DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 12	PS-DCCH+DTCH_DCH (state 6-10) in cell 1. System Information Block type 12 is modified with respect to the default settings. All measurement and reporting activities are disabled in this message.
2	←		MEASUREMENT CONTROL	SS indicates that the PCCPCH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
3	→		MEASUREMENT REPORT	UE shall transmit this message to report cell 4's PCCPCH RSCP value.
4	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
6	←		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"
7	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
8				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6A-1, and then waits for the UE to re-select to a new cell.
9	→		CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
10	←		CELL UPDATE CONFIRM	See message content.
11	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

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	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 (Nt)	UARFCN of the frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Set to same as used for cell 4
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- 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	PCCPCH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- Primary CCPCH 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 3)

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	
- CHOICE mode	TDD
- UARFCN(Nt)	Check to see if set to the UARFCN of the frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if set to the same for cell 4
- proposed TGSN	Check to see if it is absent
- PCCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- timeslot list	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 4)

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)".

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 12 (Step 6)

Information Element	Value/remark
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to table 6.1.4 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH info	Refer to clause titled "Default settings for cell No.4 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and re-selection info	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 7)

Information Element	Value/Remarks
BCCH modification info - MIB Value tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

CELL UPDATE (Step 9)

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"
Measured results on RACH	Check to see if it is absent

CELL UPDATE CONFIRM (Step 10)

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

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 11)

Only the message type is checked.

8.4.1.6A.5 Test Requirement

After step 2 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 4, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 5 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's PCCPCH RSCP value.

After step 8 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 10, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state:

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> if the cell in which the UE transited from CELL_FACH state is included in the active set for the CELL_DCH state, the UE shall:

3> resume the measurement reporting.

2> otherwise:

3> the UE should not resume the measurement reporting. If the UE does not resume the measurement reporting, the measurement shall be restarted when a MEASUREMENT CONTROL message is received with the corresponding measurement identity.

…

Upon cell reselection while in CELL_FACH/CELL_PCH/URA_PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;

…

1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

…

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

3> if the UE is in CELL_FACH state:

4> the UE behaviour is not specified.

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:

…

2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

5> if the UE is in CELL_FACH state:

6> the UE behaviour is not specified.

4> if measurement type is set to "intra-frequency measurement", for any of the optional IEs "Intra-frequency measurement objects list", "Intra-frequency measurement quantity", "Intra-frequency reporting quantity", "Measurement Validity", "report criteria" and "parameters required for each event" (given "report criteria" is set to "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:

…

5> replace the corresponding information (the IEs listed above and all their children) stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> leave all other stored information elements unchanged in the variable MEASUREMENT_IDENTITY.

1> if the IE "measurement command" has the value "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

"If the IE "Reporting Cell Status" is received, the UE shall set the IE "Measured Results" in MEASUREMENT REPORT as follows. The UE shall:

1> for intra-frequency measurement and inter-frequency measurement:
2> include the IE "Cell Measured Results" for cells (excluding cells of another RAT) that satisfy the condition (such as "Report cells within active set") specified in the IE "Reporting Cell Status", in descending order by the measurement quantity"

If the IE "Cells for measurement" has been included in a MEASUREMENT CONTROL message, only monitored set cells explicitly indicated for a given intra-frequency (resp. inter-frequency, interRAT) measurement by the IE "Cells for measurement" shall be considered for measurement. If the IE "Cells for measurement" has not been included in a MEASUREMENT CONTROL message, all of the intra-frequency (resp. inter-frequency, inter RAT) cells stored in the variable CELL_INFO_LIST shall be considered for measurement. The IE "Cells for measurement" is not applicable to active set cells or virtual active set cells e.g. when the triggering condition refers to active set cells, the UE shall consider all active set cells in the CELL_INFO_LIST for measurement irrespective if these cells are explicitly indicated by the IE "Cells for measurement".

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a, 8.4.1.7.1, 8.4.0 and 8.6.7.9

8.4.1.7.3 Test Purpose

- To confirm that UE retrieves stored measurement control information for intra-frequency measurement type with "measurement validity" assigned to "CELL_DCH", after it enters CELL_DCH state from CELL_FACH state.

- To confirm that the UE continues to monitor the neighbouring cells listed "intra-frequency cell info" IE in the System Information Block type 11 or 12 messages, if no intra-frequency measurements applicable to CELL_DCH are stored.

- To confirm that the UE transmits MEASUREMENT REPORT messages if reporting criteria stated in IE "intra-frequency measurement reporting criteria" in System Information Block type 11 or 12 messages are fulfilled.

- To confirm that a MEASUREMENT CONTROL message received in CELL_DCH state overrides the measurement and associated reporting contexts maintained in the UE by virtue of System Information Block

type 11 or 12 messages only if the measurement identities defined within the MEASUREMENT CONTROL message and System Information Block type 11 or 12 are identical.

- To confirm that the UE delete all measurements of type intra-frequency upon cell reselection while in CELL_FACH.

8.4.1.7.4 Method of test

Initial Condition

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

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.7-1

Para-meter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
CPICH Ec	dBm /3.84 MHz	-60	-70	-70	-65	-60	-60	-70	-70	-60

The UE is brought to CELL_FACH state in cell 1. (step 1) SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

SS sends a RADIO BEARER RECONFIGURATION message to UE (step2), and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message (step3). The UE shall send a MEASUREMENT REPORT message containing IE "Measured results" to report cell 2's CPICH RSCP value and IE "event results" to report triggering of event type "1e" (step 4). After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info" (step 5). After receiving such a message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement identity = 11. SS verifies that measurement readings for cell 3 's CPICH RSCP are reported in IE "cell measured results" in this message (step 6). Cell 3 shall also trigger event 1e for the measurement that the UE had stored from system information, so a MEASUREMENT REPORT message shall be received for measurement identity = 10 (step 6a) as well. The order of steps 6 and 6a is not important and could be reversed.

Next, SS sends a PHYSICAL CHANNEL RECONFIGURATION message (step 7). SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 8). SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received (step 9).

SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH state (step 9a). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 9b). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e. the UE shall have deleted the measurement configured through the MEASUREMENT CONTROL message of step 5, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE (step 9c).

SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure intra-frequency measurements with validity CELL_DCH (step 10). The UE shall send a MEASUREMENT REPORT message (with IE “Measurement identity” = 12) to the SS triggered by cell 2 (step 14).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH state (step 14a). The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 14b). SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 14c).

SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH state (step 14d). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 14e). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of step 10 (step 14f). The UE shall also apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received (step 15). The order of steps 14f and 15 is not important and could be reversed.

.

Following the reception of the MEASUREMENT REPORT messages, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in "measurement identity" = 12 (step 16). Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH with "measurement identity" = 12 (step 16a). After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more (step 17). This message is identical to the one sent in step 10 (see specific message content). A MEASUREMENT REPORT message shall be received from the UE triggered by cell 2 (step 17a).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures common physical channel (step 18). The UE shall transit to CELL_FACH state and then respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 19). SS monitors the uplink DCCH once more to verify that no MEASUREMENT REPORT messages are detected (step 20). SS modifies the downlink transmission power of the respect cells according to the settings in columns "T1" in table 8.4.1.7-1. System information block type 11 and System Information Block type 12 for cell 2 shall be different from the default settings according to what is defined in the specific message content part of this section (step 21). The UE shall initiate a cell re-selection procedure. This is verified in the SS when a CELL UPDATE message is received on the uplink CCCH with the "cell update cause" IE set to "cell reselection" (step 22). SS transmits a CELL UPDATE CONFIRM message, which includes "New C-RNTI", on the DCCH (step 23). Then the UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message (step 23a). Next, SS sends a RADIO BEARER RECONFIGURATION message on the downlink DCCH, assigning dedicated physical channels in both uplink and downlink directions (step 24). The UE shall respond with a RADIO BEARER RECONFIGURATION COMPLETE message and then return to CELL_DCH state (step 25). SS modifies the downlink transmission power of all cells according to the settings in columns "T2" in table 8.4.1.7-1. UE shall then send MEASUREMENT REPORT messages reporting cell 3's CPICH RSCP according to the content in System Information Block type 12 messages broadcasted in cell 2 (step 21).SS transmits a MEASUREMENT CONTROL message (step 27) whereby the measurement identity is set to the same value as that in the SIB type 12 messages (step 21). UE shall send MEASUREMENT REPORT message (step 28) reporting cell 3's CPICH RSCP according to the MEASUREMENT CONTROL message (step 27).

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents" clause.
1a	←		SYSTEM INFORMATION CHANGE INDICATION	
2	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4	→		MEASUREMENT REPORT	Reports cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”.
5	←		MEASUREMENT CONTROL	Cell 3 is added to the list of monitored set of the UE.
6	→		MEASUREMENT REPORT	Cell 3 shall trigger the event 1e configured in the measurement identity 11. NOTE: due to ambiguity in 25.331 – two interpretations can be given. These are shown in the specific message contents below.
6a	→		MEASUREMENT REPORT	Cell 3 shall also trigger the event 1e configured in the measurement identity 10. The order of steps 6 and 6a could be reversed.
7	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
9a	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
9b	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
9c	→		MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”.
9d	←		Void	
9e	→		Void	

Step	Direction		Message	Comment
	UE	SS		
10	←		MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement and reporting for cell 2. Measurement validity" IE is set to CELL_DCH state.
11				
12	←		Void	
13	→		Void	
13a	→		MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”. Note: The order of steps 13a and 14 could be reversed.
14	→		MEASUREMENT REPORT	UE reports cell 2's measured results for CPICH RSCP, with “measurement identity” IE set to “12”.
14a	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
14b	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
14c				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
14d	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
14e	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
14f	→		MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 10.The “measurement identity” IE shall be set to “12”.
15	→		MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”. The order of steps 14f and 15 could be reversed.
16	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activities related to "measurement identity" = 12.
16a				SS waits and verifies that UE stops transmitting MEASUREMENT REPORT messages with “measurement identity” = 12.
17	←		MEASUREMENT CONTROL	This message is the same as in step 10.

Step	Direction		Message	Comment
	UE	SS		
17a	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 2, with “measurement identity” IE set to “12”.
17b	→		MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”. Note: The order of steps 17a and 17b could be reversed.
18	←		PHYSICAL CHANNEL RECONFIGURATION	Allocates common physical channels.
19	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
20				SS checks that no MEASUREMENT REPORT messages are received.
21	←		System Information Block type 11 System Information Block type 12	SS sends SIB11 and SIB12 with specific values to Cell2. SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T1" in table 8.4.1.7.
22	→		CELL UPDATE	UE shall re-selects to cell 2 and then perform a cell update procedure.
23	←		CELL UPDATE CONFIRM	UE shall stay in CELL_FACH state.
23a	→		UTRAN MOBILITY INFORMATION CONFIRM	
24	←		RADIO BEARER RECONFIGURATION	Dedicated physical channels are assigned to the UE in this message.
25	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.UE shall not send Measurement Report message with “measurement identity” = ‘12’.
25a				SS reconfigures the downlink transmission power settings of all cells according to column “T2” in table 8.4.1.7-1.
26	→		MEASUREMENT REPORT	UE begins to report cell 3's measured results for CPICH RSCP, with “measurement identity” IE set to “1”.
27	←		MEASUREMENT CONTROL	

Step	Direction		Message	Comment
	UE	SS		
28	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 3, with "measurement identity" IE set to "1".

Specific Message Content

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	~~3~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 11 for cell 1 (Step 1)

All messages content below shall use the same content as described in default message content specified in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS34.108
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	As per 34.108 clause 6.1.0b - Contents of System Information Block type 11 (FDD)
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- 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
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range constant	Not present
- Cells forbidden to affect reporting range	Not present
- W	Not present
- Hysteresis	0 dB
- Threshold used frequency	-80 dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- Time to trigger	0
- Amount of reporting	Not Present

- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 1a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	~~3~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value
- BCCH modification time	Not Present

RADIO BEARER RECONFIGURATION (Step 2, Step 9a, Step 14d and Step 24)

Use the same message type found in Annex A, with condition set to A4.

MEASUREMENT REPORT (Steps 4, 9c, 13a, 15 and 17b)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	

- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5).

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold used frequency	-90 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency

- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

NOTE: due to ambiguity in 25.331 – two interpretations can be given for MEASUREMENT REPORT

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

MEASUREMENT REPORT (Step 6)

NOTE: due to ambiguity in 25.331 – two interpretations can be given for MEASUREMENT REPORT

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

MEASUREMENT REPORT (Step 6a)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent

Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Steps 7, 14a and 18)

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

MEASUREMENT CONTROL (Steps 10 and 17)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra- frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	

- Filter Coefficient	Not Present
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold Used Frequency	-80 dBm

- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Steps 14, 14f and 17a)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 16)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

System Information Block type 11 for cell 2 (Step 21)

All messages content below shall use the same content as described in default message content specified in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/Remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	
- Filter coefficient	Not Present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present

System Information Block type 12 for cell 2 (Step 21)

Information Element	Value/Remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	
- Filter coefficient	Not Present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Intra-frequency event identity	1a
- Triggering condition 2	Monitored set cells

- Reporting Range Constant	5dB
- Cells forbidden to affect Reporting range	Not Present
- W	0
- Hysteresis	0.0
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	2
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information - Inter-RAT measurement system information - Traffic volume measurement system information - UE internal measurement system information	Not present Not present Not Present Not Present

CELL UPDATE (Step 22)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001'
START List	Check to see if it is present
AM_RLC error indication(RB2, RB3 or RB4)	Checked to see if it is set to FALSE
AM_RLC error indication(RB>4)	Checked to see if it is set to FALSE
Cell Update Cause	Check to see if set to 'Cell Re-selection'
RB timer indicator	
- T314 expired	Checked to see if it is set to 'FALSE'
- T315 expired	Checked to see if it is set to 'FALSE'
Measured results on RACH	Check to see if it is absent

CELL UPDATE CONFIRM (Step 23)

Use the default message content of the same message type in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 23a)

Only the message type is checked.

MEASUREMENT REPORT (Step 26)

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

Note: Cells 2 and 3 can be received in any order

MEASUREMENT CONTROL (Step 27)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	Not present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold used frequency	-90 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 28)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	

- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 5 the UE shall transmit two MEASUREMENT REPORT messages which contain measured results of cell 3's CPICH RSCP value only, one for measurement identity 10 and one for measurement identity 11.

After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.

After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.

After steps 13 and 14e, the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT messages, containing measured results of cell 2's CPICH RSCP value.

After step 14e, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1.

After step 16 the UE shall stop measurement activities pertaining to event triggered reporting of cell 2's CPICH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH with “measurement identity” = 12.

After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.

After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".

After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

After step 25, UE shall not send MEASUREMENT REPORT message with “measurement identity” = ‘12’.

After step 25a the UE shall report cell 3's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 27, UE shall send MEASUREMENT REPORT message with “measurement identity” = ‘1’.

8.4.1.7A Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (TDD)

8.4.1.7A.1 Definition

8.4.1.7A.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state:

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> if the cell in which the UE transited from CELL_FACH state is included in the active set for the CELL_DCH state, the UE shall:

3> resume the measurement reporting.

2> otherwise:

3> the UE should not resume the measurement reporting. If the UE does not resume the measurement reporting, the measurement shall be restarted when a MEASUREMENT CONTROL message is received with the corresponding measurement identity.

…

Upon cell reselection while in CELL_FACH/CELL_PCH/URA_PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;

…

1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

…

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

3> if the UE is in CELL_FACH state:

4> the UE behaviour is not specified.

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:

…

2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

5> if the UE is in CELL_FACH state:

6> the UE behaviour is not specified.

4> if measurement type is set to "intra-frequency measurement", for any of the optional IEs "Intra-frequency measurement objects list", "Intra-frequency measurement quantity", "Intra-frequency reporting quantity", "Measurement Validity", "report criteria" and "parameters required for each event" (given "report criteria" is set to "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:

…

5> replace the corresponding information (the IEs listed above and all their children) stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> leave all other stored information elements unchanged in the variable MEASUREMENT_IDENTITY.

1> if the IE "measurement command" has the value "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

"If the IE "Reporting Cell Status" is received, the UE shall set the IE "Measured Results" in MEASUREMENT REPORT as follows. The UE shall:

1> for intra-frequency measurement and inter-frequency measurement:
2> include the IE "Cell Measured Results" for cells (excluding cells of another RAT) that satisfy the condition (such as "Report cells within active set") specified in the IE "Reporting Cell Status", in descending order by the measurement quantity"

If the IE "Cells for measurement" has been included in a MEASUREMENT CONTROL message, only monitored set cells explicitly indicated for a given intra-frequency (resp. inter-frequency, interRAT) measurement by the IE "Cells for measurement" shall be considered for measurement. If the IE "Cells for measurement" has not been included in a MEASUREMENT CONTROL message, all of the intra-frequency (resp. inter-frequency, inter RAT) cells stored in the variable CELL_INFO_LIST shall be considered for measurement. The IE "Cells for measurement" is not applicable to active set cells or virtual active set cells e.g. when the triggering condition refers to active set cells, the UE shall consider all active set cells in the CELL_INFO_LIST for measurement irrespective if these cells are explicitly indicated by the IE "Cells for measurement".

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a, 8.4.1.7.1, 8.4.0 and 8.6.7.9

8.4.1.7A.3 Test Purpose

- To confirm that UE retrieves stored measurement control information for intra-frequency measurement type with "measurement validity" assigned to "CELL_DCH", after it enters CELL_DCH state from CELL_FACH state.
- To confirm that the UE continues to monitor the neighbouring cells listed "intra-frequency cell info" IE in the System Information Block type 11 or 12 messages, if no intra-frequency measurements applicable to CELL_DCH are stored.
- To confirm that the UE transmits MEASUREMENT REPORT messages if reporting criteria stated in IE "intra-frequency measurement reporting criteria" in System Information Block type 11 or 12 messages are fulfilled.
- To confirm that a MEASUREMENT CONTROL message received in CELL_DCH state overrides the measurement and associated reporting contexts maintained in the UE by virtue of System Information Block type 11 or 12 messages.
- To confirm that the UE delete all measurements of type intra-frequency upon cell reselection while in CELL_FACH.

8.4.1.7A.4 Method of test

Initial Condition

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

UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7A-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.7A-1

Para-meter	Unit	Cell 1							Cell 2							Cell 3						
		T0	T1	T2	T3	T4	T5	T6	T0	T1	T2	T3	T4	T5	T6	T0	T1	T2	T3	T4	T5	T6
UTRA RF Channel Number		Ch. 1							Ch. 1							Ch. 1						
PCCPCH Ec	dBm /1.28 MHz	-60	-70	-60	-70	-60	-70	-75	-70	-60	-70	-60	-70	-60	-70	-75	-75	-75	-75	-75	-75	-60

The UE is brought to CELL_FACH state in cell 1. (step 1) SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

SS sends a RADIO BEARER RECONFIGURATION message to UE (step2), and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message (step3). SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T1" in table 8.4.1.7A .The UE shall send a MEASUREMENT REPORT message containing IE “Measured results” to report cell 2’s PCCPCH RSCP value and IE “event results” to report triggering of event type “1g” (step 4). After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with cell 3 included in the IE “new intra-frequency cell info” (step 5). After receiving such a message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement identity = 11. SS verifies that measurement readings for cell 1,2,3 ‘s PCCPCHCH RSCP are reported in IE “cell measured results” in this message (step 6). SS modifies the downlink transmission power of the respect cells according to the settings in columns “T2” in table 8.4.1.7A-1. The UE shall send a MEASUREMENT REPORT message

containing IE “Measured results” to report cell 1’s PCCPCH RSCP value and IE “event results” to report triggering of event type “1g” (step 6b).Next, SS sends a PHYSICAL CHANNEL RECONFIGURATION message (step 7). SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 8). SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received (step 9).

SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH state (step 9a). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 9b). SS modifies the downlink transmission power of the respect cells according to the settings in columns “T3” in table 8.4.1.7A-1.Shortly after, a MEASUREMENT REPORT message shall be received which has been triggered by cell 2, i.e. the UE shall have deleted the measurement configured through the MEASUREMENT CONTROL message of step 5, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE (step 9c). SS modifies the downlink transmission power of the respect cells according to the settings in columns “T4” in table 8.4.1.7A-1. The UE shall send a MEASUREMENT REPORT message containing IE “Measured results” to report cell 1’s PCCPCH RSCP value and IE “event results” to report triggering of event type “1g”.

SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure periodic intra-frequency measurements with validity CELL_DCH (step 10). The UE shall send a MEASUREMENT REPORT message (with IE “Measurement identity” = 12) to the SS (step 14).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH state (step 14a). The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 14b). SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 14c).

SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH state (step 14d). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 14e). Shortly after, a MEASUREMENT REPORT message shall be received, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of step 10, instead of the ones that are broadcast in SIB12 (step 14f).

Following the reception of the MEASUREMENT REPORT message, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in “measurement identity” = 12 (step 15). Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 16). After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more (step 17). This message is identical to the one sent in step 10 (see specific message content). A periodical MEASUREMENT REPORT message shall be received from the UE (step 17a).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures common physical channel (step 18). The UE shall transit to CELL_FACH state and then respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 19). SS monitors the uplink DCCH once more to verify that no MEASUREMENT REPORT messages are detected (step 20). System information block type 11 and System Information Block type 12 for cell 2 shall be different from the default settings according to what is defined in the specific message content part of this section (step 21). SS modifies the downlink transmission power of the respect cells according to the settings in columns “T5” in table 8.4.1.7A-1. The UE shall initiate a cell re-selection procedure. This is verified in the SS when a CELL UPDATE message is received on the uplink CCCH with the “cell update cause” IE set to “cell reselection” (step 22). SS transmits a CELL UPDATE CONFIRM message, which includes “New C-RNTI”, on the DCCH (step 23). Then the UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message (step 23a). Next, SS sends a RADIO BEARER RECONFIGURATION message on the downlink DCCH, assigning dedicated physical channels in both uplink and downlink directions (step 24). The UE shall respond with a RADIO BEARER RECONFIGURATION COMPLETE message and then return to CELL_DCH state (step 25). SS modifies the downlink transmission power of all cells according to the settings in columns “T6” in table 8.4.1.7A-1. UE shall then send MEASUREMENT REPORT messages reporting cell 3’s PCCPCH RSCP according to the content in System Information Block type 12 messages broadcasted in cell 2 (step 21).SS transmits a MEASUREMENT CONTROL message (step 27) whereby the measurement identity is set to the same value as that in the SIB type 12 messages (step 21). UE shall send MEASUREMENT REPORT message (step 28) reporting cell 1,2,3’s PCCPCH RSCP according to the MEASUREMENT CONTROL message (step 27).

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in “Specific Message Contents” clause.
1a	←		SYSTEM INFORMATION CHANGE INDICATION	
2	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
3a				SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T1" in table 8.4.1.7A
4	→		MEASUREMENT REPORT	Reports cell 2's PCCPCH RSCP measurement value, with “measurement identity” IE set to “10”.
5	←		MEASUREMENT CONTROL	A periodic measurement is setup with measurement identity of 11. Cell 3 is added to the list of monitored set of the UE.
6	→		MEASUREMENT REPORT	SS shall receive a MEASUREMENT REPORT message after the period set in step 5 in which the report for cell 1,cell 2 and cell 3 are included.
6a				SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T2" in table 8.4.1.7A
6b	→		MEASUREMENT REPORT	Cell 1 shall trigger the event 1g and a MEASUREMENT REPORT message shall be sent to SS with the measurement identity 10.
7	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.

Step	Direction		Message	Comment
	UE	SS		
9				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
9a	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
9b	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
9b1				SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T3" in table 8.4.1.7A
9c	→		MEASUREMENT REPORT	Cell 2 shall trigger the event 1g and a MEASUREMENT REPORT message shall be sent to SS with the measurement identity 10.
9d				SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T4" in table 8.4.1.7A
9e	→		MEASUREMENT REPORT	Cell 1 shall trigger the event 1g and a MEASUREMENT REPORT message shall be sent to SS with the measurement identity 10.
10	←		MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement with measurement identity of 12. Measurement validity" IE is set to CELL_DCH state.
11				
12	←		Void	
13	→		Void	
14	→		MEASUREMENT REPORT	UE reports cell 1 and cell 2's measured results for PCCPCH RSCP, with “measurement identity” IE set to “12”.
14a	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
14b	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
14c				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
14d	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.

Step	Direction		Message	Comment
	UE	SS		
14e	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
14f	→		MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 10.The "measurement identity" IE shall be set to "12".
15	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activities related to "measurement identity" = 12.
16				SS waits and verifies that UE stop transmitting MEASUREMENT REPORT messages.
17	←		MEASUREMENT CONTROL	This message is the same as in step 10.
17a	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message with "measurement identity" IE set to "12".
18	←		PHYSICAL CHANNEL RECONFIGURATION	Allocates common physical channels.
19	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
20				SS checks that no MEASUREMENT REPORT messages are received.
21	←		System Information Block type 11 System Information Block type 12	SS sends SIB11 and SIB12 with specific values to Cell2. SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T5" in table 8.4.1.7A.
22	→		CELL UPDATE	UE shall re-selects to cell 2 and then perform a cell update procedure.
23	←		CELL UPDATE CONFIRM	UE shall stay in CELL_FACH state.
23a	→		UTRAN MOBILITY INFORMATION CONFIRM	

Step	Direction		Message	Comment
	UE	SS		
24	←		RADIO BEARER RECONFIGURATION	Dedicated physical channels are assigned to the UE in this message.
25	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.UE shall not send Measurement Report message with “measurement identity” = ‘12’.
25a				SS reconfigures the downlink transmission power settings of all cells according to column “T6” in table 8.4.1.7A-1.
26	→		MEASUREMENT REPORT	UE begins to report cell 3's measured results for PCCPCH RSCP, with “measurement identity” IE set to “1”,event is 1g.
27	←		MEASUREMENT CONTROL	SS instructs the UE to setup period intra-frequency measurement. “measurement identity” IE set to “1”
28	→		MEASUREMENT REPORT	UE shall transmit a period MEASUREMENT REPORT message, with “measurement identity” IE set to “1”.

Specific Message Content

System Information Block type 1 (TDD)

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

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	~~3~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 11 for cell 1 (Step 1)

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

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- TSTD indicator	FALSE
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- SCTD indicator	FALSE
- Primary CCPCH Tx power	Not present
- timeslot info list	Not present
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- TSTD indicator	FALSE
- Cell parameters Id	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS34.108
- SCTD indicator	FALSE
- Primary CCPCH Tx power	Not present
- timeslot info list	Not present
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	

- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- 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
- Parameter required for each event	
- Intra-frequency event identity	1g
- Reporting range constant	Not present
- W	Not present
- Hysteresis	1 dB
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within actived and monitored set cells on used frequency
- Maximum number of reported cells	3

- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 1a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	~~3~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value
- BCCH modification time	Not Present

RADIO BEARER RECONFIGURATION (Step 2, Step 9a, Step 14d and Step 24)

Use the same message type found in Annex A, with condition set to A4.

MEASUREMENT REPORT (Steps 4 and 9c)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2

- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1g'
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5).

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	

- TSTD indicator	FALSE
- Cell parameters Id	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS34.108
- SCTD indicator	FALSE
- Primary CCPCH Tx power	Not present
- timeslot info list	Not present
- Cells selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- reporting amount	infinity

- reportingInterval	64s
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Steps 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 3
- proposed TGSN	Check to see if this IE is absent

- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	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 REPORT (Steps 6b)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent

- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 3
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1g'
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same code for cell 1

PHYSICAL CHANNEL RECONFIGURATION (Steps 7, 14a and 18)

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

MEASUREMENT REPORT (Steps 9e)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	

- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1g'
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same code for cell 1

MEASUREMENT CONTROL (Step 10 and 17).

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	PCCPCH RSCP

- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	CELL DCH
- CHOICE report criteria	Periodical reporting criteria
- reporting amount	infinity
- reportingInterval	64s
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Steps 14, 14f and 17a)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	

- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	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 15)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

System Information Block type 11 for cell 2 (Step 21)

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

Information Element	Value/Remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- TSTD indicator	FALSE
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- SCTD indicator	FALSE
- Primary CCPCH Tx power	Not present
- timeslot info list	Not present
- Cell Selection and Re-selection info	Not present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- TSTD indicator	FALSE
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108

- SCTD indicator	FALSE
- Primary CCPCH Tx power	Not present
- timeslot info list	Not present
- Cell Selection and Re-selection info	Not present
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- TSTD indicator	FALSE
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- SCTD indicator	FALSE
- Primary CCPCH Tx power	Not present
- timeslot info list	Not present
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	
- Filter coefficient	Not Present
- CHOICE mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present

System Information Block type 12 for cell 2 (Step 21)

Information Element	Value/Remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH RSCP

- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	
- Filter coefficient	Not Present
- CHOICE mode	TDD
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria

- Intra-frequency measurement reporting criteria	
- Intra-frequency event identity	1g
- W	0
- Hysteresis	1dB
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	2
- Replacement activation threshold	Not Present
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

CELL UPDATE (Step 22)

Information Element	Value/remark
U-RNTI	
- SRNC Identity	Check to see if set to '0000 0000 0001'
- S-RNTI	Check to see if set to '0000 0000 0000 0000 0001'
Cell Update Cause	Check to see if set to 'Cell Re-selection'
Protocol error indicator	Check to see if it is absent or set to 'FALSE'
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 23)

Use the default message content of the same message type in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 23a)

Only the message type is checked.

MEASUREMENT REPORT (Step 26)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 3
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	Check to see if this IE is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is present
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is present
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	

Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1g'
- Cell measurement event results	
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same code for cell 3

Note: Cells 2 and 3 can be received in any order

MEASUREMENT CONTROL (Step 27)

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	Period
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE

- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	period measurement criteria
- reporting amount	infinity
- reportingInterval	64s
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 28)

Information Element	Value/Remarks
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 3
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent

- timeslotISCP_List	Check to see if this IE is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is present
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 2
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is present
- CHOICE mode	TDD
- cell parameters identity	Check to see if it's the same code for cell 1
- proposed TGSN	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- timeslotISCP_List	
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

8.4.1.7A.5 Test Requirement

After step 3 the UE shall report cell 2's PCCPCH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.

After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.

After steps 13 and 14e, the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT messages, containing measured results of cell 2's PCCPCH RSCP value.

After step 15 the UE shall stop measurement activities pertaining to periodic reporting of cell 2's PCCPCH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH.

After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.

After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".

After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

After step 25, UE shall not send MEASUREMENT REPORT message with “measurement identity” = ‘12’.

After step 25a the UE shall report cell 3's PCCPCH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 27, UE shall send MEASUREMENT REPORT message with “measurement identity” = ‘1’.

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

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

1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":

2> resume the measurement reporting.

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:

2> set the variable INVALID_CONFIGURATION to TRUE.

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "TGPS Status Flag"):

2> 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.

1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";

1> update into the variable TGPS_IDENTITY the configuration information defined by IE group" transmission gap pattern sequence configuration parameters ";

1> after the new configuration has been taken into use:

2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate" at the time indicated by IE "TGCFN"; and

2> begin the inter-frequency corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":

3> start the concerned pattern sequence immediately at that CFN.

1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in TS 25.331 subclause 8.2.11.2.

Reference

3GPP TS 25.331 clause 8.4.1.7.2, 8.4.1.3

8.4.1.8.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 or 12 when it transits from CELL_FACH state to CELL_DCH state.
2. To confirm that the UE resumes inter-frequency measurements and reporting stored for which the measurement control information has IE "measurement validity" assigned to the value "CELL_DCH", after it re-enters CELL_DCH state from CELL_FACH state.
3. To confirm that the UE resumes inter-frequency measurement and reporting activities after it has received a MEASUREMENT CONTROL message specifying that a stored compressed mode pattern sequence be re-activated.

8.4.1.8.4 Method of test

Initial Condition

System Simulator: 3 cells – Cells 1, cell 4 and cell 5 are active.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

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

In case the UE supports both PS and CS CN domains, this test shall be run twice, once starting from the initial condition CS-DCCH+DTCH_DCH, and once starting from the initial condition PS-DCCH+DTCH_DCH.

Test Procedure

Table 8.4.1.8-1 illustrates the downlink power to be applied for the 3 cells in this test.

Table 8.4.1.8-1

Para-meter	Unit	Cell 1	Cell 4	Cell 5
UTRA RF Channel Number		Ch. 1	Ch. 2	Ch. 2
CPICH Ec	dBm/3.84 MHz	-60	-75	-75

Test procedure when the initial condition is that the UE is connected to the PS domain:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). If UE requires compressed mode, SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH after it has transmitted the MEASUREMENT CONTROL message. (step 3). SS checks that the UE sends a MEASUREMENT REPORT message on the uplink DCCH only if UE does not require compressed mode.

SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH to move the UE to CELL_FACH state (step 4). The UE shall reconfigure itself to receive and transmit using the common physical channels assigned, and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH (step 5). SS modifies the content of Master Information Block and System Information Block type 12 messages, such that cell 4 is added in the list of cells assigned in the IE "inter-frequency cell info" (step 6). SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. Once again, SS verifies that the UE does not transmit MEASUREMENT REPORT messages in the uplink direction (step 7).

SS sends PHYSICAL CHANNEL RECONFIGURATION message, and configures dedicated physical. If UE requires compressed mode, in this message, SS commands the UE to start applying compressed mode mechanism for DPCH. The UE shall move to CELL_DCH state and then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). SS waits for 10 seconds. The UE shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 4. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 11). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

If UE requires compressed mode, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1 (step 13). The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities (step 14).

Following this if UE requires compressed mode, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE (step 15). SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall receive MEASUREMENT REPORT messages continuously at 2 seconds interval (step 16). The SS then sends a MEASUREMENT CONTROL ordering the UE to release the measurement corresponding to identity 14, and to stop compressed mode (step 17). At reception of that message, the UE shall stop compressed mode and delete the measurement corresponding to that identity (step 18). The SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to order the UE to start compressed mode once again (step 19). The UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message, and starts compressed mode (step 20). SS checks then that it does not receive any MEASUREMENT REPORT message from the UE after that point (step 21).

Test procedure when the initial condition is that the UE is connected to the CS domain:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). SS checks that the UE sends a MEASUREMENT REPORT messages on the uplink DCCH only if UE does not require compressed mode (step 3).

If the UE requires compressed mode, SS sends PHYSICAL CHANNEL RECONFIGURATION message (step 8). In that message, SS commands the UE to start applying compressed mode. The UE shall then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). Following this, a UE requiring compressed mode shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 5. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 11). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

If the UE requires compressed mode, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1 (step 13). The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities (step 14). Following this if the UE requires compressed mode, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE (step 15). SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall receive MEASUREMENT REPORT messages continuously at 2 seconds interval (step 16). The SS then sends a MEASUREMENT CONTROL ordering the UE to release the measurement corresponding to identity 14, and to stop compressed mode (step 17). At reception of that message, the UE shall stop compressed mode and delete the measurement corresponding to that identity (step 18). The SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to order the UE to start compressed mode once again (step 19). The UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message, and starts compressed mode (step 20). SS checks then that it does not receive any MEASUREMENT REPORT message from the UE after that point (step 21).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				(Valid for both the PS and CS cases) The initial state of UE is in CELL_DCH state of cell 1.

Step	Direction		Message	Comment
	UE	SS		
2	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS specifies inter-frequency measurement and reporting parameters for cell 5, with "measurement validity" IE present and "UE state" set to "CELL_DCH".
3	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) If compresed mode is not required (refer ICS/IXIT), SS checks that UE transmit this message, or else SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
4	←		PHYSICAL CHANNEL RECONFIGURATION	(Only in the PS case) SS moves the UE to CELL_FACH state.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Only in the PS case) UE shall move to CELL_FACH state.
6	←		Master Information Block System Information Block type 12	(Only in the PS case) SS modifies MIB and SIB 12 in order to include cell 4 into the list of cells in IE "inter-frequency cell info".
7	←		SYSTEM INFORMATION CHANGE INDICATION	(Only in the PS case) After SS transmits this message, SS confirms that there are no transmissions of MEASUREMENT REPORT message in the uplink direction.
8	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. See specific message content below.
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. UE shall move to CELL_DCH state.

Step	Direction		Message	Comment
	UE	SS		
10	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) In the PS case, UE shall resume inter-frequency measurement task for cell 4 and report the measured CPICH RSCP value for cell 4. In the CS case, a UE requiring compressed mode shall start inter-frequency measurement task for cell 5 and report the measured CPICH RSCP value for cell 5. In the CS case, SS shall check that a UE not requiring compressed mode shall not send any MEASUREMENT REPORT.
11	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS changes the reporting criteria for cell 5 to 'periodic reporting'
12	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) UE shall begin to transmit this message at 2 seconds interval. If compresed mode is not required (refer ICS/IXIT), the test ends here.
13	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) SS deactivates the currently used pattern sequence for compressed mode operation.
14	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) UE stays in CELL_DCH state. SS verifies that no MEASUREMENT REPORT messages are received.
15	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS activates the pattern sequence stored by the UE.
16	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) SS checks that MEASURE-MENT REPORT messages are received at 2 seconds interval.
17	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS orders the UE to release the measurement with identity 14, and to stop compressed mode

Step	Direction		Message	Comment
	UE	SS		
18				(Valid for both the PS and CS cases) SS checks that the UE has stopped compressed mode.
19	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) SS orders the UE to start compressed mode again.
20	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) The UE transmits the response message and starts compressed mode
21				(Valid for both the PS and CS cases) SS checks that the UE does not send any MEASUREMENT REPORT

Specific Message Content

Unless explicitly stated, the messages below shall be used for both the CS case and the PS case.

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
-UE autonomous update	On with no reporting
- Non autonomous update mode	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0 dB
- Time to trigger	10 ms
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in [9] TS 34.108 clause 9 titled "(Packet to CELL_FACH from CELL_DCH in PS)".

Information Element	Value/Remark
- Downlink information for each radio link	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Scrambling code for cell 1. Ref. to the Default setting in TS34.108 clause 6.1 (FDD)
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- SCCPCH Information for FACH	Not Present

Master Information Block (Step 6)

Information Element	Value/Remark
Value Tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
-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 cells removal	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of 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
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8 for the PS case)

If UE do not require compressed mode, use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

If UE requires compressed mode, use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)", 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 indicator	Initialise
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set

- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL UL only or DL only depending on UE capability
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on 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

PHYSICAL CHANNEL RECONFIGURATION (Step 8 for the CS case)

Information Element	Value/Remark
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE *channel requirement*	Not Present
CHOICE *mode*	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present

- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Set to scrambling code of cell 1
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0
- Secondary CPICH info	Not present
- DL channelisation code	
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Same as the code currently allocated to the

	UE
- Scrambling code change	Code change
- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

MEASUREMENT REPORT (Step 3 for both the PS and the CS case, and step 10 for the CS case)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5

MEASUREMENT REPORT (Step 10 for the PS case)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 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	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Set up
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	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not Present

- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	2000 milliseconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12, 16)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message transmitted in step 8 with the following modifications:

Information Element	Value/Remark
Activation time New U-RNTI	(256+CFN-(CFN MOD 8 + 8))MOD 256 Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient CN information info URA identity Downlink counter synchronisation info Frequency info Maximum allowed UL TX power	Not Present Not Present Not Present Not Present Not Present Not Present
CHOICE *channel requirement*	Not Present
CHOICE *mode*	FDD
>Downlink PDSCH information	Not Present
Downlink information common for all radio links - Downlink DPCH info common for all RL - CHOICE mode - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TX Diversity mode - SSDT information - Default DPCH Offset Value	 Not Present FDD 1 Deactivate Not Present Not Present Not Present Not Present Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 15)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT CONTROL (Step 17)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Release

Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Flag	Deactivate
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 19 for the PS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE *channel requirement*	Not Present
CHOICE *mode*	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 19 for the CS case)

Information Element	**Value/Remark**
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE *channel requirement*	Not Present
CHOICE *mode*	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Set to scrambling code of cell 1
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0
- Secondary CPICH info	Not present
- DL channelisation code	
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Same as the code currently allocated to the UE
- Scrambling code change	Code change

- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

8.4.1.8.5 Test Requirement

After step 2, if UE requires compressed mode the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH of cell 1. If UE do not require compressed mode, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH of cell 1.

After step 4 and 8, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8, the UE shall start compressed mode using the method specified in the PHYSICAL CHANNEL RECONFIGURATION message sent in step 8.

After step 9 the UE shall transmit a MEASUREMENT REPORT message, containing the IE "measured results" reporting cell 5's CPICH RSCP value in CS case and cell 4's CPICH RSCP value in the PS case. The UE shall also report the triggering of event '2c' by including IE "Event results" in the MEASUREMENT REPORT message.

After step 11 the UE shall send MEASUREMENT REPORT messages, containing cell 5's CPICH RSCP measured value in IE "Measured results" at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

If UE requires compressed mode, after step 14, the UE shall not transmit any MEASUREMENT REPORT messages.

If UE requires compressed mode, after step 15, the UE shall start compressed mode and resume the transmission of MEASUREMENT REPORT messages with identical contents as in those received after step 11.

After step 17, the UE shall deactivate compressed mode.

After step 20, the UE shall not transmit any MEASUREMENT REPORT message to SS.

8.4.1.8A Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state (TDD)

8.4.1.8A.1 Definition

8.4.1.8A.2 Conformance requirement

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

1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":

2> resume the measurement reporting.

Reference

3GPP TS 25.331 clause 8.4.1.7.2, 8.4.1.3

8.4.1.8A.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 or 12 when it transits from CELL_FACH state to CELL_DCH state.

2. To confirm that the UE resumes inter-frequency measurements and reporting stored for which the measurement control information has IE "measurement validity" assigned to the value "CELL_DCH", after it re-enters CELL_DCH state from CELL_FACH state.

8.4.1.8A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cells 1, cell 4 and cell 5 are active.

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

In case the UE supports both PS and CS CN domains, this test shall be run twice, once starting from the initial condition CS-DCCH+DTCH_DCH, and once starting from the initial condition PS-DCCH+DTCH_DCH.

Test Procedure

Table 8.4.1.8A-1 illustrates the downlink power to be applied for the 3 cells in this test.

Table 8.4.1.8A-1

Para-meter	Unit	Cell 1	Cell 4	Cell 5
UTRA RF Channel Number		Ch. 1	Ch. 2	Ch. 2
PCCPCH RSCP	dBm	-60	-75	-75

Test procedure when the initial condition is that the UE is connected to the PS domain or CS:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). SS checks that UE transmit this message, or else SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 3).

SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH to move the UE to CELL_FACH state (step 4). The UE shall reconfigure itself to receive and transmit using the common physical channels assigned, and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH (step 5). SS modifies the content of Master Information Block and System Information Block type 12 messages, such that cell 4 is added in the list of cells assigned in the IE "inter-frequency cell info" (step 6). SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. Once again, SS verifies that the UE does not transmit MEASUREMENT REPORT messages in the uplink direction (step 7).

SS sends PHYSICAL CHANNEL RECONFIGURATION message, and configures dedicated physical only in the PS case (step 8). The UE shall move to CELL_DCH state and then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). SS waits for 10 seconds. The UE shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case PCCPCH RSCP) of cell 4. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 10). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				(Valid for both the PS and CS cases) The initial state of UE is in CELL_DCH state of cell 1.
2	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS specifies inter-frequency measurement and reporting parameters for cell 5, with "measurement validity" IE present and "UE state" set to "CELL_DCH".
3	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) SS checks that UE transmit this message.
4	←		PHYSICAL CHANNEL RECONFIGURATION	(Only in the PS case) SS moves the UE to CELL_FACH state.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Only in the PS case) UE shall move to CELL_FACH state.
6	←		Master Information Block System Information Block type 12	(Only in the PS case) SS modifies MIB and SIB 12 in order to include cell 4 into the list of cells in IE "inter-frequency cell info".
7	←		SYSTEM INFORMATION CHANGE INDICATION	(Only in the PS case) After SS transmits this message, SS confirms that there are no transmissions of MEASUREMENT REPORT message in the uplink direction.
8	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for the PS cases) SS moves the UE to CELL_DCH state.
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid only in the PS case) UE shall move to CELL_DCH state.

Step	Direction		Message	Comment
	UE	SS		
10	→		MEASUREMENT REPORT	(Valid for the PS cases) UE shall resume inter-frequency measurement task for cell 4 and report the measured PCCPCH RSCP value for cell 4.
10 a	→		MEASUREMENT REPORT	(Valid for PS cases) UE shall resume inter-frequency measurement task for cell 5 and report the measured PCCPCH RSCP value for cell 5. The order of steps 10 and 10a could be reversed.
11	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS changes the reporting criteria for cell 5 to 'periodic reporting'
12	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) UE shall begin to transmit this message at 2 seconds interval.

Specific Message Content

Unless explicitely stated, the messages below shall be used for both the CS case and the PS case.

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	5
- Frequency info	

- CHOICE mode	TDD
- UARFCN (Nt)	UARFCN of the frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Set to same code as used for cell 5
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	PCCPCH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
-UE autonomous update	On with no reporting
- Non autonomous update mode	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present

- W used frequency	Not Present
- Hysteresis	1.0 dB
- Time to trigger	10 seconds
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in TS 34.108 clause 9 titled "(Packet to CELL_FACH from CELL_DCH in PS)".

Information Element	Value/Remark
- Downlink information for each radio link	
- Choice mode	TDD
- Primary CCPCH info	For cell 1. Ref. to the Default setting in TS34.108 clause 6.1 (TDD)
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- SCCPCH Information for FACH	Not Present

Master Information Block (Step 6)

Information Element	Value/Remark
MIB Value Tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info - FACH Measurement occasion cycle length coefficient	2

- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	TRUE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
-Use of HCS	Not used
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cells removal	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.4 (TDD)" in clause 6.1.4
- Primary CCPCH TX power - Timeslot list - Cell selection and Re-selection info	Not Present Not Present Not Present – use default values
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8 only for the PS case)

UE will use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- CHOICE mode	TDD

- UARFCN	Check to see if set to the UARFCN of the 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
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 4
- Timeslot ISCP	Check to see if it is absent
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH Info	Check to see if set to the same code for cell 4
- PCCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- CHOICE mode	TDD
- UARFCN	Check to see if set to the UARFCN of the frequency for cell 4
- Non frequency related measurement event results	
- Primary CCPCH Info	Check to see if set to the same for cell 4

MEASUREMENT REPORT (Step 10a)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- CHOICE mode	TDD
- UARFCN	Check to see if set to the UARFCN of the frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 5
- Timeslot ISCP	Check to see if it is absent
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH Info	Check to see if set to the same code for cell 5
- PCCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- CHOICE mode	TDD
- UARFCN	Check to see if set to the UARFCN of the frequency for cell 5
- Non frequency related measurement event results	
- Primary CCPCH Info	Check to see if set to the same for cell 5

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Set up
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	5
- Frequency info	
- CHOICE mode	TDD
- UARFCN uplink (Nt)	UARFCN of the frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Set to same as used for cell 5
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	PCCPCH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2

- Measurement validity	Not Present
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	2000 milliseconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN	Check to see if set to the UARFCN of the frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if is absent
- Cell synchronisation information	Check to see if it is absent
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 5
- Timeslot ISCP	Check to see if it is absent
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH Info	Check to see if set to the same for cell 5
- PCCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

8.4.1.8A.5 Test Requirement

After step 2,. UE shall send a MEASUREMENT REPORT message on the uplink DCCH of cell 1.

After step 4 and 8, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 9 the UE shall transmit a MEASUREMENT REPORT message, containing the IE "measured results" reporting cell 5's PCCPCH RSCP value in CS case and cell 5's PCCPCH RSCP value in the PS case. The UE shall also report the triggering of event '2c' by including IE "Event results" in the MEASUREMENT REPORT message.

After step 11 the UE shall send MEASUREMENT REPORT messages, containing cell 5's PCCPCH RSCP measured value in IE "Measured results" at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

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 hall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC. SS verifies that the UE continues to transmit MEASURMENT REPORT messages on uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state.
2	←		MEASUREMENT CONTROL	UE internal measurement and reporting is requested.
3	→		MEASUREMENT REPORT	Contains estimated reading for UE transmitted power.
4	←		MEASUREMENT CONTROL	Inter-RAT measurements are requested in this message
5	→		MEASUREMENT CONTROL FAILURE	The value "unsupported measurement" is set in IE "failure cause".
6	→		MEASUREMENT REPORT	SS verifies that UE continue to send this message on uplink DCCH.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- CHOICE mode	FDD
- Measurement quantity	UE Transmitted Power
- Filter Coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE mode	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	1000 msec
DPCH compressed mode status info	Not present

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	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
Additional measurements list	Not Present
CHOICE measurement type	Inter-RAT measurement
- Inter-RAT cell info list	
- CHOICE inter-RAT cell removal	Remove no inter-RAT cells
- New inter-RAT cells	
- Inter-RAT cell id	1
- CHOICE *Radio Access Technology*	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Cells for measurement	
- Inter-RAT cell id	2
- Inter-RAT measurement quantity	
- CHOICE system	GSM
- Measurement quantity	GSM Carrier RSSI
- Filter Coefficient	0
- BSIC verification required	Not required

- Inter-RAT reporting quantity	
- UTRAN estimate quantity	FALSE
- CHOICE system	GSM
- Pathloss	FALSE
- Observed time difference to GSM cell Reporting indicator	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.

8.4.1.10 Measurement Control and Report: Failure (Invalid Message Reception)

8.4.1.10.1 Definition

8.4.1.10.2 Conformance requirement

If the MEASUREMENT CONTROL message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

1> 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 "Rejected 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 contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;

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 clauses 8.4.1.5 and 9.2

8.4.1.10.3 Test Purpose

1. To confirm that the UE continues its ongoing processes and procedures after it has received an invalid MEASUREMENT CONTROL message.

2. To confirm that the UE transmits MEASUREMENT CONTROL FAILURE message, after it has received an invalid MEASUREMENT CONTROL message.

8.4.1.10.4 Method of test

Initial Condition

System Simulator: 1 cell.

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

Test Procedure

The UE is initially brought to CELL_DCH. SS transmits a MEASUREMENT CONTROL message to the UE, commanding it to start transmitting report messages for the reporting quantity "UE Transmitted Power". SS waits for the UE to transmit MEASUREMENT REROR message on the uplink DCCH. After the MEASUREMENT REPORT message is received, SS transmits an invalid MEASUREMENT CONTROL message again. The UE shall reply with MEASURMENT CONTROL FAILURE message as it has detected a protocol error. It shall continue to report its UL transmission power level using MEASUREMENT REPORT messages.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is CELL_DCH state in cell 1.
2	←		MEASUREMENT CONTROL	SS transmits this message on downlink DCCH to instruct UE to start reporting the quantity "UE transmitted power".
3	→		MEASUREMENT REPORT	UE shall send this message periodically at 32 seconds interval
4	←		MEASURMENT CONTROL	See message content.

Step	Direction		Message	Comment
	UE	SS		
5	→		MEASUREMENT CONTROL FAILURE	UE shall continue its current measurement and reporting processes and procedures after sending this message.
6	→		MEASUREMENT REPORT	UE shall continue to transmit this message to the SS at 32 seconds interval.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
- Measurement quantity	UE Transmitted Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 3 and Step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 3
Measured Results	
CHOICE measurement	Check to see if set to "UE internal measurement results"
- CHOICE mode	Check to see if it's set to "FDD"
- UE Transmitted Power	Check to see if the reported power is compatible with RF class
- UE Rx-Tx report entries	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 4)

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

Information Element	Value/Remark
Critical extensions	'FF'H

MEASUREMENT CONTROL FAILURE (Step 5)

Information Element	Value/remark
Failure cause Protocol error information	Check to see if set to "protocol error" Check to see if set to " Message extension not comprehended "

8.4.1.10.5 Test Requirement

After step 4 the UE shall transmit MEASUREMENT CONTROL FAILURE message, stating the IE "failure cause" as "protocol error" and IE "protocol error information" as "Message extension not comprehended".

After step 5 the UE shall continue to send MEASUREMENT REPORT, with the measurement identity number set to 3 and "measured results" IE containing measured readings of UE Tx power, at 32 seconds interval.

8.4.1.11 Void

8.4.1.12 Void

8.4.1.13 Void

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

8.4.1.14.1 Definition

8.4.1.14.2 Conformance requirement

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

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

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

Reference

3GPP TS 25.331 clause 14.1.2.1, 14.1.2.2, clause 14.1.5.4

8.4.1.14.3 Test Purpose

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

8.4.1.14.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active. SCH_Ec is set to 0 dB relative to CPICH_Ec.

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

Test Procedure

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

Table 8.4.1.14-1

Parameter	Unit	Cell1				Cell2				Cell3			
		T0	T1	T2	T3	T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel		**Ch. 1**				**Ch. 1**				**Ch. 1**			
CPICH Ec	**dBm/3.84 MHz**	-55	-55	-60	-60	-60	-63	-67	-67	-68	-66	-66	-74

The UE is initially in CELL_DCH state of cell 1.

SS sends a MEASUREMENT CONTROL message with cell 1, cell 2 and cell 3 listed in IE "intra-frequency cell info list". In this message the IE "CHOICE reporting criteria" is set to "intra-frequency measurement report criteria", with the IE "intra-frequency event identity" set to "1A". The IE "reporting range" is set to 9 dB in the MEASUREMENT CONTROL message. The UE shall send a MEASUREMENT REPORT on the uplink DCCH, which contains the IE "Event results" to report that intra-frequency event 1A is triggered by cell 2.

SS executes the active set update procedure, requesting that cell 2 be added to the active set. The UE shall respond with ACTIVE SET UPDATE COMPLETE message on the uplink DCCH and then include cell 2 into its current active set. SS sends a MEASUREMENT CONTROL message to command that cell 1 in the active set is forbidden to affect the reporting range for event 1A. SS reconfigures the downlink transmission power settings according to values in column "T1" in table 8.4.1.14-1. The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1A. In this message, the IE "Events results" shall indicate that intra-frequency event 1A is triggered by cell 3. SS executes the active set update procedure, requesting that cell 3 be added to the active set. The UE shall respond with ACTIVE SET UPDATE COMPLETE message on the uplink DCCH and then include cell 3 into its current active set. SS sends a MEASUREMENT CONTROL message to command that cell 1 in the active set is forbidden to affect the reporting range for event 1B. The IE "reporting range" is set to 7 dB in the MEASUREMENT CONTROL message. SS checks that no measurement report is sent by the UE. SS reconfigures the downlink transmission power settings according to values in column "T2" in table 8.4.1.14-1. SS sends a

MEASUREMENT CONTROL message to command that cell 1 in the active set to be removed from the "forbidden to affect the reporting range for event 1B" cell list. SS reconfigures the downlink transmission power settings according to values in column "T3" in table 8.4.1.14-1. The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1B. In this message, the IE "Events results" shall indicate that intra-frequency event 1B is triggered by cell 3. SS reconfigures the downlink transmission power settings according to values in column "T2" in table 8.4.1.14-1. SS sends a MEASUREMENT CONTROL message to command that all cells in the active set are forbidden to update the reporting range for event 1B. SS reconfigures the downlink transmission power settings according to values in column "T3" in table 8.4.1.14-1. The UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH to report the triggering of intra-frequency event 1B. In these messages, the IE "Events results" shall indicate that intra-frequency event 1B is triggered by cell 3.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	UE is initially in CELL_DCH state in cell 1. Cell 1, cell 2 and cell 3 are listed in IE "Intra-frequency cell info list". The IE "CHOICE reporting criteria" is set to "Intra-frequency measurement reporting criteria" and IE "Intra-frequency event identity" is set to "1A", with IE "reporting range" set to 9 dB.
2	→		MEASUREMENT REPORT	Measurement made on cell 2 shall trigger event 1A
3	←		ACTIVE SET UPDATE	SS requests UE to add cell 2 into active set.
4	→		ACTIVE SET UPDATE COMPLETE	
5	←		MEASUREMENT CONTROL	SS request UE to monitor cell 3 for event '1A'. SS set cell 1 to be forbidden to affect reporting range. IE “Reporting Range” set to 7 dB.
5a				SS configures the downlink power according to column 'T1' of table 8.4.1.14-1.
6	→		MEASUREMENT REPORT	Measurement made on cell 3 shall trigger event 1A
6a	←		ACTIVE SET UPDATE	SS requests UE to add cell 3 into active set.
6b	→		ACTIVE SET UPDATE COMPLETE	
7	←		MEASUREMENT CONTROL	SS set cell 1 to be forbidden to affect reporting range for event '1B'.
7a				SS checks that no measurement report is sent by the UE for 20 seconds.
7b				SS configures the downlink power according to column 'T2' of table 8.4.1.14-1.
7c	←		MEASUREMENT CONTROL	Cell 1 shall not be forbidden to affect event '1B'.
7d				SS configures the downlink power according to column 'T3' of table 8.4.1.14-1.
8	→		MEASUREMENT REPORT	Measurement made on cell 3 shall trigger event 1B.

8a			SS configures the downlink power according to column 'T2' of table 8.4.1.14-1.
9		Void	
9a		Void	
10	→	Void	
11	←	MEASUREMENT CONTROL	SS request UE to monitor cell 3 for event '1B'. SS forbids all cells in active list to affect the reporting range. The SS requests UE to report the CPICH RSCP value of the active set cells.
11a			SS configures the downlink power according to column 'T3' of table 8.4.1.14-1.
12	→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 1)

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

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

- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1a
- Triggering conditions 1	Not Present
- Triggering conditions 2	monitored set cells
- Reporting range	9.0 dB
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present
- Time to trigger	0 msec
- Amount of reporting	Infinity
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 2)

NOTE 1: Cell measured results for cell 3 may or may not be present (depends upon the capability of the UE and test uncertainties in power level)

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

ACTIVE SET UPDATE (Step 3)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Clause 9 of TS 34.108 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	Calculated value from Cell synchronisation information
- Secondary CPICH info	Not Present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	1
- Spreading factor	Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets"
- Code Number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not Present
- TPC Combination Index	0
- SSDT Cell Identity	Not Present
- Close loop timing adjustment mode	Not Present
- TFCI Combining Indicator	Not Present
- SCCPCH information for FACH	Not Present
Radio link removal information	Not Present

ACTIVE SET UPDATE COMPLETE (Step 4 and 6b)

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

MEASUREMENT CONTROL (Step 5)

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

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1a
- Triggering conditions 1	Not Present
- Triggering conditions 2	monitored set cells
- Reporting range	7.0 dB
- Cells forbidden to affect reporting range	
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 1
- W	0
- Hysteresis	0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	3
- Replacement activation threshold	Not Present

- Time to trigger	0 msec
- Amount of reporting	Infinity
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

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

ACTIVE SET UPDATE (Step 6a)

The contents of ACTIVE SET UPDATE message for this test step is identical to the same message found in Clause 9 of TS 34.108 with the following exceptions:

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

MEASUREMENT CONTROL (Step 7)

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

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1b

- Triggering conditions 1	Active set cells
- Triggering conditions 2	Not Present
- Reporting range	7.0 dB
- Cells forbidden to affect reporting range	
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 1
- W	0
- Hysteresis	0 dB
- Time to trigger	0 msec
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL (Step 7c)

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

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1b
- Triggering conditions 1	Active set cells

- Triggering conditions 2	Not Present
- Reporting range	10.5 dB
- Cells forbidden to affect reporting range	Not Present
- W	0
- Hysteresis	0 dB
- Time to trigger	0 msec
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set on used frequency
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 8)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	Not Present
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1b'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

MEASUREMENT CONTROL (Step 11)

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

Information Element	Value/remark
RRC transaction identifier	1
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present

- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1b
- Triggering conditions 1	Active set cells
- Triggering conditions 2	Not Present
- Reporting range	10.5 dB
- Cells forbidden to affect reporting range	
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 1
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 2
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to the same code as in cell 3
- W	0
- Hysteresis	0 dB
- Time to trigger	0 msec
- Reporting cell status	
- CHOICE reported cells	Report cells within active set
- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12)

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

- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	Check to see if set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1b'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.14.5 Test requirement

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

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

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

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

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

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

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

MEASUREMENT REPORT (Step 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	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting/Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cell	Not Present
- Cell for measurement	
- Intra-frequency cell id	Set to id of cell 1
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active set
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 3)

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 2
Failure cause	Check to see if set to "incomplete configuration"

MEASUREMENT CONTROL (Step 4) (Note 1)

Information Element	Value/remark
Measurement Identity	2
RRC transaction Identifier	Arbitrarily selected between 0 and 3
Measurement Command	Setup

Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting/Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cell	
- Inter-frequency cell id	Set to id of cell 4
- Frequency info	
- CHOICE Mode	FDD
- UARFCN uplink (Nu)	Set to the same UARFCN as cell 4 in clause 6.1 of TS 34.108
- UARFCN downlink (Nu)	Set to the same UARFCN as cell 4 in clause 6.1 of TS 34.108
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	Not Present
- Cell for measurement	
- Inter-frequency cell id	Set to id of cell 4
- Inter-frequency measurement quantity	
- CHOICE rerporting criteria	Inter-frequency reporting criteria
- Filter coefficients	0
- CHOICE mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	Not Present
- Reporting cell status	

- CHOICE reported cell	Report cells within monitored set on non-used frequency
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
- Inter-frequency set update	Not Present
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 5)

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 4
Failure cause	Check to see if set to "incomplete configuration"

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 onserved time difference reporting indicator	No report
- Cell synchronization information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN onserved time difference reporting indicator	No report
- Cell synchronization information reporting indicator	No report
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active set
- Maximum number of reported cells	1
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 7)

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 6
Failure cause	Check to see if set to "incomplete configuration"

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	TRUE
- 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.

8.4.1.16 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_FACH state

8.4.1.16.1 Definition

8.4.1.16.2 Conformance requirement

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

1> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT_IDENTITY;

1> begin traffic volume measurement reporting according to the assigned information.

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

Reference

3GPP TS 25.331 clause 8.4.1.9.4, 3GPP TS 25.331 clause 8.4.1.3.

8.4.1.16.3 Test Purpose

1. To confirm that after a state transition from idle mode to CELL_FACH state, the UE shall begin a traffic volume type measurement, as specified in System Information Block type 11 or 12 messages on BCCH.

2. To confirm that in CELL_FACH state, the UE shall send a MEASUREMENT REPORT message when reporting criteria is satisfied. During CELL_FACH state, if the UE receives a MEASUREMENT CONTROL message, it shall perform the measurement and reporting tasks based on the MEASUREMENT CONTROL message received.

8.4.1.16.4 Method of test

Initial Condition

System Simulator: 1cell

UE: "Registered idle mode on 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

The UE is initially in idle mode. The System Information Block type 11 message is modified with respect to the default settings to request UE to perform traffic volume measurements. Key measurement parameters are as follows: measurement quantity = "RLC Buffer Payload", report criteria = "periodic reporting criteria", reporting interval = "6 seconds", reporting amount = 'infinity'. The System Information type 12 message is not broadcasted.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Then the UE shall begin traffic volume measurements, and shall send MEASUREMENT REPORT message after completing first measurement. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14.

UE shall continue to send MEASUREMENT REPORT messages at 6 seconds interval.

SS sends MEASUREMENT CONTROL message to the UE. This message overwrites measurement information saved from System information type 11. Key measurement parameters are as follow: measurement type = "traffic volume measurement", measurement quantity = "RLC Buffer Payload", report criteria = "Event triggered, event 4B: Transport Channel Traffic Volume becomes smaller than an absolute threshold ", Time to trigger = "5 seconds", pending time after trigger = "16 seconds", "reporting threshold = '4K'. Since there is no uplink traffic, UE shall send MEASUREMENT REPORT message after 5 seconds (time to trigger interval). 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 idle mode and camped onto cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2	↔		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
2a	→		MEASUREMENT REPORT	The UE shall send the first MEASUREMENT REPORT message, as specified in SIB11.
3	↔		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5	→		Void	
6	→		MEASUREMENT REPORT	
7	→		MEASUREMENT REPORT	Time difference between any two consecutive MEASUREMENT REPORT messages should be 6 Seconds.
8	←		MEASUREMENT CONTROL	Traffic volume measurement reporting is requested if measurement is below threshold.

9			SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are received in 5 seconds.
10	→	MEASUREMENT REPORT	Measurement report because event 4b is triggered
11	←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 11 (Step 1) (FDD)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	4
- Traffic volume measurement object list	Rach
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All States except CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	6 seconds

System Information Block type 11 (Step 1) (TDD)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Set to same as used for cell 1
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	4
- Traffic volume measurement object list	RACH
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	TRUE
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All States except CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	6 seconds

MEASUREMENT REPORT (Step 2a)

The order in which the RBs are reported is not checked.

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

MEASUREMENT REPORT (Step 6 and 7)

The order in which the RBs are reported is not checked.

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured Results	
- CHOICE measurement	Check to see if set to "traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- CHOICE reporting criteria	Traffic Volume Measurement Reporting Criteria
- Parameters sent for each transport channel	
- Uplink transport channel type	Rach
- UL Transport Channel ID	Not Present
- Parameters required for each Event	
- Traffic volume event identity	4B
- Reporting threshold	4K
- Time to trigger	5000 ms
- Pending time after trigger	16000 ms
- Tx interruption after trigger	Not Present
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Event trigger
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 10)

The order in which the RBs are reported is not checked.

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

- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity - RLC buffer payload - RLC buffer payload average - RLC buffer payload variance	20 Check to see if this IE is present Check to see if this IE is absent Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Traffic Volume Measurement Event Results
- Uplink transport channel type causing the event	Rach
- UL Transport Channel identity - Traffic volume event identity	Not Present 4B

8.4.1.16.5 Test Requirement

After step 5 the UE shall send MEASUREMENT REPORT messages on the uplink DCCH containg RLC buffer payload information for all SRBs. After 6 seconds UE shall send second MEASUREMENT REPORT messages containg RLC buffer payload information for all SRBs and RAB.

After step 8 the UE shall overwrite measurement information received from system information type 11 with measurement information in MEASUREMENT CONTROL message. The UE shall not send MEASUREMENT REPORT message within time to trigger interval. After step 9 the UE shall transmit MEASUREMENT REPORT messages with event identity 4B.

8.4.1.17 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_DCH state

8.4.1.17.1 Definition

8.4.1.17.2 Conformance requirement

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

1> begin a traffic volume type measurement, assigned in System Information Block type 11 (or System Information Block type 12.

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

Reference

3GPP TS 25.331 clause 8.4.1.8.4, 3GPP TS 25.331 clause 8.4.1.3.

8.4.1.17.3 Test Purpose

1. To confirm that after a state transition from idle mode to CELL_DCH state, the UE begin a traffic volume type measurement, as specified in System Information Block type 11 or 12 messages on BCCH. When entering CELL_DCH state, the UE shall send a MEASUREMENT REPORT message when reporting criteria is satisfied.
2. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall perform the measurement and reporting tasks based on the MEASUREMENT CONTROL message received.

8.4.1.17.4 Method of test

Initial Condition

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

Test Procedure

The UE is initially in idle mode. The System Information Block type 11 message is modified with respect to the default settings to request UE to perform traffic volume measurements. Key measurement parameters are as follows: measurement quantity = "Average RLC Buffer Payload", report criteria = "Event triggered, event 4B", reporting threshold = "8K", report transfer mode = "Unacknowledged mode". The System Information type 12 message is not broadcasted.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service).

UE shall begin traffic volume measurements after entering in CELL_DCH state. The UE shall send MEASUREMENT REPORT message because uplink traffic is below threshold.

SS sends MEASUREMENT CONTROL message to the UE. This message reconfigures measurement information saved from System information type 11. Key measurement parameters are as follow: measurement type = "traffic volume measurement", measurement quantity = "RLC Buffer Payload", report criteria = "Periodic reporting criteria", reporting interval = "8 seconds", reporting amount = "8". The UE shall periodically send MEASUREMENT REPORT message to report RLC Buffer Payload for each RB.

SS sends MEASUREMENT CONTROL message to release traffic volume measurement. UE shall not send measurement report after receiving this message. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11	The UE is idle mode and camped onto cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2	↔		SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3	↔		SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5	→		Void	
6	→		MEASUREMENT REPORT	Event 4B is triggered on DCH 5. This message should come on RB1.
6a	→		MEASUREMENT REPORT	Event 4B is triggered on DCH 1. This message should come on RB1 (only for PS)
7	←		MEASUREMENT CONTROL	Periodic Traffic volume measurement reporting is requested.
8	→		MEASUREMENT REPORT	This message should come on RB2.This MEASUREMENT REPORT shall be received on or before 8 Seconds.
9	→		MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 8 Seconds.
10	←		MEASUREMENT CONTROL	Release traffic volume measurement.
11				Wait for 8 Seconds to confirm that UE does not send measurement report message.
12	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 11 (Step 1) (FDD)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	2
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	Average RLC Buffer Payload
- Time Interval to take an average	200 msec
- Traffic volume reporting quantity	
- RB buffer payload	False
- RB buffer payload average	True
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Unacknowledged Mode
- Periodical or event trigger	Event Trigger
- CHOICE reporting criteria	Traffic volume measurement reporting criteria
- Parameters sent for each transport channel	
- Uplink transport channel type	Not Present
- UL transport channel id	Not Present
- Parameters required for each Event	
- Traffic volume event identity	4B
- Reporting threshold	8K
- Time to trigger	5000 ms
- Pending time after trigger	16000 ms
- Tx interruption after trigger	Not Present

System Information Block type 11 (Step 1) (TDD)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Set to same as used for cell 1
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	2
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	Average RLC Buffer Payload
- Traffic volume reporting quantity	
- Time Interval to take an average	200 msec
- RB buffer payload	FALSE
- RB buffer payload average	TRUE
- RB buffer payload variance	FALSE
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	CELL_DCH
- Measurement reporting mode	
- Measurement report transfer mode	Unacknowledged Mode
- Periodical or event trigger	Event Trigger
- Report criteria system Information	Traffic volume reporting criteria
- Event specific parameters	
- Event id	4B
- Reporting threshold	8K
- Time to trigger	Not Present
- Pending time after trigger	Not Present
- Tx interruption after trigger	Not Present

MEASUREMENT REPORT (Step 6/6a)

The order in which the RBs are reported is not checked.

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE measurement	Check to see if set to "traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	1

- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity - RLC buffer payload - RLC buffer payload average - RLC buffer payload variance	20 (for the PS case only) Check to see if this IE is absent Check to see if this IE is present Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	
- UL transport channel type causing the event	DCH
- UL Transport Channel identity - Traffic volume event identity	5 (step 6), 1(step 6a) 4B

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Set up
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RBe	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	Not Present
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	8
- Reporting interval	8 Sec
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 8,9)

The order in which the RBs are reported is not checked.

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

MEASUREMENT CONTROL (Step 10)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present

Additional measurement list	Not Present
DPCH compressed mode status	Not Present

8.4.1.17.5 Test Requirement

After step 5, due to triggering of event 4B, the UE shall send MEASUREMENT REPORT message using unacknowledged mode of RLC. After step 7, UE shall send MEASUREMENT REPORT message using Acknowledged mode of RLC. After 8 seconds UE shall send second MEASUREMENT REPORT message. After step 10, the UE shall not send MEASUREMENT REPORT message.

8.4.1.18 Measurement Control and Report: Traffic volume measurement for transition from CELL_FACH state to CELL_DCH state

8.4.1.18.1 Definition

8.4.1.18.2 Conformance requirement

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

- retrieve each set of measurement control information of measurement type "traffic volume" stored;
  - if the optional IE "measurement validity" for this measurement has not been included:
    - delete the measurement;
  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL_DCH":
    - stop measurement reporting; and
    - save the measurement to be used after the next transition to CELL_FACH state;
  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - continue measurement reporting;
  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL_DCH":
    - resume this measurement and associated reporting;
- if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message when transiting to CELL_DCH state:
  - continue an ongoing traffic volume type measurement, assigned in System Information Block type 11 or System Information Block type 12.

Reference

3GPP TS 25.331 clause 8.4.1.7.4

8.4.1.18.3 Test Purpose

1. To confirm that the UE performs traffic volume measurements and the associated reporting when it enters CELL_DCH state from CELL_FACH state, and that such measurement contexts (and optionally, the reporting context) valid for CELL_DCH state have been previously stored.
2. To confirm that the UE shall continue to perform traffic volume measurement listed in the System Information Block type 11 or 12 messages, if no previously assigned measurements are present. The UE shall transmit

MEASUREMENT REPORT messages if reporting conditions stated in System Information Block type 11 or 12 messages have been satisfied.

8.4.1.18.4 Method of test

Initial Condition

System Simulator: 1 cell

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

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

Test Procedure

Initially the UE is in CELL_FACH state. MEASUREMENT CONTROL message is sent to the UE to establish traffic volume measurement context with optional IE "measurement validity" is not present. The UE shall perform measurement and reporting as assigned in MEASUREMENT CONTROL message. RADIO BEARER RECONFIGURATION procedure is used to take the UE from CELL_FACH state to CELL_DCH state. While entering CELL_DCH state from CELL_FACH state, the UE shall delete traffic volume measurement contexts if optional IE "measurement validity" is not present. So, in CELL_DCH state UE shall not perform traffic volume measurement and reporting. UE is taken to the CELL_FACH state from CELL_DCH state using RADIO BEARER RECONFIGURATION procedure. The UE shall not send MEASUREMENT REPORT message as measurement context is already deleted.

The behavior of the UE when moved from CELL_FACH state to CELL_DCH state and assigned traffic volume measurement context is present with IE "measurement validity" is set to "All But CELL_DCH state" or "CELL_DCH state" or "All states" is tested in a similar way.

When the UE is in CELL_FACH state, System Information is modified to assign traffic volume measurement and reporting to the UE. No previously assigned traffic volume measurement contexts are present in the UE. A SYSTEM INFORMATION CHANGE INDICATION is sent on FACH to inform the UE about the change. The UE is taken to CELL_DCH state from CELL_FACH state using RADIO BEARER RECONFIGURATION procedure. In CELL_DCH state the UE shall continue traffic volume measurement and reporting as assigned in System Information. Traffic volume measurement and reporting is released by sending MEASUREMENT CONTROL message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	Optional IE "measurement validity" is not included.
2	→		MEASUREMENT REPORT	
3	←		RADIO BEARER RECONFIGURATION	
4	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall delete measurement context setup by MEASUREMENT CONTROL message (Step 1).
5				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
6	←		RADIO BEARER RECONFIGURATION	

7	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
8			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
9	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All But CELL_DCH".
10	→	MEASUREMENT REPORT	.
11	←	RADIO BEARER RECONFIGURATION	
12	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall stop traffic volume measurement setup by MEASUREMENT
13			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
14	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 9).
15	←	RADIO BEARER RECONFIGURATION	
16	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
17	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "CELL_DCH".
18			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
19	←	RADIO BEARER RECONFIGURATION	
20	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall start traffic volume measurement setup by MEASUREMENT
21	→	MEASUREMENT REPORT	
22	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 17)

23	←	RADIO BEARER RECONFIGURATION	
24	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
25	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All states".
26	→	MEASUREMENT REPORT	
27	←	RADIO BEARER RECONFIGURATION	
28	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall continue traffic volume measurement setup by MEASUREMENT
29	→	MEASUREMENT REPORT	
30	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 25)
31	←	RADIO BEARER RECONFIGURATION	
32	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
33	←	MIB and SIB12 modified	Traffic volume measurements and reporting is assigned to Ues
33a	←	SYSTEM INFORMATION CHANGE INDICATION	
34	→	MEASUREMENT REPORT	
35	←	RADIO BEARER RECONFIGURATION	
36	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall continue traffic volume measurement assigned in System Information (Step 33)
37	→	MEASUREMENT REPORT	
38	←	MEASUREMENT CONTROL	UE shall release measurement context assigned in System Information (Step 33).

Specific Message Content

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2)

The order in which the RBs are reported is not checked.

Information Element	Value/remark
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 3, 11, 19, 27, and 35)

Use the same message type found in TS 34.108 clause 9 with condition set to A4.

RADIO BEARER RECONFIGURATION (Step 6, 15, 23, and 31)

Use the same message type found in TS 34.108 clause 9 with condition set to A5.

MEASUREMENT CONTROL (Step 9)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	All But CELL_DCH

MEASUREMENT REPORT (Step 10)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	2

MEASUREMENT CONTROL (Step 14)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL (Step 17)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	CELL_DCH

MEASUREMENT REPORT (Step 21)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	3

MEASUREMENT CONTROL (Step 22)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	3

MEASUREMENT CONTROL (Step 25)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	

- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Measurement validity	All States

MEASUREMENT REPORT (Step 26, and 29)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4

MEASUREMENT CONTROL (Step 30)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4

Master Information Block (Step 33)

Information Element	Value/Remarks
MIB Value Tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

System Information Block type 12 (Step 33) (FDD)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All states
- 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

System Information Block type 12 (Step 1) (TDD)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Set to same as used for cell 1
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	TRUE
- RB buffer payload average	FALSE
- RB buffer payload variance	FALSE
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All states
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodocal
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds

SYSTEM INFORMATION CHANGE INDICATION (Step 33a)

Information Element	Value/Remarks
Paging record list	Not Present
BCCH modification info	
- MIB Value Tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value
- BCCH modification time	Not Present

MEASUREMENT REPORT (Step 34, and 37)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks

Measurement identity	5

MEASUREMENT CONTROL (Step 38)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	5

8.4.1.18.5 Test Requirement

The UE shall send MEASUREMENT REPORT message in steps 21, 29 and 37. The UE shall not send MEASUREMENT REPORT message in steps 5, 8, and 13.

8.4.1.19 Measurement Control and Report: Traffic volume measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.19.1 Definition

8.4.1.19.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH 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 measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL_FACH or CELL_PCH or URA_PCH states (stored in the variable MEASUREMENT_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":

2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT_IDENTITY;

2> begin traffic volume measurement reporting according to the assigned information.

Reference

3GPP TS 25.331 clauses 8.4.1.6.6.

8.4.1.19.3 Test Purpose

1. The UE shall performs traffic volume measurements and the associated reporting when it enters CELL_FACH state from CELL_DCH state, and that such measurement contexts (and optionally, the reporting context) valid for CELL_FACH state have been previously stored.

2. The UE shall perform traffic volume measurement listed in the System Information Block type 11 or 12 messages, if no previously assigned measurements are present. The UE shall transmit MEASUREMENT REPORT messages if reporting conditions has been satisfied.

Reference

3GPP TS 25.331 clause 8.4.1.6.6

8.4.1.19.4 Method of test

Initial Condition

System Simulator: 1 cell

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to the UE to establish traffic volume measurement context with optional IE "measurement validity" is not present. The UE shall perform measurement and reporting as assigned in MEASUREMENT CONTROL message. RADIO BEARER RECONFIGURATION procedure is used to take the UE from CELL_DCH state to CELL_FACH state. While entering CELL_FACH state from CELL_DCH state, the UE shall delete traffic volume measurement contexts if optional IE "measurement validity" is not present. So, in CELL_FACH state UE shall not perform traffic volume measurement and reporting. UE is taken to the CELL_DCH state from CELL_FACH state using RADIO BEARER RECONFIGURATION procedure. The UE shall not send MEASUREMENT REPORT message as measurement context is already deleted.

The behavior of the UE when moved from CELL_DCH state to CELL_FACH state and assigned traffic volume measurement context is present with IE "measurement validity" is set to "All But CELL_DCH state" or "CELL_DCH state" or "All states" is tested in a similar way.

When the UE is in CELL_DCH state, System Information is modified to assign traffic volume measurement and reporting to the UE. No previously assigned traffic volume measurement contexts are present in the UE. The UE is taken to CELL_FACH state from CELL_DCH state using RADIO BEARER RECONFIGURATION procedure. In CELL_FACH state the UE shall perform traffic volume measurement and reporting as assigned in System Information. Traffic volume measurement and reporting is released by sending MEASUREMENT CONTROL message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	Optional IE "measurement validity" is not included.
2	→		MEASUREMENT REPORT	
3	←		RADIO BEARER RECONFIGURATION	
4	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall delete measurement context setup by MEASUREMENT CONTROL message (Step 1).
5				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
6	←		RADIO BEARER RECONFIGURATION	
7	→		RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
8				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
9	←		MEASUREMENT CONTROL	IE "measurement validity" is set to "All But CELL_DCH".
10				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
11	←		RADIO BEARER RECONFIGURATION	
12	→		RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall start traffic volume measurement setup by MEASUREMENT
13	→		MEASUREMENT REPORT	
14	←		MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 9).
15	←		RADIO BEARER RECONFIGURATION	

16	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
17	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "CELL_DCH".
18	→	MEASUREMENT REPORT	
19	←	RADIO BEARER RECONFIGURATION	
20	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall stop traffic volume measurement setup by MEASUREMENT
21			SS waits for 8 seconds to confirm that there is no
22	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 17)
23	←	RADIO BEARER RECONFIGURATION	
24	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
25	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All states".
26	→	MEASUREMENT REPORT	
27	←	RADIO BEARER RECONFIGURATION	
28	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall continue traffic volume measurement setup by MEASUREMENT
29	→	MEASUREMENT REPORT	
30	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 25)
31	←	RADIO BEARER RECONFIGURATION	
32	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.

33	←	SIB12 modified	Traffic volume measurements and reporting is assigned to UEs
34	←	RADIO BEARER RECONFIGURATION	
35	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 33)
36	→	MEASUREMENT REPORT	
37	←	MEASUREMENT CONTROL	UE shall release measurement context assigned in System Information (Step 33).

Specific Message Content

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2)

The order in which the RBs are reported is not checked.

Information Element	Value/remark
Measurement identity	1
Measured Results	

- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 3, 11, 19, 27, and 34)

Use the same message type found in TS 34.108 clause 9 with condition set to A5.

RADIO BEARER RECONFIGURATION (Step 6, 15, 23, and 31)

Use the same message type found in TS 34.108 clause 9 with condition set to A4.

MEASUREMENT CONTROL (Step 9)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	All But CELL_DCH

MEASUREMENT REPORT (Step 13)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	2

MEASUREMENT CONTROL (Step 14)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL (Step 17)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	CELL_DCH

MEASUREMENT REPORT (Step 18)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	3

MEASUREMENT CONTROL (Step 22)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	3

MEASUREMENT CONTROL (Step 25)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Measurement validity	All States

MEASUREMENT REPORT (Step 26, and 29)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4

MEASUREMENT CONTROL (Step 30)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4

System Information Block type 12 (Step 33) (FDD)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality	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	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 1
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Cell selection and re-selection info for SIB11/12	
- $Qoffset1_{s,n}$	0dB
- $Qoffset1_{s,n}$	Not present
- Maximum allowed UL Tx Power	Reference to table 6.1.1
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	Not Present
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds

System Information Block type 12 (Step 33) (TDD)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Set to same as used for cell 1
- TX Diversity indicator	FALSE
- Cell selection and re-selection info for SIB11/12	
- $Qoffset1_{s,n}$	0dB
- $Qoffset1_{s,n}$	Not present
- Maximum allowed UL Tx Power	Reference to table 6.1.1
- HCS neighbouring cell information	Not Present
- CHOICE mode	TDD
- Qrxlevmin	Reference to table 6.1.1
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present

- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	TRUE
- RB buffer payload average	FALSE
- RB buffer payload variance	FALSE
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	Not Present
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds

MEASUREMENT REPORT (Step 36)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	5

MEASUREMENT CONTROL (Step 37)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	5

8.4.1.19.5 Test Requirement

The UE shall send MEASUREMENT REPORT message in steps 13, 29 and 36. The UE shall not send MEASUREMENT REPORT message in steps 5, 8, and 21.

8.4.1.20 Void

8.4.1.21 Void

8.4.1.22 Measurement Control and Report: Quality measurements

8.4.1.22.1 Definition

8.4.1.22.2 Conformance requirement

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

Reference

3GPP TS 25.331 clause 8.4.1.3

8.4.1.22.3 Test Purpose

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

8.4.1.22.4 Method of test

Initial Condition

System Simulator: 1 cell

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

Test Procedure

The UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to UE to assign quality measurement and reporting. As assigned in MEASUREMENT CONTROL message, the UE shall periodically send MEASUREMENT REPORT message reporting BLER of downlink transport channel(s). SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	The UE is requested to perform "Quality measurements"
2	→		MEASUREMENT REPORT	
3	→		MEASUREMENT REPORT	UE shall send second MEASUREMENT REPORT message after 64 seconds.
4	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 1) (FDD)

Information Element	Value/remark
Measurement identity	16
Measurement command	Setup
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurement list	Not Present
- CHOICE measurement type	Quality measurement
- Quality reporting quantity	
- DL transport channel BLER	True
- Transport channels for BLER reporting	Not present
- CHOICE mode	FDD
- CHOICE report criteria	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	64 sec
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL (Step 1) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	16
Measurement command	Setup
- CHOICE measurement type	Quality measurement
- Quality reporting quantity	
- DL transport channel BLER	True
- Transport channels for BLER reporting	Not present
- CHOICE mode	TDD
- SIR measurement list	
- TFCS ID	Not present
- CHOICE Reporting criteria	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	64 sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2,3) (FDD)

In case of CS speech call,

Information Element	Value/remark
Measurement identity	16
Measured Results	
- CHOICE measurement	Quality measurement
- BLER measurement results list	
- Transport channel identity	6
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	7
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	8
- DL transport channel BLER	Check to see if this IE is present
- Transport channel identity	10
- DL transport channel BLER	Check to see if this IE is present
- CHOICE mode	FDD
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

MEASUREMENT REPORT (Step 2,3) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	16
Measured Results	
- CHOICE measurement	Quality measurement
- BLER measurement results list	
- DL Transport channel identity	10
- DL transport channel BLER	Check to see if this IE is present
- CHOICE Mode	TDD
- SIR measurement results	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

In any cases except CS speech call,

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

8.4.1.22.5 Test Requirement

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

8.4.1.23 Measurement Control and Report: Intra-frequency measurement for events 1C and 1D

8.4.1.23.1 Definition

8.4.1.23.2 Conformance requirement

1. When event 1C is configured in the UE, the UE shall:

   1> if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for one or more primary CPICHs, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for one or more primary CPICHs, for each of these primary CPICHs:

      2> if all required reporting quantities are available for that cell; and

      2> if the equations have been fulfilled for a time period indicated by "Time to trigger", and if the primary CPICH that is better is not included in the active set but the other primary CPICH is any of the primary CPICHs included in the active set, and if that first primary CPICH is not included in the "cells triggered" in the variable TRIGGERED_1C_EVENT:

         3> include that primary CPICH in the "cells recently triggered" in the variable TRIGGERED_1C_EVENT.

   1> if the value of "Replacement activation threshold" for this event is less than or equal to the current number of cells in the active set or equal to 0 and if any primary CPICHs are stored in the "cells recently triggered" in the variable TRIGGERED_1C_EVENT:

      2> if "Reporting interval" for this event is not equal to 0:

         3> if the IE "Periodical reporting running" in the variable TRIGGERED_1C_EVENT is set to FALSE:

            4> start a timer for with the value of "Reporting interval" for this event and set the IE "Periodical reporting running" in the variable TRIGGERED_1C_EVENT to TRUE.

         3> set "sent reports" for that primary CPICH in the variable TRIGGERED_1C_EVENT to 1.

      2> send a measurement report with IEs set as below:

         3> set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1c"; and

         3> include in "cell measurement event results" all entries of the "cells recently triggered" in the variable TRIGGERED_1C_EVENT not in the active set as well as the "primary CPICH info" of all the primary CPICHs in the active set for which the measured value is worse (i.e. greater for pathloss and less for the other measurement quantities) than the one of the entry in "cell recently triggered" that has the best measured value. The "primary CPICH info" for those cells shall be ordered according to their measured value taking into account their cell individual offset, beginning with the best cell to the worst one;

         3> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2, not taking into account the cell individual offset for each cell.

      2> ….

2. When event 1D is configured in the UE, the UE shall:

   1> if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT:

NOTE: If the equations are simultaneously fulfilled for more than one primary CPICH, the UE should report only one event 1D, triggered by the best primary CPICH.

2> if all required reporting quantities are available for that cell, and if the equations have been fulfilled for a time period indicated by "Time to trigger":

3> set "best cell" in the variable BEST_CELL_1D_EVENT to that primary CPICH that triggered the event;

3> send a measurement report with IEs set as below:

4> set in "intra-frequency measurement event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH that triggered the report, not taking into account the cell individual offset for each cell.

4> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2, not taking into account the cell individual offset for each cell.

NOTE: Event 1D can be triggered by an active or by a non-active CPICH.

Reference

3GPP TS 25.331 clause 14.1.2.3, 14.1.2.4.

8.4.1.23.3 Test Purpose

1.A To confirm that the UE sends MEASUREMENT REPORT message if event 1C is configured, and number of cells in active set is greater than or equal to 'Replacement activation threshold' parameter, and if monitored or detected primary CPICH on same frequency becomes better than a primary CPICH in active set.

1.B To confirm that the UE does not send MEASUREMENT REPORT message indicating event 1C if number of cells in active set is less than 'Replacement activation threshold' parameter, and if monitored or detected primary CPICH on same frequency becomes better than a primary CPICH in active set.

1.C To confirm that the UE stops periodic reporting of event 1C if the cell that triggered event 1C is added into active set.

2. To confirm that the UE sends MEASUREMENT REPORT message if event 1D is configured and intra-frequency measurement indicates change in best cell.

8.4.1.23.4 Method of test

Initial Condition

System Simulator: 3 cells – The initial configurations of the 3 cells in the SS shall follow the values indicated in the column marked "T0" in table 8.4.1.23-1. The table is found in "Test Procedure" clause.

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

Test Procedure

Table 8.4.1.23-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" and "T2" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.23-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
CPICH Ec	dBm	-60	-60	-66	-70	-70	Switched off	Switched off	-70	-60

The UE is initially in CELL_DCH state of cell 1 and has received the default broadcast information from SIB11/12 in Cell 1. SS then performs a soft handover procedure by sending ACTIVE SET UPDATE message on the downlink DCCH. The UE shall reply with an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH, and include cell 2 to the active set when the activation time specified has elapsed.

SS then ask the UE to perform Intra-frequency measurement and report event 1C and event 1D. In MEASUREMENT CONTROL message, IE 'Replacement activation threshold' is set to 3 and IE 'Cell individual offset' is set to +6 dBm for Cell 3. SS configures itself according to the values in columns "T1" shown above. Cell 3 becomes better than Cell 2 that is in active set of the UE, due to parameter 'Cell Individual offset' for Cell 3. However the UE shall not send MEASUREMENT REPORT message indicating event 1C because number of cells in active set is less than parameter 'Replacement Activation Threshold'.

SS then sends MEASUREMENT CONTROL message to the UE to modify earlier configured intra-frequency measurement. Now, IE 'Replacement activation threshold' is set to 1. MEASUREMENT CONTROL message contains only those IEs that are modified and the UE shall continue to use current values of parameters that are not modified. The UE sends MEASUREMENT REPORT message reporting event 1C, monitored Cell 3 is better than Cell 2 that is in active set. The UE sends second MEASUREMENT REPORT message reporting event 1C after 4 seconds, equals to parameter 'Reporting interval'.

SS then performs soft handover procedure by sending ACTIVE SET UPDATE message on the downlink DCCH. In this message SS commands UE to add Cell 3 and remove Cell 2 from active set. The UE shall reply with an ACTIVE SET UPDATE COMPLETE message. The UE shall also stop periodic reporting of event 1C because the Cell that triggered it is added into active set. SS then configures itself according to the values in columns "T2" shown above. This triggers event 1D and the UE sends MEASUREMENT REPORT message indicating Cell 3 as a best cell. 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	←		ACTIVE SET UPDATE	SS command the UE to add Cell 2 in active set.
2	→		ACTIVE SET UPDATE COMPLETE	
3	←		MEASUREMENT CONTROL	Event 1C and 1D are configured. IE "Replacement activation threshold" is set to 3.
4				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.23-1.
5				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message.
6	←		MEASUREMENT CONTROL	Measurement configured in step 3 is modified to set parameter 'replacement activation threshold' to 1.
7	→		MEASUREMENT REPORT	Event 1C is triggered. The UE shall report that Cell 3 is better than Cell 2.
8	→		MEASUREMENT REPORT	The UE shall send second report after 4 seconds (Reporting interval)
9	←		ACTIVE SET UPDATE	SS command the UE to replace Cell 2 in active set by Cell 3.
10	→		ACTIVE SET UPDATE COMPLETE	
11				Check for 10 seconds, the UE shall not send MEASUREMENT REPORT message.
12				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.23-1.
13	→		MEASUREMENT REPORT	The UE shall report event 1D change of best cell
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:

ACTIVE SET UPDATE (Step 1)

Information Element	Value/remark
Radio link addition information	
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 2
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	P-CPICH may be used.
- DPCH frame offset	Calculated value from Cell synchronisation infomation
- Secondary CPICH info	Not present
- DL channelisation code	This IE is repeated for all existing downlink DPCHs allocated to the UE
- Secondary scrambling code	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Code number	For each DPCH, assign the same code number in the current code given in cell 1.
- Scrambling code change	Not present
- TPC combination index	0
- SSDT cell identity	Not present
- Close loop timing adjustment mode	Not present
- TFCI combining indicator	TRUE
- SCCPCH information for FACH	Not present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/remark
Measurement identity	1
Measurement command	Setup
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- Intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	Id of Cell 3
- Cell info	
- Cell individual offset	6 dBm
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary scrambling code	Primary scrambling code of Cell 3
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection Info	Not Present
- Cell for measurement	
- Intra-frequency cell id list	Set to id of cell 1, 2 and 3.
- Intra-frequency measurement quantity	
- Filter Coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1C
- Replacement activation threshold	3
- Reporting amount	16
- Reporting interval	4 seconds
- Hysteresis	4 dB
- Time to trigger	10 mSec
- Reporting cell status	Not present
- Intra-frequency event identity	1D
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
Measurement reporting mode	
- Measurement reporting transfer mode	Acknowledged mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT CONTROL (Step 6)

Information Element	Value/remark

Measurement identity	1
Measurement command	Modify
- CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1C
- Replacement activation threshold	1
- Reporting amount	16
- Reporting interval	4 seconds
- Hysteresis	4 dB
- Time to trigger	10 mSec
- Reporting cell status	Not present
- Intra-frequency event identity	1D
- Hysteresis	4
- Time to trigger	10 mSec
- Reporting cell status	Not present
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 7 and 8)

Information Element	Value/remark
Measurement identity	1
Measured results	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Checked to see if set to "Intra Frequency Event results"
- Event ID	Check to see if set to "1C"
- Cell measurement event results	
- Primary scrambling code	Check to see if set to Primary scrambling code of Cell 3
- Primary scrambling code	Check to see if set to Primary scrambling code of Cell 2

ACTIVE SET UPDATE (Step 9)

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

MEASUREMENT REPORT (Step 13)

Information Element	Value/remark
Measurement identity	1
Measured results	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional Measured results	Check to see if this IE is absent
Event results	Check to see if set to "Intra-frequency event results"
- Event ID	Check to see if set to "1D"
- Cell measurement event results	
- Primary scrambling code	Check to see if set to "Primary scrambling code of Cell 3"

8.4.1.23.5 Test Requirement

1.A In steps 7 and 8 the UE shall send MEASUREMENT REPORT message indicating event 1C. IE 'Cell measurement event results' in MEASUREMENT REPORT message shall contain primary scrambling code of Cell 3 and Cell 2 in that order.

1.B In step 5 the UE shall not send MEASUREMENT REPORT message.

1.C In step 11 the UE shall not send MEASUREMENT REPORT message.

2. In step 13 the UE shall send MEASUREMENT REPORT message indicating event 1D. IE 'Cell measurement event results' in MEASUREMENT REPORT message shall contain primary scrambling code of Cell 3.

8.4.1.24 Measurement Control and Report: Inter-frequency measurement for event 2A

8.4.1.24.1 Definition

8.4.1.24.2 Conformance requirement

When event 2a is configured in the UE within a measurement, the UE shall:

1> when the measurement is initiated or resumed:

2> store the used frequency in the variable BEST_FREQUENCY_2A_EVENT.

1> if equation 1 below has been fulfilled for a time period indicated by "Time to trigger" for a frequency included for that event and which is not stored in the variable BEST_FREQUENCY_2A_EVENT:

2> send a measurement report with IEs set as below:

3> set in "inter-frequency measurement event results":

4> "inter-frequency event identity" to "2a"; and

4> "Frequency info" to the frequency that triggered the event; and

4> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cells parameters ID" of the best primary CCPCH for TDD cells on that frequency, not taking into account the cell individual offset;

3> if a non-used frequency triggered the measurement report:

4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2, not taking into account the cell individual offset;

3> if the used frequency triggered the measurement report:

4> do not include the IE "Inter-frequency measured results list" in the measurement report;

2> update the variable BEST_FREQUENCY_2A_EVENT with that frequency.

Equation 1:

$$Q_{NotBest} \geq Q_{Best} + H_{2a} / 2$$

The variables in the formula are defined as follows:

$Q_{Not\ Best}$ 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 (FDD)	dBm /3.84 Mhz	-65	-65	-65	-70	-65	-70	-75	-60	-75	-55	-75	-55
P-CCPCH RSCP (TDD)	dBm	-65	-65	-65	-70	-65	-70	-75	-60	-75	-55	-75	-55
P-CCPCH TS (3.84Mcps TDD)		TS 0						TS 4					

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 (for FDD only), SS performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS then commands the UE to perform Inter-frequency measurements and report event 2A by sending MEASUREMENT CONTROL message. In MEASUREMENT CONTROL message, IE "Hysteresis" is set to 14.5 dB and IE "Additional measurement list" is set to id of "UE Internal measurements" configured earlier. SS then configures itself according to the values in columns "T1" shown above. Even though quality estimate for Cell 4 has become better than that of Cell 1, event 2A will not be triggered since hysteresis condition is not fulfilled. SS then configures itself according to the values in columns "T2" shown above.

SS sends MEASUREMENT CONTROL message to modify parameter "Hysteresis" of Inter-frequency measurements to 1 dB. SS then configures Cell 1 and Cell 4 according to columns "T3" for short duration (less than 5 seconds), and then configures itself according to columns "T4" shown above. The UE will not send MEASUREMENT REPORT message because time to trigger condition is not fulfilled. SS then configures itself according to the values in columns "T5" shown above. The UE sends MEASUREMENT REPORT message reporting even 2A as well as measurement of transmitted power.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Important Note: Duration between time instant "T3" and "T4" (between steps 9 and 10 of expected sequence) must be less than 5 seconds.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	To setup UE Internal measurement. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation. (for FDD only)
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(for FDD only)
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) (FDD)

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	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger Reporting Mode
Additional measurements list	Not present
DPCH compressed mode status	Not present

MEASUREMENT CONTROL (Step 1) (1.28 Mcps TDD)

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	TDD
-CHOICE TDD option	1.28 Mcps TDD
- T_{ADV} info	FALSE
- CHOICE report criteria	No reporting
Measurement reporting mode	Not present
Additional measurements list	Not present
DPCH compressed mode status	Not present

MEASUREMENT CONTROL (Step 1) (3.84 Mcps TDD)

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	TDD
-CHOICE TDD option	3.84 Mcps TDD
- Applied TA	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) (FDD)

Use the same message sub-type found in clause 9 of TS 34.108, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)FDD", 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	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	TRUE
- 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	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL mode	UL and DL or DL only or UL 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) (FDD)

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	
- 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	Not present
- Used frequency W	0
- Hysteresis	14.5 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 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	Id of Cell 4
- Frequency Info	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
-CHOICE TDD option	1.28 Mcps TDD
- Cell parameters ID	Cell parameters ID of Cell 4
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Threshold used frequency	Not present
- W used frequency	0
- Hysteresis	14.5 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	
- Threshold non-used frequency	-72 dBm
- W non-used frequency	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 4) (3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	Id of Cell 4
- Frequency Info	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	SyncCase 1
- Timeslot	4
- Cell parameters ID	Cell parameters ID of Cell 4
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Threshold used frequency	Not present
- W used frequency	0
- Hysteresis	14.5 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	
- Threshold non-used frequency	-72 dBm
- W non-used frequency	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
- Inter-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
- Threshold used frequency	Not present
- W used frequency	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	
- Threshold non-used frequency	-72 dBm
- W non-used frequency	0
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 13) (FDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present
- UE RX TX report entry list	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- Inter-frequency event identity	2A
- 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 13) (1.28 Mcps TDD)

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
- T_{ADV}	Check to see if it is absent
Event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2A”
- Inter-frequency Cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- Cell parameters ID	Check to see if set to Cell parameter ID of Cell 4

MEASUREMENT REPORT (Step 13) (3.84 Mcps TDD)

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
CHOICE mode	Check to see if set to “TDD”
- UE transmitted power	Check to see if it is present
CHOICE TDD option	Check to see if set to “3.84 Mcps TDD”
- Applied TA	Check to see if it is absent
Event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2A”
- Inter-frequency Cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non frequency related measurement event results	
CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
CHOICE TDD option	Check to see if set to “3.48 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameter ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

8.4.1.24.5 Test Requirement

1.A In step 13 the UE shall send MEASUREMENT REPORT message indicating event 2A. IE ' Inter-frequency Cells ' in MEASUREMENT REPORT message shall contain frequency information and primary scrambling code (for FDD) or Cell parameters ID (forTDD) 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:

$\boldsymbol{Q_{Non\ used}}$ is the quality estimate of a non-used frequency that becomes better than an absolute threshold.

$\boldsymbol{T_{Non\ used\ 2b}}$ is the absolute threshold that applies for this non-used frequency in that measurement.

$\boldsymbol{H_{2b}}$ 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:

$\boldsymbol{Q_{Used}}$ is the quality estimate of the used frequency.

$\boldsymbol{T_{Used\ 2b}}$ is the absolute threshold that applies for the used frequency in that measurement.

$\boldsymbol{H_{2b}}$ 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 info (for FDD) or primary CCPCH info (for TDD) 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 info (for FDD) or primary CCPCH info (for TDD)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 (FDD)	dBm /3.84 MHz	-55	-55	-85	-85	-55	-55
P-CCPCH RSCP(TDD)	dBm	-60	-60	-80	-80	-60	-60
P-CCPCH TS (3.84 Mcps TDD)		TS 0			TS 4		

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 (for FDD only).

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. (for FDD only)
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(for FDD only)
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. Layer 3 Filtering causes an additional delay.
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. Layer 3 Filtering causes an additional delay. For Cell 1 the CPICH Ec value of -80 dBm(for FDD)or the P-CCPCH RSCP value of -75 dBm (for TDD) 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 (for FDD) or P-CCPCH RSCP(for TDD) is +/- 3 dBm, SS set Hysteresis value is +/- 2dB)
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)(FDD)

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	
- 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	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non used frequency parameter list	
- Non used frequency threshold	-70 dBm
- Non used frequency W	0
- Inter-frequency event identity	2B
- Used frequency threshold	-70 dBm
- Used frequency W	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec

- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Non used frequency parameter list	
- Non used frequency threshold	-70 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

MEASUREMENT CONTROL (Step 1)(1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- 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
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD Indicator	FALSE
- Cell parameters ID	Cell parameters ID of Cell 4
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70dBm
- W non-used frequency	0
- Inter-frequency event identity	2B
- Threshold used frequency	-70 dBm
- W used frequency	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70 dBm
- W non-used frequency	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

MEASUREMENT CONTROL (Step 1)(3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- 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
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	SyncCase 1
- Timeslot	4
- Cell parameters ID	Cell parameters ID of Cell 4
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70dBm
- W non-used frequency	0
- Inter-frequency event identity	2B
- Threshold used frequency	-70 dBm
- W used frequency	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70 dBm
- W non-used frequency	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	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (Single)
- CHOICE Mode	FDD
- Power offset PPilot-DPDCH	0
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	TRUE
- 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	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL mode	UL and DL or DL only or UL 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) (FDD)

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 measurement event results,
- Inter-frequency event identity	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 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot List/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2E”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “1.28 Mcps TDD”
- TSTD Indicator	Check to see if set to “FALSE”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD Indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 4) (3.48 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot list/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2E”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “3.48 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 8) (FDD)

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
- 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 absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent

Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- Inter-frequency event identity	2B
- 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) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot List/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2B”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “1.28 Mcps TDD”
- TSTD Indicator	Check to see if set to “FALSE”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD Indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 8) (3.84Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot list/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2B”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “3.84 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

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(for FDD) or Cell parameters ID (TDD) 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 (for FDD) or Cell parameters ID (TDD) of Cell 4.

8.4.1.26 Measurement Control and Report: 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:

$\boldsymbol{Q_{Used}}$ is the quality estimate of the used frequency.

$\boldsymbol{T_{Used\ 2d}}$ is the absolute threshold that applies for the used frequency and event 2d.

$\boldsymbol{H_{2d}}$ 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:

$\boldsymbol{Q_{Used}}$ is the quality estimate of the used frequency.

$\boldsymbol{T_{Used\ 2d}}$ is the absolute threshold that applies for the used frequency and event 2d.

$\boldsymbol{H_{2d}}$ 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".
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".

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.

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 (FDD)	dBm /3.84 MHz	-55	-75
P-CCPCH RSCP(TDD)	dBm	-60	-80

The UE is initially in CELL_DCH state of cell 1. 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			Void	
2			Void	
3			Void	
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:

MEASUREMENT CONTROL (Step 4) (FDD)

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	
- 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	-70 dBm
- Used frequency W	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Inter-frequency event identity	2F
- Used frequency threshold	-70 dBm
- Used frequency W	0
- Hysteresis	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 CONTROL (Step 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	10
Measurement command	Setup
Measurement reporting mode	
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects 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	0
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE Mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD indicator	FALSE
- Cell parameters ID	Any value of Cell parameters ID
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2D
- Threshold used frequency	-70 dBm
- W used frequency	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Report cells within active set
- Maximum number of reported cells	2
- Inter-frequency event identity	2F
- Threshold used frequency	-70 dBm
- W used frequency	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Report cells within active set
- Maximum number of reported cells	2
DPCH compressed mode status info	Not present

MEASUREMENT CONTROL (Step 4) (3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	10
Measurement command	Setup
Measurement reporting mode	
- Measurement reporting transfer mode	Unacknowledged Mode RLC
- Periodic reporting / Event trigger reporting mode	Event trigger
Additional measurement list	Not present
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects 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	0
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE Mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Cell parameters ID	Any value of Cell parameters ID
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2D
- Threshold used frequency	-70 dBm
- W used frequency	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Report cells within active set
- Maximum number of reported cells	2
- Inter-frequency event identity	2F
- Threshold used frequency	-70 dBm
- W used frequency	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Report cells within active set
- Maximum number of reported cells	2
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 5) (FDD)

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 measurement event results,
- Inter-frequency event identity	2F

MEASUREMENT REPORT (Step 5)(TDD)

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	
- CHOICE event results	Check to see if set to Inter-frequency measurement event results,
- Inter-frequency event identity	Check to see if set to 2F

MEASUREMENT REPORT (Step 7) (FDD)

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 measurement event results,
- Inter-frequency event identity	2D

MEASUREMENT REPORT (Step 7)(TDD)

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	
- CHOICE event results	Check to see if set to Inter-frequency measurement event results,
- Inter-frequency event identity	Check to see if set to 2D

8.4.1.26.5 Test Requirement

1. In step 5 the UE shall send MEASUREMENT REPORT message indicating event 2F.
2. In step 7 the UE shall send MEASUREMENT REPORT message indicating event 2D.

8.4.1.27 Measurement Control and Report: UE internal measurement for events 6A and 6B

8.4.1.27.1 Definition

8.4.1.27.2 Conformance requirement

When event 6A is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE transmission power (for TDD within a single TS) becomes larger than a predefined threshold. The corresponding report identifies the threshold that was exceeded.

When event 6B is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE transmission power (for TDD within a single TS) becomes less than a predefined threshold. The corresponding report identifies the threshold that the UE Tx power went below.

Reference

3GPP TS 25.331, clauses 14.6.2.1 and 14.6.2.2.

8.4.1.27.3 Test Purpose

1. To confirm that the UE performs UE internal measurements and reporting for events 6A and 6B, when requested by the UTRAN to do so in the MEASUREMENT CONTROL message.

8.4.1.27.4 Method of test

Initial Condition

System Simulator: 1 cell, cell 1.

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

Test Procedure

The UE is in CELL_DCH state in cell 1, after successfully executing procedures P11 or P13 as specified in clause 7.4 of TS 34.108. Next, SS transmits MEASUREMENT CONTROL message to request the UE to perform UE internal measurements and reporting for events 6A and 6B.

SS increases the UE Tx power above the threshold set to event 6A. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6A, to SS.

SS decreases the UE Tx power below the threshold set to event 6B. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6B, to SS. 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	←		MEASUREMENT CONTROL	SS requests for measurement and reporting of events 6A and 6B.
3				SS sets the UE transmission power above 18 dBm.
4	→		MEASUREMENT REPORT	UE shall send 6A event measurement report.
5				SS sets the UE transmission power below 15 dBm.
6	→		MEASUREMENT REPORT	UE shall send 6B event measurement report.
7	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

MEASUREMENT CONTROL (Step 2) (FDD)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement	
- UE internal measurement quantity	Present
-CHOICE *mode*	FDD
-UE internal measurement quantity	UE Transmitted Power
-Filter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	TRUE
- CHOICE *mode*	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6A
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	18 dBm
-UE internal event identity	6B
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	15 dBm
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL (Step 2)(1.28 Mcps TDD)

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
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	
-CHOICE *mode*	TDD
- measurement quantity	UE Transmitted Power
-Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	TRUE
- CHOICE *mode*	TDD
- CHOICE TDD option	1.28 Mcps TDD
- T_{ADV} info	FALSE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6A
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	18 dBm
-UE internal event identity	6B
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	15 dBm
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 4) (FDD)

Information Element	Value/remark

Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6A"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

MEASUREMENT REPORT (Step 4)(1.28Mcps TDD)

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"
-CHOICE *mode*	Check to see if set to "TDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6A"

MEASUREMENT REPORT (Step 6) (FDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6B"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

MEASUREMENT REPORT (Step 6)(1.28 Mcps TDD)

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"
-CHOICE *mode*	Check to see if set to "TDD"
- UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6B"

8.4.1.27.5 Test Requirement

After step 3, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6A.

After step 5, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6B.

8.4.1.28 Measurement Control and Report: UE internal measurement for events 6F (FDD) 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.SS sets the initial timing of cell 2 to be the timing of cell 1 - 5 chips.

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				SS switches the Tx timing of Cell 2, with respect to Cell 1 to a delay of – 19 chips.
6	→		MEASUREMENT REPORT	UE shall send 6F event measurement report.
7				SS switches the Tx timing of Cell 2 with respect to Cell 1 to a delay of 19 chips.
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 *mode*	FDD
- Measurement quantity	UE Rx-Tx time difference
- Flter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	FALSE

- CHOICE *mode*	FDD
- UE Rx-Tx time difference	TRUE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6F
-Time-to-trigger	0 milliseconds
-UE Rx-Tx time difference threshold	1037
-UE internal event identity	6G
-Time-to-trigger	0 milliseconds
-UE Rx-Tx time difference threshold	1011
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 *mode*	Check to see if set to "FDD"
UE Rx-Tx report entries	
- Primary CPICH info	
-Primary scrambling code	Check to see if set to codes assigned for cell 1 & cell 2.
-UE Rx-Tx time difference type 1	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6F"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	
-Primary scrambling code	Check to see if set to code assigned for cell 2.

MEASUREMENT REPORT (Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Rx-Tx report entries	
- Primary CPICH info	
-Primary scrambling code	Check to see if set to codes assigned for cell 1 & cell 2.
-UE Rx-Tx time difference type 1	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6G"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	
-Primary scrambling code	Check to see if set to code assigned for cell 2

8.4.1.28.5 Test Requirement

After step 5, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE Rx-Tx time difference. The 'Event results' IE contains event identity 6F.

After step 7, the UE shall transmit MEASUREMENT REPORT message, containing measured results for UE Rx-Tx time difference. The 'Event results' IE contains event identity 6G.

8.4.1.28A Measurement Control and Report: UE internal measurement for event 6F (1.28 Mcps TDD)

8.4.1.28A.1 Definition

8.4.1.28A.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 absolute value of the difference between the measured T_{ADV} and the T_{ADV} stored in the variable TRIGGERED_6F_EVENT becomes larger than the threshold defined by the IE " T_{ADV} Threshold ".

Reference

3GPP TS 25.331, clauses 14.6.2.6a

8.4.1.28A.3 Test Purpose

1. To confirm that the UE performs UE internal measurements and reporting for event 6F, when requested by the UTRAN to do so in the MEASUREMENT CONTROL message.

8.4.1.28A.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 in CELL_DCH state.

SS transmits MEASUREMENT CONTROL message to request the UE to perform UE internal measurements and reporting for event 6F.

SS adjusts the Tx timing of cell 1 until the time difference indicated by T_{ADV} becomes above the threshold set to event 6F. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6F, 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	←		MEASUREMENT CONTROL	SS requests for measurement and reporting of event 6F.
3				SS adjusts the Tx timing of cell 1 until the time difference indicated by T_{ADV} becomes above a certain threshold.
4	→		MEASUREMENT REPORT	UE shall send 6F event measurement report.
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

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
-UE Internal measurement quantity	
- CHOICE *mode*	TDD
- Measurement quantity	T_{ADV}

- Flter coefficient	0
- UE internal reporting quantity	
- UE Transmitted Power	FALSE
- CHOICE *mode*	TDD
- CHOICE TDD option	1.28 Mcps TDD
- T_{ADV} info	TRUE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6F
-Time-to-trigger	0
- T_{ADV} threshold	60
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 4)

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"
-CHOICE *mode*	Check to see if set to "TDD"
- CHOICE TDD option	Check to see if set to “1.28 Mcps TDD”
- T_{ADV}	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6F"

8.4.1.28A.5 Test Requirement

After step 3, the UE shall transmit MEASUREMENT REPORT message, containing measured results for T_{ADV}. The 'Event results' IE contains event identity 6F.

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 TCTV>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 at TVM set up UE sends 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 triggerreds after TVM set up UE sends 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.

3. To confirm that the UE sends MEASUREMENT REPORT message, with 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: Idle state (State 3 or State 7) as specified in clause 7.4 of TS 34.108.

System Information Block type 11 or 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(for FDD) , clause 6.10.3.4.4.2(for 3.84 Mcps TDD), or clause 6.11.5.4.4.2(for 1.28 Mcps TDD): 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 FDD) , 6.10.2.4.4.1: Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH (for 3.84 Mcps TDD), or clause 6.11.5.4.5.2 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRBs for DCCH for UL(for 1.28Mcps TDD) for DL. 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 (for FDD) or P-CCPCH RSCP (for TDD) is reported for intra-frequency reporting when transmitting RACH messages. After this modification, SS configures transport channel traffic volume so as to exceed threshold and then sends to UE MEASUREMENT CONTROL message, which includes traffic volume measurement control parameters e.g. uplink transport channel type and reporting threshold. Transport channel traffic volume exceeds threshold and after 'time to trigger' UE sends MEASUREMENT REPORT to SS. SS does not respond and after 'pending time after trigger' UE sends the same MEASUREMENT REPORT again. 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 MEASUREMENT REPORT message to SS. After 'pending time after trigger' UE sends again same 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	←		PAGING TYPE1	The SS transmits the message, which includes a allocated identity (P-TMSI).
1a	→		RRC CONNECTION REQUEST	
1b	←		RRC CONNECTION SETUP	
1c	→		RRC CONNECTION SETUP COMPLETE	
1d	→		SERVICE REQUEST	
1e	←		AUTHENTICATION AND CIPHERING REQUEST	
1f	→		AUTHENTICATION AND CIPHERING RESPONSE	
1g	←		SECURITY MODE COMMAND	
1h	→		SECURITY MODE COMPLETE	
1i	←		ACTIVATE RB TEST MODE	TC
1j	→		ACTIVATE RB TEST MODE COMPLETE	
1k	←		RADIO BEARER SETUP	RRC RAB SETUP See specific message contents for this message
1l	→		RADIO BEARER SETUP COMPLETE	
1m	←		CLOSED UE TEST LOOP	TC UE Test Loop Mode1
1n	→		CLOSED UE TEST LOOP COMPLETE	TC
1o	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	System Information Block type 12 is different from the default settings (see specific message contents)
1p	←		SYSTEM INFORMATION CHANGE INDICATION	To notify the modification of SYSTEM INFORMATION BLOCK TYPE 12, this message Is transmitted.
1q				SS configures transport channel traffic volume so as to exceed threshold.
1q				SS configures transport channel traffic volume so as to exceed threshold.
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 1100 ms.
4a				SS configures UE's transport channel load decreases to zero
4b				SS receive no MEASUREMENT REPORT message.
4c				SS configures transport channel traffic volume so as to exceed threshold

4d	→	MEASUREMENT REPORT	UE reports that Traffic Volume measurement event 4A is triggered.
4e	→	MEASUREMENT REPORT	UE repeats message after 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

PAGING TYPE 1 (Step 1)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
CHOICE Used paging identity	CN identity
- Paging cause	Terminating Call with one of the supported services
- CN domain identity	PS Domain
- CHOICE UE Identity	P-TMSI
- p-TMSI	Allocated identity during the attach procedure.
BCCH modification info	Not Present

RRC CONNECTION REQUEST (Step 1a)

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

System Information Block type 12 (Step 1o) (FDD)

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	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE

- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	15 dB
- Cells forbidden to affect reporting range	Not Present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 1o) (1.28 Mcps TDD)

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	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE TDD option	1.28 Mcps TDD
- Cell parameters ID	Set to same Cell parameters ID as used for cell 1
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Cell selection and Re-selection info	Not present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE mode	TDD
- Measurement quantity	P-CCPCH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- CHOICE mode	TDD
- Reporting quantity	P-CCPCH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	60 ms

- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within virtual 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

System Information Block type 12 (Step 1o) (3.84 Mcps TDD)

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	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE TDD option	3.84 Mcps TDD
- Cell parameters ID	Set to same Cell parameters ID as used for cell 1
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Cell selection and Re-selection info	Not present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE mode	TDD
- Measurement quantity	P-CCPCH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- CHOICE mode	TDD
- Reporting quantity	P-CCPCH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	60 ms

- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within virtual 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

MASTER INFORMATION BLOCK (Step 1o)

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~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value

SYSTEM INFORMATION CHANGE INDICATION (Step 1p)

Information Element	Value/remark
Message Type	
BCCH modification info	
MIB Value Tag	~~2~~ A valid MIB value tag as defined in TS 25.331 that is different from the previous value
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
- 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 except CELL_DCH
CHOICE report criteria	Traffic volume measurement reporting criteria
- Parameters sent for each transport channel	
- Parameters required for each event	
- 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, step 4, step 4d and step 4e) (FDD)

The order in which the RBs are reported is not checked.

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 above the threshold
- 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	
- CPICH RSCP	Checked to see if this IE is present and within the acceptable range
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 that this IE is absent
- Traffic volume event identity	Check to see if set to "4a"

MEASUREMENT REPORT (Step 3, step 4, step 4d and step 4e) (TDD)

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 above the threshold
- 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	
- CHOICE mode	Check to see if set to'TDD'
- Primary CCPCH RSCP	Checked to see if this IE is present and the value is within an acceptable range
- Measurement results for monitored cells	
- CHOICE mode	Check to see if set to'TDD'
- Primary CCPCH RSCP	Checked to see if this IE is absent
Additional Measured results	Not checked
Event Results	
CHOICE event result	Check to see if set to'Traffic volume measurement 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 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 (for FDD) or P-CCPCH RSCP (for TDD) 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.

3GPP TSG-RAN WG5 Meeting #27
Bath, UK, April 25th - 29th, 2005

Tdoc ⌘R5-050624

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1184** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	CR to 34.123-1 Rel-5; Removal of Release 5 test case 8.4.1.46
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI5
Date:	⌘	18/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The RRC measurement test case 8.4.1.46 on event 1D and Delta CPICH RSCP reporting for Rel-5 UEs was added at T1#25, but the method of test was left for further study. However, there are other possibilities regarding the verification of the two conformance requirements that are addressed by test case 8.4.1.46. On event 1D, the release 5 specific behaviour is already verified in test cases 8.2.6.39a and 8.2.6.39b. These test cases are for HSDPA capable UEs but from our point of view it should be sufficient to verify this for those UEs. On Delta CPICH RSCP, it is more feasible to verify this in RRM test cases, since it requires very specific (and low) power settings, that actually is already done in the test case 8.7.1.1.1. It may be impossible for the protocol test equipment to verify the requirement. What is missing in the current RRM test case is to allow the UE to use the new Rel-5 IE “Delta CPICH RSCP” in case that the result of the UE measurment is lower than -115 dBm. A companion CR to 34.121 adds this IE to the MEASUREMENT REPORT message. Thus, the test case 8.4.1.46 may be removed.
Summary of change:	⌘	The contents of test case 8.4.1.46 are removed.
Consequences if not approved:	⌘	A redundant and unspecified test case would remain.

Clauses affected:	⌘	8.4.1.46

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	Affects Rel-5.			

How to create CRs using this form:

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

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

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

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

8.4.1.46 ~~Measurement Control and Report: Intra-frequency measurement for event 1D and DeltaRSCP reporting~~Void

~~8.4.1.46.1 Definition~~

~~8.4.1.46.2 Conformance requirement~~

~~>>CPICH RSCP~~	~~OP~~		~~Integer(0..91)~~	~~According to CPICH_RSCP in [19] and [20].~~ ~~Thirty-six spare values are needed.~~	
~~>>Delta$_{CPICH\ RSCP}$~~	~~CV-*RSCP*~~		~~Integer(-5..1)~~	~~If present, the actual value of CPICH RSCP = CPICH RSCP+ Delta$_{CPICH\ RSCP}$~~	~~REL-5~~

~~**Condition**~~	~~**Explanation**~~
~~*RSCP*~~	~~This IE is mandatory if CPICH RSCP is present and if the value of the CPICH RSCP is below 0. It is not needed otherwise.~~

~~…~~

~~When an intra-frequency measurement configuring event 1d is set up, the UE shall:~~

~~1> create a variable TRIGGERED_1D_EVENT related to that measurement, which shall initially contain the best cell in the active set when the measurement is initiated;~~

~~1> delete this variable when the measurement is released.~~

~~1> As soon as the best cell in the active set has been evaluated by the UE (and stored in the TRIGGERED_1D_EVENT variable) and provided that there is more than one cell in the active set, trigger an immediate measurement report with IEs set as below:~~

~~2> set in "intra-frequency measurement event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH stored in the TRIGGERED_1D_EVENT variable;~~

~~2> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2~~

~~When event 1D is configured in the UE, the UE shall:~~

~~1> if IE "useCIO" is present and its value is TRUE, take into account the Cell Individual Offset for evaluation of the Equation 1 and 2, otherwise do not take it into account.~~

~~1> if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT:~~

~~NOTE: If the equations are simultaneously fulfilled for more than one primary CPICH, the UE should report only one event 1D, triggered by the best primary CPICH.~~

~~2> if all required reporting quantities are available for that cell, and if the equations have been fulfilled for a time period indicated by "Time to trigger" and if IE "Triggering condition 2" is absent or if it is present and that primary CPICH is part of cells allowed to trigger the event according to "Triggering condition 2":~~

3> set "best cell" in the variable BEST_CELL_1D_EVENT to that primary CPICH that triggered the event;

3> send a measurement report with IEs set as below:

4> set in "intra-frequency measurement event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH that triggered the report.

4> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2.

Reference

3GPP TS 25.331 clauses 10.3.7.3, 14.2.1.4

8.4.1.46.3 Test Purpose

1.To confirm that the UE responds as soon as possible with a MEASUREMENT REPORT indicating best cell, after receiving a MEASUREMENT CONTROL message indicating the 1d event.

2.To confirm that the UE includes the IE “Delta CPICH RSCP” in the MEASUREMENT REPORT message when needed.

8.4.1.46.4 Method of test

FFS

8.4.1.46.5 Test Requirement

FFS

3GPP TSG-R5 Meeting #27 *Tdoc ⌘R5-050634*
Bath, UK, 25th – 29th April 2005 **Agenda 8.8.3.4**

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** 1185 ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Corrections to GCF WI-010 (P2) approved test case 8.4.1.7
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	14/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘ 1. Measurement Reports in steps 13a and 17b may not be required as per the core spec:

There is no clear core spec requirement how to handle variable TRIGGERED_1E_EVENT when a cell available in the UE is re-added to the CELL_INFO_LIST. However, it is not a realistic configuration for a cell included in SIB12 to be re-added with identical parameters in subsequent Measurement Control message.

2. Measurement Report in step 15 not compliant to core spec:

When the UE transitions from CELL_FACH to CELL_DCH state at step 14d the UE does not start the measurement according to SIB12.

According to TS 25.331 section 8.1.1.6.12:

>>>>>

2> if no intra-frequency measurement in the variable MEASUREMENT_IDENTITY was set up or modified through a MEASUREMENT CONTROL message:

3> store the IE "Intra-frequency reporting quantity" and the IE

"Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

<<<<<<

In this case there is an intra-frequency measurement (id 12 set up in step 10) in

	variable MEASUREMENT_IDENTITY that was setup by Measurement Control at step 10 and hence the UE does not take the measurement configuration from SIB12. There is no requirement in this core spec for the UE to consider the measurement identity of the stored intra-frequency measurement.
Summary of change: ⌘	1. Removed inclusion of Cell 2 info in neighbouring cells list in Measurement Control message in steps 10 and 17. 2. Measurement Report in steps 13a and 17b deleted. 3. Measurement Report in step 15 deleted.
Consequences if not approved: ⌘	Test case will fail a conformant UE

Clauses affected: ⌘	8.4.1.7				
Other specs affected: ⌘	Y	N		⌘	
		X	Other core specifications		
	X		Test specifications		34.123-3(TTCN)
		X	O&M Specifications		
Other comments: ⌘	This CR applies to R99 & later releases. Corresponding TTCN changes required				

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

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

8.4.1.7 Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)

8.4.1.7.1 Definition

8.4.1.7.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state:

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> if the cell in which the UE transited from CELL_FACH state is included in the active set for the CELL_DCH state, the UE shall:

3> resume the measurement reporting.

2> otherwise:

3> the UE should not resume the measurement reporting. If the UE does not resume the measurement reporting, the measurement shall be restarted when a MEASUREMENT CONTROL message is received with the corresponding measurement identity.

…

Upon cell reselection while in CELL_FACH/CELL_PCH/URA_PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;

…

1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

…

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

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

3> if the UE is in CELL_FACH state:

4> the UE behaviour is not specified.

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:

…

2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:

…

2> for measurement type "UE positioning measurement":

…

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

1> if the IE "Measurement command" has the value "modify":

2> for all IEs present in the MEASUREMENT CONTROL message:

3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":

4> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:

5> if the UE is in CELL_FACH state:

6> the UE behaviour is not specified.

4> if measurement type is set to "intra-frequency measurement", for any of the optional IEs "Intra-frequency measurement objects list", "Intra-frequency measurement quantity", "Intra-frequency reporting quantity", "Measurement Validity", "report criteria" and "parameters required for each event" (given "report criteria" is set to "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:

…

5> replace the corresponding information (the IEs listed above and all their children) stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;

5> leave all other stored information elements unchanged in the variable MEASUREMENT_IDENTITY.

1> if the IE "measurement command" has the value "release":

2> terminate the measurement associated with the identity given in the IE "measurement identity";

2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

"If the IE "Reporting Cell Status" is received, the UE shall set the IE "Measured Results" in MEASUREMENT REPORT as follows. The UE shall:

1> for intra-frequency measurement and inter-frequency measurement:
2> include the IE "Cell Measured Results" for cells (excluding cells of another RAT) that satisfy the condition (such as "Report cells within active set") specified in the IE "Reporting Cell Status", in descending order by the measurement quantity"

If the IE "Cells for measurement" has been included in a MEASUREMENT CONTROL message, only monitored set cells explicitly indicated for a given intra-frequency (resp. inter-frequency, interRAT) measurement by the IE "Cells for measurement" shall be considered for measurement. If the IE "Cells for measurement" has not been included in a MEASUREMENT CONTROL message, all of the intra-frequency (resp. inter-frequency, inter RAT) cells stored in the variable CELL_INFO_LIST shall be considered for measurement. The IE "Cells for measurement" is not applicable to active set cells or virtual active set cells e.g. when the triggering condition refers to active set cells, the UE shall consider all active set cells in the CELL_INFO_LIST for measurement irrespective if these cells are explicitly indicated by the IE "Cells for measurement".

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a, 8.4.1.7.1, 8.4.0 and 8.6.7.9

8.4.1.7.3 Test Purpose

- To confirm that UE retrieves stored measurement control information for intra-frequency measurement type with "measurement validity" assigned to "CELL_DCH", after it enters CELL_DCH state from CELL_FACH state.
- To confirm that the UE continues to monitor the neighbouring cells listed "intra-frequency cell info" IE in the System Information Block type 11 or 12 messages, if no intra-frequency measurements applicable to CELL_DCH are stored.
- To confirm that the UE transmits MEASUREMENT REPORT messages if reporting criteria stated in IE "intra-frequency measurement reporting criteria" in System Information Block type 11 or 12 messages are fulfilled.
- To confirm that a MEASUREMENT CONTROL message received in CELL_DCH state overrides the measurement and associated reporting contexts maintained in the UE by virtue of System Information Block type 11 or 12 messages. ~~only if the measurement identities defined within the MEASUREMENT CONTROL message and System Information Block type 11 or 12 are identical.~~
- To confirm that the UE delete all measurements of type intra-frequency upon cell reselection while in CELL_FACH.

8.4.1.7.4 Method of test

Initial Condition

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

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the text in this clause.

Table 8.4.1.7-1

Para-meter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
CPICH Ec	dBm /3.84 MHz	-60	-70	-70	-65	-60	-60	-70	-70	-60

The UE is brought to CELL_FACH state in cell 1. (step 1) SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

SS sends a RADIO BEARER RECONFIGURATION message to UE (step2), and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message (step3). The UE shall send a MEASUREMENT REPORT message containing IE "Measured results" to report cell 2's CPICH RSCP value and IE "event results" to report triggering of event type "1e" (step 4). After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info" (step 5). After receiving such a message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement identity = 11. SS verifies that measurement readings for cell 3 's CPICH RSCP are reported in IE "cell measured results" in this message (step 6). Cell 3 shall also trigger event 1e for the measurement that the UE had stored from

system information, so a MEASUREMENT REPORT message shall be received for measurement identity = 10 (step 6a) as well. The order of steps 6 and 6a is not important and could be reversed.

Next, SS sends a PHYSICAL CHANNEL RECONFIGURATION message (step 7). SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 8). SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received (step 9).

SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH state (step 9a). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 9b). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e. the UE shall have deleted the measurement configured through the MEASUREMENT CONTROL message of step 5, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE (step 9c).

SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure intra-frequency measurements with validity CELL_DCH (step 10). The UE shall send a MEASUREMENT REPORT message (with IE “Measurement identity” = 12) to the SS triggered by cell 2 (step 14).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH state (step 14a). The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS (step 14b). SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 14c).

SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH state (step 14d). The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS (step 14e). Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of step 10 (step 14f). ~~The UE shall also apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received (step 15). The order of steps 14f and 15 is not important and could be reversed.~~

.

Following the reception of the MEASUREMENT REPORT messages, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in "measurement identity" = 12 (step 16). Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH with "measurement identity" = 12 (step 16a). After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more (step 17). This message is identical to the one sent in step 10 (see specific message content). A MEASUREMENT REPORT message shall be received from the UE triggered by cell 2 (step 17a).

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH and configures common physical channel (step 18). The UE shall transit to CELL_FACH state and then respond with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 19). SS monitors the uplink DCCH once more to verify that no MEASUREMENT REPORT messages are detected (step 20). SS modifies the downlink transmission power of the respect cells according to the settings in columns "T1" in table 8.4.1.7-1. System information block type 11 and System Information Block type 12 for cell 2 shall be different from the default settings according to what is defined in the specific message content part of this section (step 21). The UE shall initiate a cell re-selection procedure. This is verified in the SS when a CELL UPDATE message is received on the uplink CCCH with the "cell update cause" IE set to "cell reselection" (step 22). SS transmits a CELL UPDATE CONFIRM message, which includes "New C-RNTI", on the DCCH (step 23). Then the UE shall reply with UTRAN MOBILITY INFORMATION CONFIRM message (step 23a). Next, SS sends a RADIO BEARER RECONFIGURATION message on the downlink DCCH, assigning dedicated physical channels in both uplink and downlink directions (step 24). The UE shall respond with a RADIO BEARER RECONFIGURATION COMPLETE message and then return to CELL_DCH state (step 25). SS modifies the downlink transmission power of all cells according to the settings in columns "T2" in table 8.4.1.7-1. UE shall then send MEASUREMENT REPORT messages reporting cell 3's CPICH RSCP according to the content in System Information Block type 12 messages broadcasted in cell 2 (step 21).SS transmits a MEASUREMENT CONTROL message (step 27) whereby the measurement identity is set to the same value as that in the SIB type 12 messages (step 21). UE shall send MEASUREMENT REPORT message (step 28) reporting cell 3's CPICH RSCP according to the MEASUREMENT CONTROL message (step 27).

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents" clause.
1a	←		SYSTEM INFORMATION CHANGE INDICATION	
2	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
3	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
4	→		MEASUREMENT REPORT	Reports cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”.
5	←		MEASUREMENT CONTROL	Cell 3 is added to the list of monitored set of the UE.
6	→		MEASUREMENT REPORT	Cell 3 shall trigger the event 1e configured in the measurement identity 11. NOTE: due to ambiguity in 25.331 – two interpretations can be given. These are shown in the specific message contents below.
6a	→		MEASUREMENT REPORT	Cell 3 shall also trigger the event 1e configured in the measurement identity 10. The order of steps 6 and 6a could be reversed.
7	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
9				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
9a	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
9b	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
9c	→		MEASUREMENT REPORT	UE shall report cell 2's CPICH RSCP measurement value, with “measurement identity” IE set to “10”.
9d	←		Void	
9e	→		Void	

Step	Direction		Message	Comment
	UE	SS		
10	←		MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement and reporting for cell 2(already available as neighbouring cell in UE). Measurement validity" IE is set to CELL_DCH state.
11				
12	←		Void	
13	→		Void	
13a	→		~~MEASUREMENT REPORT~~Void	~~UE shall report cell 2's CPICH RSCP measurement value, with "measurement identity" IE set to "10". Note: The order of steps 13a and 14 could be reversed.~~
14	→		MEASUREMENT REPORT	UE reports cell 2's measured results for CPICH RSCP, with "measurement identity" IE set to "12".
14a	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
14b	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
14c				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
14d	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
14e	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
14f	→		MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 10.The "measurement identity" IE shall be set to "12".
15	→		~~MEASUREMENT REPORT~~Void	~~UE shall report cell 2's CPICH RSCP measurement value, with "measurement identity" IE set to "10". The order of steps 14f and 15 could be reversed.~~
16	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activities related to "measurement identity" = 12.
16a				SS waits and verifies that UE stops transmitting MEASUREMENT REPORT messages with "measurement identity" = 12.
17	←		MEASUREMENT CONTROL	This message is the same as in step 10.

Step	Direction		Message	Comment
	UE	SS		
17a	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 2, with "measurement identity" IE set to "12".
17b	→		~~MEASUREMENT REPORT~~Void	~~UE shall report cell 2's CPICH RSCP measurement value, with "measurement identity" IE set to "10". Note: The order of steps 17a and 17b could be reversed.~~
18	←		PHYSICAL CHANNEL RECONFIGURATION	Allocates common physical channels.
19	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
20				SS checks that no MEASUREMENT REPORT messages are received.
21	←		System Information Block type 11 System Information Block type 12	SS sends SIB11 and SIB12 with specific values to Cell2. SS reconfigures the downlink transmission power settings for cells 1 to 3 according to column "T1" in table 8.4.1.7.
22	→		CELL UPDATE	UE shall re-selects to cell 2 and then perform a cell update procedure.
23	←		CELL UPDATE CONFIRM	UE shall stay in CELL_FACH state.
23a	→		UTRAN MOBILITY INFORMATION CONFIRM	
24	←		RADIO BEARER RECONFIGURATION	Dedicated physical channels are assigned to the UE in this message.
25	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.UE shall not send Measurement Report message with "measurement identity" = '12'.
25a				SS reconfigures the downlink transmission power settings of all cells according to column "T2" in table 8.4.1.7-1.
26	→		MEASUREMENT REPORT	UE begins to report cell 3's measured results for CPICH RSCP, with "measurement identity" IE set to "1".
27	←		MEASUREMENT CONTROL	

Step	Direction		Message	Comment
	UE	SS		
28	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 3, with "measurement identity" IE set to "1".

Specific Message Content

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	3

System Information Block type 11 for cell 1 (Step 1)

All messages content below shall use the same content as described in default message content specified in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS34.108
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	As per 34.108 clause 6.1.0b - Contents of System Information Block type 11 (FDD)
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- 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
- Parameter required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range constant	Not present
- Cells forbidden to affect reporting range	Not present
- W	Not present
- Hysteresis	0 dB
- Threshold used frequency	-80 dBm
- Reporting deactivation threshold	Not present
- Replacement activation threshold	Not present
- Time to trigger	0
- Amount of reporting	Not Present

- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 1a)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	3
- BCCH modification time	Not Present

RADIO BEARER RECONFIGURATION (Step 2, Step 9a, Step 14d and Step 24)

Use the same message type found in Annex A, with condition set to A4.

MEASUREMENT REPORT (Steps 4 and~~,~~ 9c,~~ 13a, 15 and 17b~~)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	

- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 5).

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold used frequency	-90 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency

- Maximum number of reported cells	3
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

NOTE: due to ambiguity in 25.331 – two interpretations can be given for MEASUREMENT REPORT

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

MEASUREMENT REPORT (Step 6)

NOTE: due to ambiguity in 25.331 – two interpretations can be given for MEASUREMENT REPORT

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

MEASUREMENT REPORT (Step 6a)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent

Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

PHYSICAL CHANNEL RECONFIGURATION (Steps 7, 14a and 18)

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

MEASUREMENT CONTROL (Steps 10 and 17)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
~~- CHOICE intra-frequency cell removal~~	~~Remove no intra-frequency cells~~
~~New intra-frequency info list~~	
~~Intra-frequency cell id~~	~~2~~
~~- Cell info~~	
~~Cell individual offset~~	~~0 dB~~
~~- Reference time difference to cell~~	~~Not Present~~
~~- Read SFN Indicator~~	~~FALSE~~
~~- CHOICE Mode~~	~~FDD~~
~~- Primary CPICH Info~~	
~~Primary Scrambling Code~~	~~Set to same code as used for cell 2~~
~~- Primary CPICH TX power~~	~~Not Present~~
~~- TX Diversity Indicator~~	~~FALSE~~
~~- Cell selection and Re-selection info~~	~~Not Present~~
~~- Cells for measurement~~	~~Not Present~~
- Intra-frequency measurement quantity	

- Filter Coefficient	Not Present
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	
- UE state	CELL_DCH
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 2
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold Used Frequency	-80 dBm

- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Steps 14, 14f and 17a)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 2
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 2

MEASUREMENT CONTROL (Step 16)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE Measurement type	Not Present
DPCH compressed mode status info	Not Present

System Information Block type 11 for cell 2 (Step 21)

All messages content below shall use the same content as described in default message content specified in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/Remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	
- Filter coefficient	Not Present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present

System Information Block type 12 for cell 2 (Step 21)

Information Element	Value/Remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	
- Filter coefficient	Not Present
- CHOICE mode	FDD
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Intra-frequency measurement reporting criteria	
- Intra-frequency event identity	1a
- Triggering condition 2	Monitored set cells

- Reporting Range Constant	5dB
- Cells forbidden to affect Reporting range	Not Present
- W	0
- Hysteresis	0.0
- Threshold Used Frequency	Not Present
- Reporting deactivation threshold	2
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	4
- Reporting interval	4000
- Reporting cell status	
- CHOICE reported cell	Report cell within active set and/or monitored set cells on used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information - Inter-RAT measurement system information - Traffic volume measurement system information - UE internal measurement system information	Not present Not present Not Present Not Present

CELL UPDATE (Step 22)

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI	 Check to see if set to '0000 0000 0001' Check to see if set to '0000 0000 0000 0000 0001'
START List	Check to see if it is present
AM_RLC error indication(RB2, RB3 or RB4)	Checked to see if it is set to FALSE
AM_RLC error indication(RB>4)	Checked to see if it is set to FALSE
Cell Update Cause	Check to see if set to 'Cell Re-selection'
RB timer indicator	
- T314 expired	Checked to see if it is set to 'FALSE'
- T315 expired	Checked to see if it is set to 'FALSE'
Measured results on RACH	Check to see if it is absent

CELL UPDATE CONFIRM (Step 23)

Use the default message content of the same message type in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 23a)

Only the message type is checked.

MEASUREMENT REPORT (Step 26)

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

Note: Cells 2 and 3 can be received in any order

MEASUREMENT CONTROL (Step 27)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	Not present
- Cells for measurement	
- Intra-frequency cell id	3
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	
- Intra-frequency event identity	1e
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to the same scrambling code for cell 3
- W	Not Present
- Hysteresis	0 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Threshold used frequency	-90 dBm
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 28)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	

- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if it's set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if this IE is set to '1e'
- Cell measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check to see if it's the same code for cell 3

8.4.1.7.5 Test Requirement

After step 3 the UE shall report cell 2's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 5 the UE shall transmit two MEASUREMENT REPORT messages which contain measured results of cell 3's CPICH RSCP value only, one for measurement identity 10 and one for measurement identity 11.

After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.

After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.

After steps 13 and 14e, the UE shall resume the measurement and reporting activities as specified in MEASUREMENT CONTROL message received in step 10. The UE shall transmit MEASUREMENT REPORT messages, containing measured results of cell 2's CPICH RSCP value.

~~After step 14e, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1.~~

After step 16 the UE shall stop measurement activities pertaining to event triggered reporting of cell 2's CPICH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH with “measurement identity” = 12.

After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.

After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".

After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

After step 25, UE shall not send MEASUREMENT REPORT message with “measurement identity” = ‘12’.

After step 25a the UE shall report cell 3's CPICH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 27, UE shall send MEASUREMENT REPORT message with “measurement identity” = ‘1’.

3GPP TSG-R5 Meeting #27
Bath, UK,25th – 29th April, 2005

Tdoc ⌘R5-050646

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1186** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to Package 4 RRC test case 8.4.1.41
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	15/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change: ⌘

As per **25.133 section 9.1.6**:
For Power Class 3 UE, the maximum Output Power (PUEMAX) is 24 dbm and that for Power Class 4 UE is 21 dbm and

PUEMAX - 10 < UE transmitted power < PUEMAX - 3

Thus accuracy is given as +3/-5 dbm for powerclass 3 and +/-4 dbm for Powerclass 4.

In Test case 8.4.1.41, the threshold set for Events 6a (18db) and 6b (15dbm) will belong to above category. When SS the sets the UE transmission power between 18dbm and 15 dbm at step 1 of the test case, there can be a maximum deviation of +4 db or -5 db depending on the powerclass of the UE.

Taking into consideration of above tolerances, it is difficult for SS to set the transmission power between 15 and 18 dbm, as the gap between them is not sufficient. This can cause unexpected behavior from the UE (triggering of either Event 6a or 6b at step 4).

To make the test case more reliable, it is suggested to add a sufficient gap between Transmitted Power thresholds for event 6a and 6b.

At step 1 of the test case, the SS increases the Power by 36 db to bring the UE transmission power between 15 dbm and 18dbm.
The TTCN assumes that UE Initial transmission power is in the range of -18 dbm to -21 dbm.

The proposed alternative method is to read the UE Initial power level before making the power level change so that the SS can adjust the power level with the maximum accuracy.

Summary of change: ⌘	Following changes are made to **34.123-1** section **8.4.1.41.4**: 1. Step 1 of the test case to set the UE transmission FDD power between 15 and 18 dbm is changed to void. 2. A new step 3a is added after step 3 of the test case, to wait for measurement report message from UE. The UE transmitted power in Measurement report message at step 3a would be used to read the initial transmission power of UE and shall be used to calculate the delta needed to be applied to bring the UE transmission power level between threshold set for event 6a and 6b. 3. A new step 3b is added after step 3a of the test case, to set the UE transmission FDD power between thresholds set for event 6a and 6b. 4. Step 3a and Step 8 of the expected sequence is modified to use the Transmitted Power threshold for Measurement event 6b to 6dbm in place of 15 dbm. 5. The specific message content for the measurement control message at step 2 of the expected sequence is modified to use Transmitted Power threshold for Measurement event 6b to 6 dBm in place of 15 dbm.
Consequences if not approved: ⌘	Test case may fail a conformant UE.

Clauses affected: ⌘	8.4.1.41.4			
Other specs affected: ⌘	**Y**	**N**		
		X	Other core specifications	⌘
	X		Test specifications	
		X	O&M Specifications	
Other comments: ⌘	This CR will require change in TTCN.			

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 >>

8.4.1.41 Measurement Control and Report: Additional Measurements list

8.4.1.41.1 Definition

8.4.1.41.2 Conformance requirement

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

…..

1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and

2> if more than one additional measured results are to be included:

3> include only the available additional measured results, and sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.

……

If the IE "Additional Measurement List" is received in a MEASUREMENT CONTROL message, the UE shall:

1> if the received measurement configuration in this MEASUREMENT CONTROL message, or any measurement referenced in the "Additional Measurement List" do not all have the same validity (for this consistency check the UE should assume "CELL_DCH" as the measurement validity for measurements of type "inter-RAT", "UE internal", and "quality"):

2> set the variable CONFIGURATION_INCOMPLETE to TRUE.

1> if any of the measurements referenced in the "Additional Measurement List" is an intra-frequency, inter-frequence or inter-RAT measurement, and this measurement is configured with event based reporting:

2> the UE behaviour is not specified.

1> if the result of this MEASUREMENT CONTROL message is such that more than one additional measurement of the same type will be referenced in the IE "Additional Measurement List" in the MEASUREMENT_IDENTITY variable:

2> the UE behaviour is not specified.

…

If the measurement configured with the MEASUREMENT CONTROL message triggers a measurement report, the UE shall also include the reporting quantities for the measurements referenced by the additional measurement identities. The contents of the IE "Additional Measured results" is completely determined by the measurement configuration of the referenced additional measurement.

…..

Reference

3GPP TS 25.331, clause 8.4.2.2, 8.6.7.22

8.4.1.41.3 Test Purpose

1. To confirm that the UE reports measured results for a referenced additional measurement.

2. To confirm that the UE transmits MEASUREMENT REPORT messages for a measurement, also if this measurement is referenced as an additional measurement by another measurement.

8.4.1.41.4 Method of test

Initial Condition

System Simulator: 1 cell, cell 1.

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

Test Procedure

The UE is in CELL_DCH state in cell 1, after successfully executing procedures P11 or P13 as specified in clause 7.4 of TS 34.108. Next, SS transmits MEASUREMENT CONTROL message to request the UE to perform UE internal measurements and reporting for events 6A and 6B, followed by a MEASUREMENT CONTROL message to request the UE to perform a periodic intra-frequency measurement. The intra-frequency measurement configuration references as an additional measurement the measurement defined by the first MEASUREMENT CONTROL message.

The UE will start to periodically send MEASUREMENT REPORT messages for the intra-frequency measurement. The reports shall include the UE Tx power as an additional measurement result.

After two MEASUREMENT REPORT messages, the SS increases the UE Tx power above the threshold set to event 6A. After 'time to trigger' the UE sends MEASUREMENT REPORT, triggered by event 6A, to the SS.

Next the SS decreases the UE Tx power below the threshold set for event 6B. After 'time to trigger' UE sends MEASUREMENT REPORT, triggered by event 6B, to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1			void	~~UE is initially in CELL_DCH state in cell 1. SS sets the UE transmission power between 15 and 18 dBm.~~
2	←		MEASUREMENT CONTROL	SS requests for measurement and reporting for events 6A and 6B.
3	←		MEASUREMENT CONTROL	SS requests a periodic intra-frequency measurement.
3a	→		MEASUREMENT REPORT	UE shall send a periodical measurement report. Check the current transmission power of UE from the IE transmitted power FDD of measurement report.
3b				SS sets the UE transmission power between 6dbm and 18 dBm.
4	→		MEASUREMENT REPORT	
5	→		MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 32 seconds.

Step	Direction		Message	Comment
	UE	SS		
6				SS sets the UE transmission power above 18 dBm.
7	→		MEASUREMENT REPORT	UE shall send 6A event measurement report.
8				SS sets the UE transmission power below ~~15~~6 dBm.
9	→		MEASUREMENT REPORT	UE shall send 6B event measurement report.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger Reporting
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement	
- UE internal measurement quantity	Present
-CHOICE *mode*	FDD
-UE internal measurement quantity	UE Transmitted Power
-Filter coefficient	0
- UE internal reporting quantity	Present
- UE Transmitted Power	TRUE
- CHOICE *mode*	FDD
- UE Rx-Tx time difference	FALSE
- CHOICE *report criteria*	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
-UE internal event identity	6A
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	18 dBm
-UE internal event identity	6B
-Time-to-trigger	100 milliseconds
-UE Transmitted Power Tx power threshold	~~15~~6 dBm
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	
- Additional measurement identity	5
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active set
- Maximum number of reported cells	2
- Measurement validity	CELL_DCH
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	32 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 3a)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	
- 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	Check to see if this IE is absent

MEASUREMENT REPORT (Step 4 and step 5)

Information Element	Value/remark
RRC transaction identifier	Check to see if set to 1
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- SFN-SFN observed time difference	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present and value is reasonable
- UE RX TX report entry list	Check to see if it is absent
Event Results	Check to see if this IE is absent

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6A"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "UE Internal measured results"
- UE internal measured results	
-CHOICE *mode*	Check to see if set to "FDD"
UE Transmitted Power	Check to see if present and value is reasonable
Measured Results on RACH	Check to see if this IE is absent
Event results	
-CHOICE *event result*	Check to see if set to "UE internal measurement event results"
-UE internal event identity	Check to see if set to "6B"
-CHOICE *mode*	Check to see if set to "FDD"
-Primary CPICH info	Check to see if this IE is absent

8.4.1.41.5 Test Requirement

After step 3, the UE shall periodically transmit a MEASUREMENT REPORT message for measurement identity 5. In addition to the CPICH RSCP, these reports shall also include the UL Tx power with a reasonable value.

After step 6, the UE shall transmit a MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6A.

After step 8, the UE shall transmit a MEASUREMENT REPORT message, containing measured results for UE transmitted power. The 'Event results' IE contains event identity 6B.

<< END OF MODIFIED SECTION >>

3GPP TSG-R5 Meeting #27
Bath, UK, 25th – 29th April 2005

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CHANGE REQUEST

⌘ **34.123-1** **CR** 1187 ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

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

Title:	⌘	CR to 34.123-1: Correction to GCF WI-012 RRC test case 8.4.1.6.
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	18/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	1. In order to do inter-frequency measurements in FACH state, the IE FACH Measurement Occasion needs to be enabled, for UE's not capable of measuring on non-used frequencies, while listening to S-CCPCH
Summary of change:	⌘	1. Included IE FACH measurement occasion info in System information Type 12 message
Consequences if not approved:	⌘	A conformant UE may fail this testcase

Clauses affected:	⌘	8.4.1.6.4			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	No impact to TTCN			

How to create CRs using this form:
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Below is a brief summary:

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

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downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)

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

Specific Message contents

For system information block 12 for Cell1 (gives IEs which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATIONmessage to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
			Void	
2			Void	If compresed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8	←		MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9	→		MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12	←		Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15	→		CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16	←		CELL UPDATE CONFIRM	See message content.
17	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL_DCH"

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	4
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 12 (Step 12)

Information Element	Value/remark
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	
- Use of HCS	Not used
- Cell_selection_and_reselection_-quality_measure	CPICH_Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to TS 25.101
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH Tx power	Not Present
- TX diversity indicator	FALSE
- Cell selection and re-selection info	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	2

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI	Check to see if same to value assigned in P3 or P5
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

3GPP TSG-T WG1 Meeting #26
Bath, England, 25-29 April, 2005

Tdoc ⌘R5-050792

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1188** ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to GCF WI-10 RRC Test Cases 8.4.1.29
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	10/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The specific message content System Information Block type 12 (Step 1o) (FDD) mis-aligned with the current TTCN implementation.
Summary of change:	⌘	• The specific message content System Information Block type 12 (Step 1o) (FDD) has been corrected to be consistent with the currentl TTCN implementation.
Consequences if not approved:	⌘	The prose and TTCN will be mis-aligned.

Clauses affected:	⌘	8.4.1.29.4

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

Other comments:	⌘	Revision of R5-050590 No impact to TTCN

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.4.1.29 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 TCTV>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 at TVM set up UE sends 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 triggerreds after TVM set up UE sends 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.

3. To confirm that the UE sends MEASUREMENT REPORT message, with 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: Idle state (State 3 or State 7) as specified in clause 7.4 of TS 34.108.

System Information Block type 11 or 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(for FDD) , clause 6.10.3.4.4.2(for 3.84 Mcps TDD), or clause 6.11.5.4.4.2(for 1.28 Mcps TDD): 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 FDD) , 6.10.2.4.4.1: Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH (for 3.84 Mcps TDD), or clause 6.11.5.4.5.2 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRBs for DCCH for UL(for 1.28Mcps TDD) for DL. 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 (for FDD) or P-CCPCH RSCP (for TDD) is reported for intra-frequency reporting when transmitting RACH messages. After this modification, SS configures transport channel traffic volume so as to exceed threshold and then sends to UE MEASUREMENT CONTROL message, which includes traffic volume measurement control parameters e.g. uplink transport channel type and reporting threshold. Transport channel traffic volume exceeds threshold and after 'time to trigger' UE sends MEASUREMENT REPORT to SS. SS does not respond and after 'pending time after trigger' UE sends the same MEASUREMENT REPORT again. 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 MEASUREMENT REPORT message to SS. After 'pending time after trigger' UE sends again same 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	←		PAGING TYPE1	The SS transmits the message, which includes a allocated identity (P-TMSI).
1a	→		RRC CONNECTION REQUEST	
1b	←		RRC CONNECTION SETUP	
1c	→		RRC CONNECTION SETUP COMPLETE	
1d	→		SERVICE REQUEST	
1e	←		AUTHENTICATION AND CIPHERING REQUEST	
1f	→		AUTHENTICATION AND CIPHERING RESPONSE	
1g	←		SECURITY MODE COMMAND	
1h	→		SECURITY MODE COMPLETE	
1i	←		ACTIVATE RB TEST MODE	TC
1j	→		ACTIVATE RB TEST MODE COMPLETE	
1k	←		RADIO BEARER SETUP	RRC RAB SETUP See specific message contents for this message
1l	→		RADIO BEARER SETUP COMPLETE	
1m	←		CLOSED UE TEST LOOP	TC UE Test Loop Mode1
1n	→		CLOSED UE TEST LOOP COMPLETE	TC
1o	←		MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	System Information Block type 12 is different from the default settings (see specific message contents)
1p	←		SYSTEM INFORMATION CHANGE INDICATION	To notify the modification of SYSTEM INFORMATION BLOCK TYPE 12, this message Is transmitted.
1q				SS configures transport channel traffic volume so as to exceed threshold.
1q				SS configures transport channel traffic volume so as to exceed threshold.
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 1100 ms.
4a				SS configures UE's transport channel load decreases to zero
4b				SS receive no MEASUREMENT REPORT message.
4c				SS configures transport channel traffic volume so as to exceed threshold

4d	→	MEASUREMENT REPORT	UE reports that Traffic Volume measurement event 4A is triggered.
4e	→	MEASUREMENT REPORT	UE repeats message after 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

PAGING TYPE 1 (Step 1)

Information Element	Value/remark
Message Type	
Paging record list	Only 1 entry
Paging record	
CHOICE Used paging identity	CN identity
- Paging cause	Terminating Call with one of the supported services
- CN domain identity	PS Domain
- CHOICE UE Identity	P-TMSI
- p-TMSI	Allocated identity during the attach procedure.
BCCH modification info	Not Present

RRC CONNECTION REQUEST (Step 1a)

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

System Information Block type 12 (Step 1o) (FDD)

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	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
~~- Cell selection and Re-selection info~~	~~Not present~~
- Cell selection and re-selection info for SIB12	
- $Qoffset1_{s,n}$	0dB
- $Qoffset2_{s,n}$	Not present
- Maximum allowed UL Tx Power	Reference to table 6.1.1
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
~~- Cell selection and Re-selection info~~	~~Not present~~
- Cell selection and re-selection info for SIB12	
- $Qoffset1_{s,n}$	0dB
- $Qoffset2_{s,n}$	Not present
- Maximum allowed UL Tx Power	Reference to table 6.1.1
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
~~- Cell selection and Re-selection info~~	~~Not present~~
- Cell selection and re-selection info for SIB12	
- $Qoffset1_{s,n}$	0dB
- $Qoffset2_{s,n}$	Not present
- Maximum allowed UL Tx Power	Reference to table 6.1.1
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Intra-frequency cell id	4

- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not present
- TX Diversity Indicator	FALSE
~~- Cell selection and Re-selection info~~	~~Not present~~
- Cell selection and re-selection info for SIB12	
- $Qoffset1_{s,n}$	0dB
- $Qoffset2_{s,n}$	Not present
- Maximum allowed UL Tx Power	Reference to table 6.1.1
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	Reference to table 6.1.1
- Qrxlevmin	Reference to table 6.1.1
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	15 dB
- Cells forbidden to affect reporting range	Not Present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 1o) (1.28 Mcps TDD)

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	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE TDD option	1.28 Mcps TDD
- Cell parameters ID	Set to same Cell parameters ID as used for cell 1
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Cell selection and Re-selection info	Not present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE mode	TDD
- Measurement quantity	P-CCPCH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- CHOICE mode	TDD
- Reporting quantity	P-CCPCH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	60 ms

- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within virtual 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

System Information Block type 12 (Step 1o) (3.84 Mcps TDD)

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	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE TDD option	3.84 Mcps TDD
- Cell parameters ID	Set to same Cell parameters ID as used for cell 1
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Cell selection and Re-selection info	Not present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE mode	TDD
- Measurement quantity	P-CCPCH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- CHOICE mode	TDD
- Reporting quantity	P-CCPCH RSCP
- Maximum number of reported cells on RACH	Current cell
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1g
- Triggering condition 1	Not Present
- Triggering condition 2	Not Present
- Reporting Range Constant	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	60 ms

- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within virtual 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

MASTER INFORMATION BLOCK (Step 1o)

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 1p)

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
- 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 except CELL_DCH
CHOICE report criteria	Traffic volume measurement reporting criteria
- Parameters sent for each transport channel	
- Parameters required for each event	
- 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, step 4, step 4d and step 4e) (FDD)

The order in which the RBs are reported is not checked.

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 above the threshold
- 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	
- CPICH RSCP	Checked to see if this IE is present and within the acceptable range
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 that this IE is absent
- Traffic volume event identity	Check to see if set to "4a"

MEASUREMENT REPORT (Step 3, step 4, step 4d and step 4e) (TDD)

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 above the threshold
- 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	
- CHOICE mode	Check to see if set to'TDD'
- Primary CCPCH RSCP	Checked to see if this IE is present and the value is within an acceptable range
- Measurement results for monitored cells	
- CHOICE mode	Check to see if set to'TDD'
- Primary CCPCH RSCP	Checked to see if this IE is absent
Additional Measured results	Not checked
Event Results	
CHOICE event result	Check to see if set to'Traffic volume measurement 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 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 (for FDD) or P-CCPCH RSCP (for TDD) 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.

3GPP TSG-T WG1 Meeting #26
Bath, England, 25-29 April, 2005

Tdoc ⌘R5-050794

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1189** ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to GCF WI-10 RRC Test Cases 8.4.1.25
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	10/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	Change 1, Alignment of prose and TTCN. Change 2, The Default DPCH Offset value should be omitted because the PhysChReconf message is only use to download CM parameters. The DPCH Offset value should only be present in case of DPCH set up or timing re-initialized hard handover.
Summary of change:	⌘	8.4.1.25 • Change 1, setp 1 MEASUREMENT CONTROL, Frequency quality estimate quantity changed fromCPICH Ec/No to CPICH RSCP • Change 2, step 2, PHYSICAL CHANNEL RECONFIGURATION, Default DPCH offset value changed from 0 to Not present
Consequences if not approved:	⌘	The prose and TTCN will be mis-aligned.

Clauses affected:	⌘	8.4.1.25.4

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

Other comments:	⌘	(Revision of R5-050592) Change 1, no impact to TTCN. Change 2, will require TTCN change.

How to create CRs using this form:

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

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

8.4.1.25 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:

$\boldsymbol{Q_{Non\ used}}$ is the quality estimate of a non-used frequency that becomes better than an absolute threshold.

$\boldsymbol{T_{Non\ used\ 2b}}$ is the absolute threshold that applies for this non-used frequency in that measurement.

$\boldsymbol{H_{2b}}$ 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 info (for FDD) or primary CCPCH info (for TDD) 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 info (for FDD) or primary CCPCH info (for TDD)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 (FDD)	dBm /3.84 MHz	-55	-55	-85	-85	-55	-55
P-CCPCH RSCP(TDD)	dBm	-60	-60	-80	-80	-60	-60
P-CCPCH TS (3.84 Mcps TDD)		TS 0			TS 4		

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 (for FDD only).

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. (for FDD only)
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(for FDD only)
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. Layer 3 Filtering causes an additional delay.
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. Layer 3 Filtering causes an additional delay. For Cell 1 the CPICH Ec value of -80 dBm(for FDD)or the P-CCPCH RSCP value of -75 dBm (for TDD) 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 (for FDD) or P-CCPCH RSCP(for TDD) is +/- 3 dBm, SS set Hysteresis value is +/- 2dB)
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)(FDD)

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~~RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- 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	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non used frequency parameter list	
- Non used frequency threshold	-70 dBm
- Non used frequency W	0
- Inter-frequency event identity	2B
- Used frequency threshold	-70 dBm
- Used frequency W	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec

- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Non used frequency parameter list	
- Non used frequency threshold	-70 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

MEASUREMENT CONTROL (Step 1)(1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- 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
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD Indicator	FALSE
- Cell parameters ID	Cell parameters ID of Cell 4
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70dBm
- W non-used frequency	0
- Inter-frequency event identity	2B
- Threshold used frequency	-70 dBm
- W used frequency	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70 dBm
- W non-used frequency	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

MEASUREMENT CONTROL (Step 1)(3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- 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
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	SyncCase 1
- Timeslot	4
- Cell parameters ID	Cell parameters ID of Cell 4
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70dBm
- W non-used frequency	0
- Inter-frequency event identity	2B
- Threshold used frequency	-70 dBm
- W used frequency	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70 dBm
- W non-used frequency	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	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (Single)
- CHOICE Mode	FDD
- Power offset PPilot-DPDCH	0
- DL rate matching restriction information	Not present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	TRUE
- 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	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL mode	UL and DL or DL only or UL 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~~Not present

MEASUREMENT REPORT (Step 4) (FDD)

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 measurement event results,
- Inter-frequency event identity	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 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot List/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2E”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “1.28 Mcps TDD”
- TSTD Indicator	Check to see if set to “FALSE”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD Indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 4) (3.48 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot list/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2E”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “3.48 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 8) (FDD)

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
- 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 absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent

Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- Inter-frequency event identity	2B
- 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) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot List/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2B”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “1.28 Mcps TDD”
- TSTD Indicator	Check to see if set to “FALSE”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD Indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 8) (3.84Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot list/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2B”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “3.84 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

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(for FDD) or Cell parameters ID (TDD) 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 (for FDD) or Cell parameters ID (TDD) of Cell 4.

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CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1190** ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to GCF WI-10 Inter-RAT Test Cases 8.4.1.31, 8.4.1.33, 8.4.1.34, 8.4.1.35, 8.4.1.36, 8.4.1.40 (Revision of R5-050598)
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	10/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	To expand the coverage of these cases so that they can be tested for other GSM bands.
Summary of change:	⌘	Removed specific band indicator and BCCH ARFCN values.
Consequences if not approved:	⌘	The test case will fail with UEs operating in a band other than GSM900.

Clauses affected:	⌘	8.4.1.31.4, 8.4.1.33.4, 8.4.1.34.4, 8.4.1.35.4, 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:	⌘	This will require TTCN change.

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

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

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

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

8.4.1.31 Measurement Control and Report: Inter-RAT measurement in CELL_DCH state.

8.4.1.31.1 Definition

8.4.1.31.2 Conformance requirement

A UE supporting both FDD and GSM shall be able to perform the GSM RSSI measurement and the GSM Initial BSIC identification measurement.

If, according to its capabilities, the UE requires compressed mode to perform GSM RSSI measurements, the UE shall perform GSM RSSI measurements in the gaps of a compressed mode pattern sequence specified for GSM RSSI measurement purpose.

If, according to its capabilities, the UE requires compressed mode to perform GSM Initial BSIC identification measurements, the UE shall perform GSM Initial BSIC identification in a compressed mode pattern sequence specified for Initial BSIC identification measurement purpose.

Reference

3GPP TS 25.133, clause 8.1.2.5; 3GPP TS 25.331, clauses 8.6.7.6, 14.3.2.

8.4.1.31.3 Test Purpose

Purpose of this test is to verify that UE is capable to perform GSM RSSI and GSM Initial BSIC identification measurements.

8.4.1.31.4 Method of test

Initial Condition

System Simulator: 1 UTRAN FDD cell and 2 GSM cells.

Parameter	Unit	Cell 1 (GSM)	Cell 2 (GSM)
Test Channel	#	1	2
RF Signal Level	dBm	-70	-85
BCCH ARFCN	#	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
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
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters. Two compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message.

The first RRC: MEASUREMENT CONTROL message is used to provide measurement control parameters (GSM RSSI) to the UE and to start compressed mode for the measurement if required according to the UE capabilities. The UE replies according to request by sending RRC: MEASUREMENT REPORT messages periodically to SS. Reporting period is 4000 ms.

After two RRC: MEASUREMENT REPORT messages, the SS sends a second RRC: MEASUREMENT CONTROL message to start GSM Initial BSIC identification measurement. The UE replies similarly as in GSM RSSI measurement case but now with a period of 12000ms.

The SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS provides GSM RSSI measurement control parameters to UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode for GSM RSSI measurement is started.
5	→		MEASUREMENT REPORT	UE reports measurement results of GSM RSSI measurement to SS.
6	→		MEASUREMENT REPORT	Next periodical measurement report.
7	←		MEASUREMENT CONTROL	SS provides GSM Initial BSIC identification measurement control parameters to UE. If the UE requires compressed mode (refer ICS/IXIT),compressed mode for GSM Intial BSIC identification measurement is started.
8	→		MEASUREMENT REPORT	UE reports measurement results of GSM Initial BSIC identification measurement to SS.
9	→		MEASUREMENT REPORT	Next periodical measurement report.
10	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

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

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement Identity	15

Measurement Command	Setup
Measurement Reporting Mode	
- 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
- New 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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	GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)~~DCS 1800 band used~~
- BCCH ARFCN	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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	4000
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Deactivate
- TGCFN	Not present

MEASUREMENT REPORT, if the UE requires compressed mode (refer ICS/IXIT) (Step 5 and step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	~~Check that is set to "1"~~ Check that is set to the correct value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	~~Check that is set to "7"~~ Check that is set to the correct value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT REPORT, if the UE doesn't requires compressed mode (refer ICS/IXIT) (Step 5 and step 6)

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

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	12000
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT, if the UE requires compressed mode (refer ICS/IXIT) (Step 8)

EITHER

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	Not checked
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- 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

OR

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	Not checked
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

MEASUREMENT REPORT, if the UE does not require compressed mode (refer ICS/IXIT) (Step 8)

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

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-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Not checked
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 identitifed in IE "TGPSI"

3. The UE shall perform GSM RSSI measurements in the gaps of compressed mode pattern sequence specified for GSM RSSI measurement purpose. The UE shall perform Initial BSIC identification in compressed mode pattern sequence specified for Initial BSIC identification measurement purpose. The UE shall be able to measure the "Observed time difference to GSM cell" during a compressed mode pattern sequence configured for this purpose. The UE shall perform BSIC re-confirmation in compressed mode pattern sequence specified for BSIC re-confirmation measurement purpose.
4. If the IE "Inter-RAT measurement quantity" is received in a MEASUREMENT CONTROL message and CHOICE system is GSM, the UE shall:
   - if IE "BSIC verification required" is set to "required", for cells that match any of the BCCH ARFCN and BSIC combinations in the list of inter-RAT cells that the UE has received in IE "Inter-RAT cell info list", and that has a "verified" BSIC:
     - report measurement quantities according to IE "inter-RAT reporting quantity" taking into account the restrictions defined in TS 25.331 clause 8.6.7.6;
     - trigger inter-RAT events according to IE "inter-RAT measurement reporting criteria"; and
   - perform event evaluation for event-triggered reporting after BSIC has been verified for a GSM cell
   - indicate non-verified BSIC for a GSM cell in the "Inter-RAT measured results list" IE
5. The UE shall include measured results in MEASUREMENT REPORT as specified in the IE "Inter-RAT reporting quantity".
6. If IE "Observed time difference to GSM cell 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 MEASUREMEN CONTROL message.
2. To confirm that the UE sends MEASUREMENT REPORT message if event 3a is configured, if the quality of the currently used UTRAN frequency is below a given threshold and the estimated quality of the other system is above a certain threshold.
3. To confirm that the hysteresis and time to trigger behaviours for event 3a are correctly implemented.
4. To confirm that the UE verifies the BSIC of the cell triggering the event if so required by UTRAN and if the proper compressed mode patterns have been configured in the UE by UTRAN.
5. To confirm that the content of the MEASUREMENT REPORT sent by the UE is according to what was required by UTRAN.

NOTE: Test purpose 1 verifies conformance requirement 1 and 2.

NOTE: Test purpose 2 and 3 verifies conformance requirement 1.

NOTE: Test purpose 4 verifies conformance requirement 2, 3 and 4.

NOTE: Test purpose 5 verifies conformance requirement 4, 5, 6 and 7.

8.4.1.33.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell and 3 GSM cells. The initial configurations of the 3 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

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

Related ICS/IXIT statements

- Compressed mode required yes/no
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

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~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)					~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)					~~39~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)				
CELL identity	#	0					1					2				
BSIC	#	BSIC 1					BSIC 2					BSIC 3				
RF Signal Level	dBm	-85	-85	-70	-76	-70	-85	-85	-85	-84	-84	-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	dBm /3.84 Mhz	-60	-80	-80	-80	-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 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, but remains above the releasing condition for event 3a.

At intant T4, the RF signal strength for GSM cell 1 increases above the threshold for the other system for event 3a+hysteresis. 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 2s, 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	
- 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
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2

- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	66
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate

- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 1
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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	39
- 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	CPICH RSCP
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	3a
- Threshold own system	-66
- W	0
- Threshold other system	-80
- Hysteresis	5

- Time to Trigger	640 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 cells
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (250 – TTI/10msec))mod 256
- 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 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it 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 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) 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:

$\boldsymbol{M_{Other\ RAT}}$ is the measurement quantity for the cell of the other system.

$\boldsymbol{CIO_{Other\ RAT}}$ is the cell individual offset for the cell of the other system.

$\boldsymbol{T_{Other\ RAT}}$ is the absolute threshold that applies for the other system in that measurement.

$\boldsymbol{H_{3b}}$ 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:

$\boldsymbol{M_{Other\ RAT}}$ is the measurement quantity for the cell of the other system. $\boldsymbol{M_{Other\ RAT}}$ is expressed in dBm.

$\boldsymbol{CIO_{Other\ RAT}}$ is the cell individual offset for the cell of the other system.

$\boldsymbol{T_{Other\ RAT}}$ is the absolute threshold that applies for the other system in that measurement.

$\boldsymbol{H_{3b}}$ 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 3 GSM 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
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

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~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)		~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)		~~39~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)	
CELL identity	#	0		1		2	
BSIC	#	BSIC 1		BSIC 2		BSIC 3	
RF Signal Level	dBm	-70	-90	-70	-70	-90	-90

The table above illustrate the downlink power to be applied for the 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 1020m s, 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 5.8 s, 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	
- 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
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4

- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	66
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2

- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3b
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	2
- Time to Trigger	60 ms
- Reporting cell status	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	(Current CFN + (250 – TTI/10msec))mod 256
- 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 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 it is set to 0.
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~39~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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>)	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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 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 0 or 2.
- 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 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) after instant T1.

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:

$\boldsymbol{M_{Other\ RAT}}$ is the measurement quantity for the cell of the other system. $\boldsymbol{M_{Other\ RAT}}$ is expressed in dBm.

$\boldsymbol{CIO_{Other\ RAT}}$ is the cell individual offset for the cell of the other system.

$\boldsymbol{T_{Other\ RAT}}$ is the absolute threshold that applies for the other system in that measurement.

$\boldsymbol{H_{3c}}$ 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 2 GSM 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
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

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~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)				~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)			
CELL identity	#	0				1			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	-75	-80	-75	-75	-75	-75	-75

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. 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 1 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 0.9 s, 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	
- 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
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	66
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation
- TGPRC	Infinity

- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- inter-RAT cell id	1

CHOICE Radio Access Technology	GSM
- Cell individual offset	-3
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	~~DCS 1800 band used~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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	-74
- 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	(Current CFN + (250 – TTI/10msec))mod 256
- 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.35.4 Test requirement

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

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

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

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 2 GSM 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
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

Test procedure

Table 8.4.1.36.4-1

Parameter	Unit	Cell 1 (GSM)		Cell 2 (GSM)	
		T0	T1	T0	T1
Test Channel	#	GSM Ch.1		GSM Ch.2	
BCCH ARFCN	#	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)		~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)	
CELL identity	#	0		1	
BSIC	#	BSIC 1		BSIC 2	
RF Signal Level	dBm	-70	-90	-90	-70

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"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/are the best GSM cell/Cells just after the initiation of the measurement SS should wait long enough for the reception of this message as UE that needs compressed mode takes time to activate compressed mode patterns as well as complete BSIC verification before sending the report
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 1 s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3d.
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	
- 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
- TGPL1	12
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability) depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TGPSI	2
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC identification
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	66
- T Reconfirm abort	Not Present
- TGPSI	3
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	GSM BSIC re-confirmation

- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not present
- TGD	undefined
- TGPL1	8
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event	
(1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3d
- Threshold own system	Not present
- W	Not present
- Threshold other system	Not present
- Hysteresis	5
- Time to Trigger	200 ms
- Reporting cell status	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	(Current CFN + (250 – TTI/10msec))mod 256
- 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 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	Optional to have both Cells since a UE requiring compressed mode for inter-RAT measurements may take longer time for BSIC verification and hence need not include both the Cells
- GSM carrier RSSI	Check that measurement result is reasonable. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 0
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable (Optional as this can be included only if BSIC verification is completed)
CHOICE BSIC	Verified BSIC (Optional as this can be included only if BSIC verification is completed)
- inter-RAT cell id	Check that it is set to 1(Optional)
- Observed time difference to GSM cell	Check that the IE is not present (Optional)
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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 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 it is set to 0.
- 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.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- 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.

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	unde fined	16	16	Set-up to monitor 12 GSM neighbours every second measurement period, i.e. every second 480ms period.
GSM Initial BSIC identification	Note 1	Inf.	8	14	Not sent	unde fined	24	24	Equal to Pattern 6 in TS 25.133 table 8.7.
GSM BSIC re-confirmation	Note 1	Inf.	8	14	Not sent	unde fined	24	24	Equal to Pattern 12 in TS 25.133 table 8.8.

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

Initial Condition

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

UE: "CS-DCCH + DTCH_DCH", state 6-9 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480, GSM-PCS.

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~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)				~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)			
CELL identity	#	0				1			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	-75	-80	-75	-75	-75	-75	-75

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

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

The UE is initially in "CS-DCCH + DTCH_DCH", state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements on 12 GSM cells. Event 3c is set up in this message, and compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.40.4-2, since the cell individual offset for GSM cell 1 is 10 dB, event 3c shall be triggered in the UE. A MEASUREMENT REPORT shall be sent to the SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is -3 dB.

At instant T2, the RF signal strength for GSM cell 1 drops as described in table 8.4.1.40.4-2, and at instant T3, it increases again to its previous level. No MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for the leaving condition to be met. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3c in the UE, compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.40.4-2.
7	→		MEASUREMENT REPORT	After about 1.6 s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3c.
8				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.40.4-2.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.40.4-2.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

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

- TGSN	8
- TGL1	14
- TGL2	Not present
- TGD	undefined
- TGPL1	24
- TGPL2	Not present
- RPP	Mode 0
- ITP	Mode 0
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2
- Downlink frame type	A
- DeltaSIR1	1.0
- DeltaSIRAfter1	0.5
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	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=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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~1~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	-3
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	~~DCS 1800 band used~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~7~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~5~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~17~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~9~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~11~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~13~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~15~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~17~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~19~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~21~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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~~ GSM/DCS-1800 or GSM/PCS-1900 (dependent on band used)
- BCCH ARFCN	~~17~~ Value according to the GSM band under test (see 3GPP 34.123-1 table 6.5 for details on the ARFCN)
- 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	-74
- 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	
- TGPS reconfiguration CFN	(Current CFN + (256 - 11 – TTI/10msec))mod 256
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=33f35s
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – 11 – TTI/10msec)) mod 256
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – 7 – TTI/10msec)) mod 256
- TGPSI	3
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present

Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.40.5 Test Requirement

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

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

3GPP TSG-R5 Meeting #27
Bath, UK, 25th– 29th April, 2005

Tdoc ⌘R5-050929

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1191** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Removal of TGPL2 from section 8.4
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	26/04/05
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The compressed mode pattern parameter TGPL2 was removed from Rel-5 and onwards by CRs to 25.101, 25.133, 25.215 and 25.331 approved at RAN plenary 27 (see RP-050038). 34.123-1 need to be updated accordingly.
Summary of change:	⌘	1. Version column added for messages including the IE TGPL2 and applicability "R99 and REL-4 only" added. 2. Test case 8.4.1.35: Correction of clause number for test requirement, changed to 8.4.1.35.5.
Consequences if not approved:	⌘	34.123-1 not aligned to core specifications

Clauses affected:	⌘	8.4.1.2.4, 8.4.1.6.4, 8.4.1.8.4, 8.4.1.24.4, 8.4.1.25.4, 8.4.1.31.4, 8.4.1.33.4, 8.4.1.34.4, 8.4.1.35.4, 8.4.1.36.4, 8.4.1.40.4, 8.4.1.42.4 and 8.4.1.43.5
Other specs affected:	⌘	Y N [ ] [X] Other core specifications [X] [ ] Test specifications [ ] [X] O&M Specifications
	⌘	34.108, 34.121
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 first modified section>

8.4.1.2 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state (FDD)

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

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

1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11).

Upon reception of a MEASUREMENT CONTROL message the UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:

3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS_IDENTITY; or

3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements on at least one supported band of that measurement type:

4> if the measurement is valid in the current RRC state of the UE:

5> begin measurements according to the stored control information for this measurement identity.

If the IE "Reporting Cell Status" is not received for intra-frequency, inter-frequency measurement, or inter-RAT measurement, the UE shall:

1> for intra-frequency measurement, inter-frequency measurement and inter-RAT measurement:

2> exclude the IE "Measured Results" in MEASUREMENT REPORT.

Reference

3GPP TS 25.331 clauses 8.4.1.3, 8.4.1.8.2, 8.6.6.15 and 8.6.7.9

8.4.1.2.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 messages, after it enters CELL_DCH state from idle mode.

2. To confirm that the UE, which requires compressed mode, starts to perform inter-frequency measurement and related reporting activities, when it receives a MEASUREMENT CONTROL message with the "DPCH compressed mode status info" IE indicating that a stored compressed mode pattern sequence be simultaneously activated.

3. To confirm that the UE, which does not require compressed mode, starts to perform inter-frequency measurement and related reporting activities when it receives a MEASUREMENT CONTROL message without IE "DPCH compressed mode status info".

4. To confirm that the UE excludes the IE "Measured Results" for any cells in the MEASUREMENT REPORT messages, after it receives a MEASUREMENT CONTROL message with "Reporting cell status" IE omitted.

8.4.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

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

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.2-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.4.1.2-1

Parameter	Unit	Cell 1	Cell 4
UTRA RF Channel Number		Ch. 1	Ch. 2
CPICH Ec	dBm/ 3.84 MHz	-60	-75

The UE is initially in idle mode and has selected cell 1 for camping.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). The RRC CONNECTION SETUP message used in procedure P3 or P5 should contain IE "DPCH compressed mode info", setting the "TGPS status flag" to "Deactivate" and configuring transmission pattern gap sequence with TGPSI=1 only if UE requires compressed mode. Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service). An optional PHYSICAL CHANNEL RECONFIGURATION message is transmitted by SS to activate the transmission pattern gap sequence with TGPSI=1, if the UE requires compressed mode to perform inter-frequency measurement. Correspondingly, the UE shall start the compressed mode operations at designated time and respond with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for cells listed in the IE "inter-frequency cell info list" in System Information Block Type 11.

If UE requires compressed mode, SS sends PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH, specifying that compressed mode sequence pattern with TGPSI=1 be deactivated. The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH if UE configures according to the PHYSICAL CHANNEL RECONFIGURATION message.

SS sends MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS requests UE to perform inter-frequency measurement with periodic reporting of CPICH RSCP values for cell 4. If UE requires compressed mode, IE "DPCH compressed status info" IE to activate the transmission gap pattern sequence with TGPSI = 1 is included in this message.

The UE shall start inter-frequency measurement and reporting for cell 4's CPICH RSCP values. It shall report this measurement result by transmitting MEASUREMENT REPORT messages on uplink DCCH periodically at 16 seconds interval.

SS sends MEASUREMENT CONTROL message on the downlink DCCH omitting the IE "Reporting cell status". The UE shall send MEASUREMENT REPORT messages on the uplink DCCH, with the IE "Cell measured results" excluded in these messages. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		System Information Block type 11	The UE is idle mode and camped onto cell 1.System Information Block Type 11 to be transmitted is different from the default settings (see specific message contents)
2	↔		SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the operator to make an outgoing call.
3	↔		SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4	↔		SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5	←		Void (if compressed mode is not required by the UE), or PHYSICAL CHANNEL RECONFIGURATION (if compressed mode is required by the UE)	If compressed mode is not required (refer ICS/IXIT), then goto step 6. Else, activate the compressed mode operation.
5a	→		Void (if compressed mode is not required by the UE), or PHYSICAL CHANNEL RECONFIGURATION COMPLETE (if compressed mode is required by the UE)	UE shall remain in CELL_DCH state.
6				SS checks to see that no MEASUREMENT REPORT messages are received for 10 s. If compressed mode is not required (refer ICS/IXIT), then goto step 9.
7	←		Void (if compressed mode is not required by the UE), or PHYSICAL CHANNEL RECONFIGURATION (if compressed mode is required by the UE)	Existing compressed mode sequence pattern is de-activated in this message.
8	→		Void (if compressed mode is not required by the UE), or PHYSICAL CHANNEL RECONFIGURATION COMPLETE (if compressed mode is required by the UE)	UE shall remain in CELL_DCH state.
9	←		MEASUREMENT CONTROL	SS requests UE to start inter-frequency measurement for cell 4, and performing periodic reporting for cell 4's CPICH RSCP. See specific message content below.
10	→		MEASUREMENT REPORT	UE shall report cell 4's CPICH RSCP reading periodically.
11	←		MEASUREMENT CONTROL	SS changes the reporting criteria of cell 4 to 'event 2c'. "Reporting cell status" IE in this message is omitted.
12	→		MEASUREMENT REPORT	SS monitors the uplink DCCH to make sure that only 1 such message is received almost immediately after step 11. This message shall not contain IE "Inter-frequency cell measured results"

13	←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

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

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
-Use of HCS	Not used
-Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH Tx power	Not present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	Not present For neigbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
-Cells for measurement	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

RRC CONNECTION SETUP (Step 2)

If UE do not require compressed mode, use the message found in TS 34.108 clause 9.

If UE requires compressed mode, use the message found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing Indication	Initialise	
- CFN-targetSFN frame offset	Not Present	
- Downlink DPCH power control information		
- DPC mode	Single TPC	
- CHOICE Mode	FDD	
- Power offset $P_{Pilot-DPDCH}$	0	
- DL rate matching restriction information	Not Present	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Fixed or flexible position	Fixed	
- TFCI existence	FALSE	
- Number of bits for Pilot bits (SF=128, 256)	Refer to the parameter set in TS 34.108	
- DPCH compressed mode info	This IE is present only if the ICS/IXIT statement indicates that compressed mode is required.	
- TGPSI	1	
- TGPS Status Flag	Deactivate	
- TGCFN	Not Present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	Undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only depending the on UE capability	
- Downlink compressed mode method	SF/2 (or Not present depending on the UE capability)	
- Uplink compressed mode method	SF/2 or Not present depending on the UE capability	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity Mode	None	
- SSDT information	Not Present	
- Default DPCH Offset Value	0	
Downlink information for each radio link list		
- Downlink information for each radio link		
- CHOICE mode	FDD	
- Primary CPICH info		
- Primary scrambling code	Reference to 34.108	
- PDSCH with SHO DCH info	Not Present	
- PDSCH code mapping	Not Present	
- Downlink DPCH info for each RL		
- Primary CPICH usage for channel estimation	Primary CPICH can be used	
- DPCH frame offset	Set to value: Default DPCH Offset value mod 38400	
- Secondary CPICH info	Not Present	

- DL Channelisation code		
- Secondary scrambling code	1	
- Spreading factor	Reference to 34.108	
- Code number	0	
- Scrambling code change	No code change	
- TPC combination index	0	
- SSDT Cell identity	Not present	
- Closed loop timing adjustment mode	Not present	
SCCPCH information for FACH	Not present	

PHYSICAL CHANNEL RECONFIGURATION (Step 5)

Use the same message sub-type in clause 9 of TS 34.108 titled "Non speech in CS" or "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- Number of bits for Pilot bits (SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	This IE is present only if the ICS/IXIT statement indicates that compressed mode is required.
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence configuration parameters	Not Present
Downlink information per radio link list	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type in clause 9 of TS 34.108 titled "Non speech in CS" or "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- Number of bits for Pilot bits (SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	
- Transmission gap pattern sequence	
- TGPSI	1
- TPGS status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0
Downlink information per radio link list	Not Present

MEASUREMENT CONTROL (Step 9)

If UE requires compressed mode,

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	Not Present
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cell within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

If UE do not require compressed mode,

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	4
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	Not Present
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cell within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured results	Check to see if it is absent
Event Results	Check to see if it is absent

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Set up
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	Not Present
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not Present
- Measurement validity	Not present
- Inter-frequency set update	
-UE Autonomous update mode	On with no reporting
-Non autonomous update mode	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	0.5 dB
- Time to trigger	0 milliseconds
- Reporting cell status	Not Present
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non used frequency	0
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured Results	Check to see if it is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Inter-frequency event identity	Check to see if this IE is set to "2c"
- Inter-frequency cells	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- Non frequency related measurement event results	
- CHOICE Mode	Check to see if set to "FDD"
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code as cell 4

8.4.1.2.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of CPICH RSCP of cell 4.

If UE requires compressed mode operation, after step 5, UE shall activate compressed mode operations at the time indicated by IE "TGCFN" and then transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

If UE requires compressed mode, after step 7, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 9 the UE shall transmit MEASUREMENT REPORT messages on uplink DCCH, reporting cell 4's CPICH RSCP value at periodic time interval of 16 seconds in "inter-frequency cell measurement results" IE.

After step 11 the UE shall transmit only 1 MEASUREMENT REPORT message on the uplink DCCH. In this message, IE "Measured Results" shall be absent.

<End of modified section>

<Start of next modified section>

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)

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

Specific Message contents

For system information block 12 for Cell1 (gives IEs which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATIONmessage to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
			Void	
2			Void	If compresed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8	←		MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9	→		MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12	←		Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15	→		CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16	←		CELL UPDATE CONFIRM	See message content.
17	→		UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

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	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	Not Present	
- CHOICE Mode	FDD	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2 or Not present depending on UE capability	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity Mode	None	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	
Downlink information for each radio link	Not Present	

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	4
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	
- UE state	CELL_DCH
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	8 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/Remarks
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_-quality_measure	CPICH_Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE Inter-frequency cell removal	Not Present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to TS 25.101
- UARFCN downlink (Nd)	Reference to table 6.1.2 of TS 34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH Tx power	Not Present
- TX diversity indicator	FALSE
- Cell selection and re-selection info	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	2

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI	Check to see if same to value assigned in P3 or P5
Cell update cause	Check to see if it is set to "Cell Reselection"
Protocol error info	Check to see if it is absent or set to FALSE
Measured results on RACH	Check to see if it is absent
Protocol error information	Check to see if it is absent

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

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

UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

<End of modified section>

<Start of next modified section>

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

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

1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);

1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":

2> resume the measurement reporting.

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:

2> set the variable INVALID_CONFIGURATION to TRUE.

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "TGPS Status Flag"):

2> 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.

1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";

1> update into the variable TGPS_IDENTITY the configuration information defined by IE group" transmission gap pattern sequence configuration parameters ";

1> after the new configuration has been taken into use:

2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate" at the time indicated by IE "TGCFN"; and

2> begin the inter-frequency corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":

3> start the concerned pattern sequence immediately at that CFN.

1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in TS 25.331 subclause 8.2.11.2.

Reference

3GPP TS 25.331 clause 8.4.1.7.2, 8.4.1.3

8.4.1.8.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 or 12 when it transits from CELL_FACH state to CELL_DCH state.
2. To confirm that the UE resumes inter-frequency measurements and reporting stored for which the measurement control information has IE "measurement validity" assigned to the value "CELL_DCH", after it re-enters CELL_DCH state from CELL_FACH state.
3. To confirm that the UE resumes inter-frequency measurement and reporting activities after it has received a MEASUREMENT CONTROL message specifying that a stored compressed mode pattern sequence be re-activated.

8.4.1.8.4 Method of test

Initial Condition

System Simulator: 3 cells – Cells 1, cell 4 and cell 5 are active.

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

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

In case the UE supports both PS and CS CN domains, this test shall be run twice, once starting from the initial condition CS-DCCH+DTCH_DCH, and once starting from the initial condition PS-DCCH+DTCH_DCH.

Test Procedure

Table 8.4.1.8-1 illustrates the downlink power to be applied for the 3 cells in this test.

Table 8.4.1.8-1

Para-meter	Unit	Cell 1	Cell 4	Cell 5
UTRA RF Channel Number		Ch. 1	Ch. 2	Ch. 2
CPICH Ec	dBm/3.84 MHz	-60	-75	-75

Test procedure when the initial condition is that the UE is connected to the PS domain:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). If UE requires compressed mode, SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH after it has transmitted the MEASUREMENT CONTROL message. (step 3). SS checks that the UE sends a MEASUREMENT REPORT message on the uplink DCCH only if UE does not require compressed mode.

SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH to move the UE to CELL_FACH state (step 4). The UE shall reconfigure itself to receive and transmit using the common physical

channels assigned, and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH (step 5). SS modifies the content of Master Information Block and System Information Block type 12 messages, such that cell 4 is added in the list of cells assigned in the IE "inter-frequency cell info" (step 6). SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. Once again, SS verifies that the UE does not transmit MEASUREMENT REPORT messages in the uplink direction (step 7).

SS sends PHYSICAL CHANNEL RECONFIGURATION message, and configures dedicated physical. If UE requires compressed mode, in this message, SS commands the UE to start applying compressed mode mechanism for DPCH. The UE shall move to CELL_DCH state and then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). SS waits for 10 seconds. The UE shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 4. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 11). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

If UE requires compressed mode, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1 (step 13). The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities (step 14).

Following this if UE requires compressed mode, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE (step 15). SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall receive MEASUREMENT REPORT messages continuously at 2 seconds interval (step 16). The SS then sends a MEASUREMENT CONTROL ordering the UE to release the measurement corresponding to identity 14, and to stop compressed mode (step 17). At reception of that message, the UE shall stop compressed mode and delete the measurement corresponding to that identity (step 18). The SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to order the UE to start compressed mode once again (step 19). The UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message, and starts compressed mode (step 20). SS checks then that it does not receive any MEASUREMENT REPORT message from the UE after that point (step 21).

Test procedure when the initial condition is that the UE is connected to the CS domain:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). SS checks that the UE sends a MEASUREMENT REPORT messages on the uplink DCCH only if UE does not require compressed mode (step 3).

If the UE requires compressed mode, SS sends PHYSICAL CHANNEL RECONFIGURATION message (step 8). In that message, SS commands the UE to start applying compressed mode. The UE shall then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). Following this, a UE requiring compressed mode shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 5. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 11). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

If the UE requires compressed mode, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1 (step 13). The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities (step 14). Following this if the UE requires compressed mode, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE (step 15). SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall receive MEASUREMENT REPORT messages continuously at 2 seconds interval (step 16). The SS then sends a MEASUREMENT CONTROL ordering the UE to release the measurement corresponding to identity 14, and to stop compressed mode (step 17). At reception of that message, the UE shall stop compressed mode and delete the measurement corresponding to that identity (step 18). The SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to order the UE to start compressed mode once again (step 19). The UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message, and starts compressed mode (step 20). SS checks then that it does not receive any MEASUREMENT REPORT message from the UE after that point (step 21).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		

Step	Direction		Message	Comment
	UE	SS		
1				(Valid for both the PS and CS cases) The initial state of UE is in CELL_DCH state of cell 1.
2	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS specifies inter-frequency measurement and reporting parameters for cell 5, with "measurement validity" IE present and "UE state" set to "CELL_DCH".
3	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) If compresed mode is not required (refer ICS/IXIT), SS checks that UE transmit this message, or else SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
4	←		PHYSICAL CHANNEL RECONFIGURATION	(Only in the PS case) SS moves the UE to CELL_FACH state.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Only in the PS case) UE shall move to CELL_FACH state.
6	←		Master Information Block System Information Block type 12	(Only in the PS case) SS modifies MIB and SIB 12 in order to include cell 4 into the list of cells in IE "inter-frequency cell info".
7	←		SYSTEM INFORMATION CHANGE INDICATION	(Only in the PS case) After SS transmits this message, SS confirms that there are no transmissions of MEASUREMENT REPORT message in the uplink direction.
8	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. See specific message content below.
9	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. UE shall move to CELL_DCH state.
10	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) In the PS case, UE shall resume inter-frequency measurement task for cell 4 and report the measured CPICH RSCP value for cell 4. In the CS case, a UE requiring compressed mode shall start inter-frequency measurement task for cell 5 and report the measured CPICH RSCP value for cell 5. In the CS case, SS shall check that a UE not requiring compressed mode shall not

Step	Direction		Message	Comment
	UE	SS		
				send any MEASUREMENT REPORT.
11	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS changes the reporting criteria for cell 5 to 'periodic reporting'
12	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) UE shall begin to transmit this message at 2 seconds interval. If compresed mode is not required (refer ICS/IXIT), the test ends here.
13	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) SS deactivates the currently used pattern sequence for compressed mode operation.
14	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) UE stays in CELL_DCH state. SS verifies that no MEASUREMENT REPORT messages are received.
15	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS activates the pattern sequence stored by the UE.
16	→		MEASUREMENT REPORT	(Valid for both the PS and CS cases) SS checks that MEASURE-MENT REPORT messages are received at 2 seconds interval.
17	←		MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS orders the UE to release the measurement with identity 14, and to stop compressed mode
18				(Valid for both the PS and CS cases) SS checks that the UE has stopped compressed mode.
19	←		PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) SS orders the UE to start compressed mode again.
20	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) The UE transmits the response message and starts compressed mode
21				(Valid for both the PS and CS cases) SS checks that the UE does not send any MEASUREMENT REPORT

Specific Message Content

Unless explicitly stated, the messages below shall be used for both the CS case and the PS case.

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
-UE autonomous update	On with no reporting
- Non autonomous update mode	Not Present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0 dB
- Time to trigger	10 ms
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in [9] TS 34.108 clause 9 titled "(Packet to CELL_FACH from CELL_DCH in PS)".

Information Element	Value/Remark
- Downlink information for each radio link	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Scrambling code for cell 1. Ref. to the Default setting in TS34.108 clause 6.1 (FDD)
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- SCCPCH Information for FACH	Not Present

Master Information Block (Step 6)

Information Element	Value/Remark
Value Tag	2

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
-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 cells removal	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of 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
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8 for the PS case)

If UE do not require compressed mode, use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

If UE requires compressed mode, use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing indicator	Initialise	
- CFN-targetSFN frame offset	Not Present	
- Downlink DPCH power control information		
- DPC mode	0 (single)	
- CHOICE mode	FDD	
- Power offset $P_{Pilot-DPDCH}$	0	
- DL rate matching restriction information	Not Present	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set	
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE mode	FDD	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL UL only or DL only depending on UE capability	
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2 (or not sent, depending on 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	

PHYSICAL CHANNEL RECONFIGURATION (Step 8 for the CS case)

Information Element	Value/Remark	Version
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256	
New U-RNTI	Not Present	
New C-RNTI	Not Present	
New DSCH-RNTI	Not Present	
RRC State indicator	CELL_DCH	
UTRAN DRX cycle length coefficient	Not Present	
CN information info	Not Present	
URA identity	Not Present	
Downlink counter synchronisation info	Not Present	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
CHOICE *channel requirement*	Not Present	
CHOICE *mode*	FDD	
- Downlink PDSCH information	Not Present	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	Not Present	
- CHOICE mode	FDD	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity mode	Not Present	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	
Downlink information for each radio link		
- CHOICE mode	FDD	
- Primary CPICH info	Set to scrambling code of cell 1	
- Cell ID	Not present	
- PDSCH with SHO DCH info	Not present	
- PDSCH code mapping	Not present	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	Primary CPICH may be used	
- DPCH frame offset	0	
- Secondary CPICH info	Not present	

- DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT cell identity - Closed loop timing adjustment mode	 Not present Reference to TS34.108 clause 6.10 Parameter Set Same as the code currently allocated to the UE Code change 0 Not present Not present	

MEASUREMENT REPORT (Step 3 for both the PS and the CS case, and step 10 for the CS case)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5

MEASUREMENT REPORT (Step 10 for the PS case)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 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	
- CHOICE event result	Inter-frequency event results
- Inter-frequency event identity	Check to see if it's set to '2c'
- Inter-frequency cells	
- Frequency Info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Set up
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	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 5
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 5
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 5
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	
- Inter-frequency cell id	5
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not Present
- Inter-frequency set update	Not Present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	2000 milliseconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12, 16)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-frequency measured results list"
- Inter-frequency measurement results	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message transmitted in step 8 with the following modifications:

Information Element	Value/Remark
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE *channel requirement*	Not Present
CHOICE *mode*	FDD
>Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 15)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT CONTROL (Step 17)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Flag	Deactivate
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 19 for the PS case)

Information Element	Value/Remark	Version
Activation time New U-RNTI	Not Present Not Present	
New C-RNTI	Not Present	
New DSCH-RNTI	Not Present	
RRC State indicator	CELL_DCH	
UTRAN DRX cycle length coefficient CN information info URA identity Downlink counter synchronisation info Frequency info Maximum allowed UL TX power	Not Present Not Present Not Present Not Present Not Present Not Present	
CHOICE *channel requirement*	Not Present	
CHOICE *mode*	FDD	
- Downlink PDSCH information	Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - CHOICE mode - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort - TX Diversity mode - SSDT information - Default DPCH Offset Value	 Not Present FDD 1 Activate (Current CFN+(256 – TTI/10msec)) mod 256 FDD Measurement Infinity 4 7 Not Present undefined 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) SF/2 (or not sent, depending on the UE capability) SF/2 (or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present Not Present Not Present Not Present	R99 and REL-4 only
Downlink information for each radio link	Not Present	

PHYSICAL CHANNEL RECONFIGURATION (Step 19 for the CS case)

Information Element	**Value/Remark**	**Version**
Activation time	Not Present	
New U-RNTI	Not Present	
New C-RNTI	Not Present	
New DSCH-RNTI	Not Present	
RRC State indicator	CELL_DCH	
UTRAN DRX cycle length coefficient	Not Present	
CN information info	Not Present	
URA identity	Not Present	
Downlink counter synchronisation info	Not Present	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
CHOICE *channel requirement*	Not Present	
CHOICE *mode*	FDD	
- Downlink PDSCH information	Not Present	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	Not Present	
- CHOICE mode	FDD	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity mode	Not Present	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	
Downlink information for each radio link		
- CHOICE mode	FDD	
- Primary CPICH info	Set to scrambling code of cell 1	
- Cell ID	Not present	
- PDSCH with SHO DCH info	Not present	
- PDSCH code mapping	Not present	
- Downlink DPCH info for each RL		
- CHOICE mode	FDD	
- Primary CPICH usage for channel estimation	Primary CPICH may be used	
- DPCH frame offset	0	
- Secondary CPICH info	Not present	
- DL channelisation code		

- Secondary scrambling code	Not present	
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set	
- Code number	Same as the code currently allocated to the UE	
- Scrambling code change	Code change	
- TPC combination index	0	
- SSDT cell identity	Not present	
- Closed loop timing adjustment mode	Not present	

8.4.1.8.5 Test Requirement

After step 2, if UE requires compressed mode the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH of cell 1. If UE do not require compressed mode, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH of cell 1.

After step 4 and 8, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8, the UE shall start compressed mode using the method specified in the PHYSICAL CHANNEL RECONFIGURATION message sent in step 8.

After step 9 the UE shall transmit a MEASUREMENT REPORT message, containing the IE "measured results" reporting cell 5's CPICH RSCP value in CS case and cell 4's CPICH RSCP value in the PS case. The UE shall also report the triggering of event '2c' by including IE "Event results" in the MEASUREMENT REPORT message.

After step 11 the UE shall send MEASUREMENT REPORT messages, containing cell 5's CPICH RSCP measured value in IE "Measured results" at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

If UE requires compressed mode, after step 14, the UE shall not transmit any MEASUREMENT REPORT messages.

If UE requires compressed mode, after step 15, the UE shall start compressed mode and resume the transmission of MEASUREMENT REPORT messages with identical contents as in those received after step 11.

After step 17, the UE shall deactivate compressed mode.

After step 20, the UE shall not transmit any MEASUREMENT REPORT message to SS.

<End of modified section>

<Start of next modified section>

8.4.1.24 Measurement Control and Report: Inter-frequency measurement for event 2A

8.4.1.24.1 Definition

8.4.1.24.2 Conformance requirement

When event 2a is configured in the UE within a measurement, the UE shall:

1> when the measurement is initiated or resumed:

2> store the used frequency in the variable BEST_FREQUENCY_2A_EVENT.

1> if equation 1 below has been fulfilled for a time period indicated by "Time to trigger" for a frequency included for that event and which is not stored in the variable BEST_FREQUENCY_2A_EVENT:

2> send a measurement report with IEs set as below:

3> set in "inter-frequency measurement event results":

4> "inter-frequency event identity" to "2a"; and

4> "Frequency info" to the frequency that triggered the event; and

4> "Non frequency related measurement event results" to the "Primary CPICH info" of the best primary CPICH for FDD cells or "Primary CCPCH info" to the "Cells parameters ID" of the best primary CCPCH for TDD cells on that frequency, not taking into account the cell individual offset;

3> if a non-used frequency triggered the measurement report:

4> set the IE "measured results" and the IE "additional measured results" according to TS 25.331 subclause 8.4.2, not taking into account the cell individual offset;

3> if the used frequency triggered the measurement report:

4> do not include the IE "Inter-frequency measured results list" in the measurement report;

2> update the variable BEST_FREQUENCY_2A_EVENT with that frequency.

Equation 1:

$$Q_{NotBest} \geq Q_{Best} + H_{2a} / 2$$

The variables in the formula are defined as follows:

$Q_{Not\ Best}$ 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 (FDD)	dBm /3.84 Mhz	-65	-65	-65	-70	-65	-70	-75	-60	-75	-55	-75	-55
P-CCPCH RSCP (TDD)	dBm	-65	-65	-65	-70	-65	-70	-75	-60	-75	-55	-75	-55
P-CCPCH TS (3.84Mcps TDD)		TS 0						TS 4					

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 (for FDD only), SS performs PHYSICAL CHANNEL RECONFIGURATION procedure to activate compressed mode. SS then commands the UE to perform Inter-frequency measurements and report event 2A by sending MEASUREMENT CONTROL message. In MEASUREMENT CONTROL message, IE "Hysteresis" is set to 14.5 dB and IE "Additional measurement list" is set to id of "UE Internal measurements" configured earlier. SS then configures itself according to the values in columns "T1" shown above. Even though quality estimate for Cell 4 has become better than that of Cell 1, event 2A will not be triggered since hysteresis condition is not fulfilled. SS then configures itself according to the values in columns "T2" shown above.

SS sends MEASUREMENT CONTROL message to modify parameter "Hysteresis" of Inter-frequency measurements to 1 dB. SS then configures Cell 1 and Cell 4 according to columns "T3" for short duration (less than 5 seconds), and then configures itself according to columns "T4" shown above. The UE will not send MEASUREMENT REPORT message because time to trigger condition is not fulfilled. SS then configures itself according to the values in columns "T5" shown above. The UE sends MEASUREMENT REPORT message reporting even 2A as well as measurement of transmitted power.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Important Note: Duration between time instant "T3" and "T4" (between steps 9 and 10 of expected sequence) must be less than 5 seconds.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		MEASUREMENT CONTROL	To setup UE Internal measurement. If Compressed Mode not required (refer ICS/IXIT) go to step 4
2	←		PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation. (for FDD only)
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(for FDD only)
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) (FDD)

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	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger Reporting Mode
Additional measurements list	Not present
DPCH compressed mode status	Not present

MEASUREMENT CONTROL (Step 1) (1.28 Mcps TDD)

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	TDD
-CHOICE TDD option	1.28 Mcps TDD
- T_{ADV} info	FALSE
- CHOICE report criteria	No reporting
Measurement reporting mode	Not present
Additional measurements list	Not present
DPCH compressed mode status	Not present

MEASUREMENT CONTROL (Step 1) (3.84 Mcps TDD)

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	TDD
-CHOICE TDD option	3.84 Mcps TDD
- Applied TA	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) (FDD)

Use the same message sub-type found in clause 9 of TS 34.108, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)FDD", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing Indication	Maintain	
- Downlink DPCH power control information		
- DPC mode	0 (Single)	
- CHOICE Mode	FDD	
- Power offset PPilot-DPDCH	0	
- DL rate matching restriction information	Not present	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Fixed or flexible position	Flexible	
- TFCI existence	TRUE	
- 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	Undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL mode	UL and DL or DL only or UL 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) (FDD)

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	
- 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	Not present
- Used frequency W	0
- Hysteresis	14.5 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 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	Id of Cell 4
- Frequency Info	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
-CHOICE TDD option	1.28 Mcps TDD
- Cell parameters ID	Cell parameters ID of Cell 4
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Threshold used frequency	Not present
- W used frequency	0
- Hysteresis	14.5 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	
- Threshold non-used frequency	-72 dBm
- W non-used frequency	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 4) (3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	2
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	Id of Cell 4
- Frequency Info	Frequency of Cell 4
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	SyncCase 1
- Timeslot	4
- Cell parameters ID	Cell parameters ID of Cell 4
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Measurement validity	CELL_DCH state
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2A
- Threshold used frequency	Not present
- W used frequency	0
- Hysteresis	14.5 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	
- Threshold non-used frequency	-72 dBm
- W non-used frequency	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
- Inter-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
- Threshold used frequency	Not present
- W used frequency	0
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Parameters required for each non-used frequency	
- Threshold non-used frequency	-72 dBm
- W non-used frequency	0
Measurement reporting mode	Not present
Additional measurement list	Not present
DPCH compressed mode status info	Not present

MEASUREMENT REPORT (Step 13) (FDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured results	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	
- Measured results	UE internal measured results
- UE transmitted power	Check to see if it is present
- UE RX TX report entry list	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- Inter-frequency event identity	2A
- 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 13) (1.28 Mcps TDD)

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
- T_{ADV}	Check to see if it is absent
Event results	Check to see if set to "Inter-frequency measurement event results"
- Inter-frequency event identity	Check to see if set to "2A"
- Inter-frequency Cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non frequency related measurement event results	
- CHOICE mode	Check to see if set to "TDD"
- Primary CCPCH info	
- Cell parameters ID	Check to see if set to Cell parameter ID of Cell 4

MEASUREMENT REPORT (Step 13) (3.84 Mcps TDD)

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
CHOICE mode	Check to see if set to "TDD"
- UE transmitted power	Check to see if it is present
CHOICE TDD option	Check to see if set to "3.84 Mcps TDD"
- Applied TA	Check to see if it is absent
Event results	Check to see if set to "Inter-frequency measurement event results"
- Inter-frequency event identity	Check to see if set to "2A"
- Inter-frequency Cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non frequency related measurement event results	
CHOICE mode	Check to see if set to "TDD"
- Primary CCPCH info	
CHOICE mode	Check to see if set to "TDD"
CHOICE TDD option	Check to see if set to "3.48 Mcps TDD"
CHOISE SyncCase	Check to see if set to "Sync Case 1"
- Timeslot	Check to see if set to "4"
- Cell parameters ID	Check to see if set to Cell parameter ID of Cell 4
- SCTD indicator	Check to see if set to "FALSE"

8.4.1.24.5 Test Requirement

1.A In step 13 the UE shall send MEASUREMENT REPORT message indicating event 2A. IE ' Inter-frequency Cells ' in MEASUREMENT REPORT message shall contain frequency information and primary scrambling code (for FDD) or Cell parameters ID (forTDD) 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:

$\boldsymbol{Q_{Non\ used}}$ is the quality estimate of a non-used frequency that becomes better than an absolute threshold.

$\boldsymbol{T_{Non\ used\ 2b}}$ is the absolute threshold that applies for this non-used frequency in that measurement.

$\boldsymbol{H_{2b}}$ 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:

$\boldsymbol{Q_{Used}}$ is the quality estimate of the used frequency.

$\boldsymbol{T_{Used\ 2b}}$ is the absolute threshold that applies for the used frequency in that measurement.

$\boldsymbol{H_{2b}}$ 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 info (for FDD) or primary CCPCH info (for TDD) 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 info (for FDD) or primary CCPCH info (for TDD)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 (FDD)	dBm /3.84 MHz	-55	-55	-85	-85	-55	-55
P-CCPCH RSCP(TDD)	dBm	-60	-60	-80	-80	-60	-60
P-CCPCH TS (3.84 Mcps TDD)		TS 0			TS 4		

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 (for FDD only).

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. (for FDD only)
3	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(for FDD only)
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. Layer 3 Filtering causes an additional delay.
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. Layer 3 Filtering causes an additional delay. For Cell 1 the CPICH Ec value of -80 dBm(for FDD)or the P-CCPCH RSCP value of -75 dBm (for TDD) 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 (for FDD) or P-CCPCH RSCP(for TDD) is +/- 3 dBm, SS set Hysteresis value is +/- 2dB)
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)(FDD)

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	
- 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	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Not present
- Non used frequency parameter list	
- Non used frequency threshold	-70 dBm
- Non used frequency W	0
- Inter-frequency event identity	2B
- Used frequency threshold	-70 dBm
- Used frequency W	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Non used frequency parameter list	
- Non used frequency threshold	-70 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

MEASUREMENT CONTROL (Step 1)(1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- 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
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- TSTD Indicator	FALSE
- Cell parameters ID	Cell parameters ID of Cell 4
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70dBm
- W non-used frequency	0
- Inter-frequency event identity	2B
- Threshold used frequency	-70 dBm
- W used frequency	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70 dBm
- W non-used frequency	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

MEASUREMENT CONTROL (Step 1)(3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	4
Measurement command	Setup
- CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement objects list	
- Inter-frequency cell removal	Not present
- New inter-frequency cells	
- 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
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- CHOICE SyncCase	SyncCase 1
- Timeslot	4
- Cell parameters ID	Cell parameters ID of Cell 4
- SCTD indicator	FALSE
- Primary CCPCH TX power	Not present
- Timeslot list	Not present
- Cell for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	4
- CHOICE mode	TDD
- Measurement quantity for frequency quality estimate	P-CCPCH RSCP
- Inter-frequency reporting quantity	
- UTRAN Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN reporting indicator	FALSE
- Primary CCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Measurement validity	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each events	
- Inter-frequency event identity	2E
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70dBm
- W non-used frequency	0
- Inter-frequency event identity	2B
- Threshold used frequency	-70 dBm
- W used frequency	0.4
- Hysteresis	1 dB
- Time to trigger	5000 mSec
- Reporting cell status	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1
- Parameters required for each non-used frequency	
- Threshold non used frequency	-70 dBm
- W non-used frequency	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	Version
Downlink information common for all radio links		
- Downlink DPCH info common for all RL		
- Timing Indication	Maintain	
- Downlink DPCH power control information		
- DPC mode	0 (Single)	
- CHOICE Mode	FDD	
- Power offset PPilot-DPDCH	0	
- DL rate matching restriction information	Not present	
- Spreading factor	Refer to the parameter set in TS 34.108	
- Fixed or flexible position	Flexible	
- TFCI existence	TRUE	
- 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	Undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL mode	UL and DL or DL only or UL 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) (FDD)

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 measurement event results,
- Inter-frequency event identity	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 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot List/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2E”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “1.28 Mcps TDD”
- TSTD Indicator	Check to see if set to “FALSE”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD Indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 4) (3.48 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot list/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2E”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “3.48 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 8) (FDD)

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
- 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 absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	Inter-frequency measurement event results,
- Inter-frequency event identity	2B
- 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) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot List/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2B”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
- CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “1.28 Mcps TDD”
- TSTD Indicator	Check to see if set to “FALSE”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD Indicator	Check to see if set to “FALSE”

MEASUREMENT REPORT (Step 8) (3.84Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured results	Check to see if it set to “Inter-frequency measured results list”
- Frequency information	Check to see if set to Frequency of Cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measured results	
- Cell measurement results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	Check to see if set to “TDD”
- Cell parameters ID	Check to see if set to Cell parameters ID for cell 4
- Proposed TGSN	Check to see if it is absent
- Primary CCPCH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- Timeslot list/ISCP	Check to see if it is absent
Measured results on RACH	Check to see if it is absent
Additional measured results	Check to see if it is absent
Event results	
- CHOICE event results	Check to see if set to “Inter-frequency measurement event results”
- Inter-frequency event identity	Check to see if set to “2B”
- Inter-frequency cells	
- Frequency info	Check to see if set to Frequency of Cell 4
- Non-frequency related measurement event results	
- CHOICE mode	Check to see if set to “TDD”
- Primary CCPCH info	
CHOICE mode	Check to see if set to “TDD”
- CHOICE mode option	Check to see if set to “3.84 Mcps TDD”
CHOISE SyncCase	Check to see if set to “Sync Case 1”
- Timeslot	Check to see if set to “4”
- Cell parameters ID	Check to see if set to Cell parameters ID of Cell 4
- SCTD indicator	Check to see if set to “FALSE”

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(for FDD) or Cell parameters ID (TDD) 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 (for FDD) or Cell parameters ID (TDD) of Cell 4.

<End of modified section>

<Start of next modified section>

8.4.1.31 Measurement Control and Report: Inter-RAT measurement in CELL_DCH state.

8.4.1.31.1 Definition

8.4.1.31.2 Conformance requirement

A UE supporting both FDD and GSM shall be able to perform the GSM RSSI measurement and the GSM Initial BSIC identification measurement.

If, according to its capabilities, the UE requires compressed mode to perform GSM RSSI measurements, the UE shall perform GSM RSSI measurements in the gaps of a compressed mode pattern sequence specified for GSM RSSI measurement purpose.

If, according to its capabilities, the UE requires compressed mode to perform GSM Initial BSIC identification measurements, the UE shall perform GSM Initial BSIC identification in a compressed mode pattern sequence specified for Initial BSIC identification measurement purpose.

Reference

3GPP TS 25.133, clause 8.1.2.5; 3GPP TS 25.331, clauses 8.6.7.6, 14.3.2.

8.4.1.31.3 Test Purpose

Purpose of this test is to verify that UE is capable to perform GSM RSSI and GSM Initial BSIC identification measurements.

8.4.1.31.4 Method of test

Initial Condition

System Simulator: 1 UTRAN FDD cell and 2 GSM cells.

Parameter	Unit	Cell 1 (GSM)	Cell 2 (GSM)
Test Channel	#	1	2
RF Signal Level	dBm	-70	-85
BCCH ARFCN	#	1	7
CELL identity	#	0	1
BSIC	#	BSIC1	BSIC2

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

System Information Block type 11 nor 12 does not include Inter-RAT measurement system information.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. If the UE requires compressed mode (refer ICS/IXIT), the SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters. Two compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message.

The first RRC: MEASUREMENT CONTROL message is used to provide measurement control parameters (GSM RSSI) to the UE and to start compressed mode for the measurement if required according to the UE capabilities. The UE replies according to request by sending RRC: MEASUREMENT REPORT messages periodically to SS. Reporting period is 4000 ms.

After two RRC: MEASUREMENT REPORT messages, the SS sends a second RRC: MEASUREMENT CONTROL message to start GSM Initial BSIC identification measurement. The UE replies similarly as in GSM RSSI measurement case but now with a period of 12000ms.

The SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1. If the UE does not require compressed mode (refer ICS/IXIT), then goto step 4.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS provides GSM RSSI measurement control parameters to UE. If the UE requires compressed mode (refer ICS/IXIT), compressed mode for GSM RSSI measurement is started.
5	→		MEASUREMENT REPORT	UE reports measurement results of GSM RSSI measurement to SS.
6	→		MEASUREMENT REPORT	Next periodical measurement report.
7	←		MEASUREMENT CONTROL	SS provides GSM Initial BSIC identification measurement control parameters to UE. If the UE requires compressed mode (refer ICS/IXIT),compressed mode for GSM Intial BSIC identification measurement is started.
8	→		MEASUREMENT REPORT	UE reports measurement results of GSM Initial BSIC identification measurement to SS.
9	→		MEASUREMENT REPORT	Next periodical measurement report.
10	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark	Version
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	undefined	
- TGPL1	12	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM Initial BSIC identification	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	128	
- T Reconfirm abort	Not Present	

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- 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
- New 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	4000
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256
- TGPSI	2
- TGPS status flag	Deactivate
- TGCFN	Not present

MEASUREMENT REPORT, if the UE requires compressed mode (refer ICS/IXIT) (Step 5 and step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Check to see if present
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to "1"
- Observed time difference to GSM cell	Check that not present
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Non verified BSIC
- BCCH ARFCN	Check that is set to "7"
- Observed time difference to GSM cell	Check that not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that not present

MEASUREMENT REPORT, if the UE doesn't requires compressed mode (refer ICS/IXIT) (Step 5 and step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Inter-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- 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

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Modify
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical reporting
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not present
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
UTRAN estimated quality	FALSE
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
- Reporting cell status	
CHOICE reported cell	
- Reported cells within active set or within virtual active set or of the other RAT	
- Maximum number of reported cells	6
CHOICE report criteria	
- Periodical reporting criteria	
- Amount of reporting	infinity
- Reporting interval	12000
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS status flag	Deactivate
- TGCFN	Not present
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT, if the UE requires compressed mode (refer ICS/IXIT) (Step 8)

EITHER

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	Not checked
CHOICE BSIC	Verified BSIC
- Inter-RAT cell id	Check that is set to "0"
- 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

OR

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	Not checked
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

MEASUREMENT REPORT, if the UE does not require compressed mode (refer ICS/IXIT) (Step 8)

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

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-RAT measured results list"
- Inter-RAT measured result list	
- CHOICE system	GSM
- Measured GSM cells	
- GSM carrier RSSI	Not checked
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.

8.4.1.32 Void

8.4.1.33 Measurement Control and Report: Inter-RAT measurement, event 3a

8.4.1.33.1 Definition

8.4.1.33.2 Conformance requirement

1. When this event is ordered by UTRAN in a MEASUREMENT CONTROL message the UE shall send a report when the estimated quality of the currently used frequency is below the value of the IE "Threshold own system" and the hysteresis and time to trigger conditions are fulfilled and the estimated quality of the other system is above the value of the IE "Threshold other system" and the hysteresis and time to trigger conditions are fulfilled.

2. If the IE "DPCH Compressed Mode Status Info" is present, [in the MEASUREMENT CONTROL message]:

   - after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:

     - activate the pattern sequence stored in the variable TGPS_IDENTITY corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "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 identitifed in IE "TGPSI"

3. The UE shall perform GSM RSSI measurements in the gaps of compressed mode pattern sequence specified for GSM RSSI measurement purpose. The UE shall perform Initial BSIC identification in compressed mode pattern sequence specified for Initial BSIC identification measurement purpose. The UE shall be able to measure the "Observed time difference to GSM cell" during a compressed mode pattern sequence configured for this purpose. The UE shall perform BSIC re-confirmation in compressed mode pattern sequence specified for BSIC re-confirmation measurement purpose.

4. If the IE "Inter-RAT measurement quantity" is received in a MEASUREMENT CONTROL message and CHOICE system is GSM, the UE shall:

   - if IE "BSIC verification required" is set to "required", for cells that match any of the BCCH ARFCN and BSIC combinations in the list of inter-RAT cells that the UE has received in IE "Inter-RAT cell info list", and that has a "verified" BSIC:

     - report measurement quantities according to IE "inter-RAT reporting quantity" taking into account the restrictions defined in TS 25.331 clause 8.6.7.6;

     - trigger inter-RAT events according to IE "inter-RAT measurement reporting criteria"; and

   - perform event evaluation for event-triggered reporting after BSIC has been verified for a GSM cell

   - indicate non-verified BSIC for a GSM cell in the "Inter-RAT measured results list" IE

5. The UE shall include measured results in MEASUREMENT REPORT as specified in the IE "Inter-RAT reporting quantity".

6. If IE "Observed time difference to GSM cell 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 MEASUREMEN CONTROL message.
2. To confirm that the UE sends MEASUREMENT REPORT message if event 3a is configured, if the quality of the currently used UTRAN frequency is below a given threshold and the estimated quality of the other system is above a certain threshold.
3. To confirm that the hysteresis and time to trigger behaviours for event 3a are correctly implemented.
4. To confirm that the UE verifies the BSIC of the cell triggering the event if so required by UTRAN and if the proper compressed mode patterns have been configured in the UE by UTRAN.
5. To confirm that the content of the MEASUREMENT REPORT sent by the UE is according to what was required by UTRAN.

NOTE: Test purpose 1 verifies conformance requirement 1 and 2.

NOTE: Test purpose 2 and 3 verifies conformance requirement 1.

NOTE: Test purpose 4 verifies conformance requirement 2, 3 and 4.

NOTE: Test purpose 5 verifies conformance requirement 4, 5, 6 and 7.

8.4.1.33.4 Method of test

Initial Condition

System simulator: 1 UTRAN FDD cell and 3 GSM cells. The initial configurations of the 3 cells in the SS shall follow the values indicated in the column marked T0. The table is found in "Test procedure".

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

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	#	0					1					2				
BSIC	#	BSIC 1					BSIC 2					BSIC 3				
RF Signal Level	dBm	-85	-85	-70	-76	-70	-85	-85	-85	-84	-84	-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	dBm /3.84 Mhz	-60	-80	-80	-80	-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 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, but remains above the releasing condition for event 3a.

At intant T4, the RF signal strength for GSM cell 1 increases above the threshold for the other system for event 3a+hysteresis. 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 2s, 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	Version
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	undefined	
- TGPL1	12	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 1	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC identification	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 1	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	66	
- T Reconfirm abort	Not Present	

- TGPSI	3	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC re-confirmation	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 1	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	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	39
- 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	CPICH RSCP
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	3a
- Threshold own system	-66
- W	0
- Threshold other system	-80
- Hysteresis	5
- Time to Trigger	640 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 cells
Physical channel information elements	
- DPCH compressed mode status info	If the UE requires compressed mode (refer ICS/IXIT), this IE is present and contains the IEs as follows. If the UE does not require compressed mode (refer ICS/IXIT), this IE is not present.
- TGPS reconfiguration CFN	(Current CFN + (250 – TTI/10msec))mod 256
- 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 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it 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 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) 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 3 GSM 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	#	0		1		2	
BSIC	#	BSIC 1		BSIC 2		BSIC 3	
RF Signal Level	dBm	-70	-90	-70	-70	-90	-90

The table above illustrate the downlink power to be applied for the 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 1020m s, 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 5.8 s, 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	Version
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	undefined	
- TGPL1	12	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC identification	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	

- N identify abort	66	
- T Reconfirm abort	Not Present	
- TGPSI	3	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC re-confirmation	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	5 s	

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- inter-RAT measurement	
- inter-RAT measurement object list	
CHOICE Inter-RAT Cell Removal	Remove all inter-RAT cells
-Remove all inter-RAT cells	(No Data)
New inter-RAT cells (1 to <MaxCellMeas>)	MaxCellMeas=2
- inter-RAT cell id	0
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC1
- Band indicator	DCS 1800 band used
- BCCH ARFCN	1
- inter-RAT cell id	1
CHOICE Radio Access Technology	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM
- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3b
- Threshold own system	Not included
- W	Not included
- Threshold other system	-80
- Hysteresis	2
- Time to Trigger	60 ms
- Reporting cell status	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	(Current CFN + (250 – TTI/10msec))mod 256
- 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 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 it is set to 0.
- 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	39
- 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>)	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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 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 0 or 2.
- 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 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) after instant T1.

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:

$\boldsymbol{M_{Other\ RAT}}$ is the measurement quantity for the cell of the other system. $\boldsymbol{M_{Other\ RAT}}$ is expressed in dBm.

$\boldsymbol{CIO_{Other\ RAT}}$ is the cell individual offset for the cell of the other system.

$\boldsymbol{T_{Other\ RAT}}$ is the absolute threshold that applies for the other system in that measurement.

$\boldsymbol{H_{3c}}$ 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:

$\boldsymbol{M_{Other\ RAT}}$ is the measurement quantity for the cell of the other system. $\boldsymbol{M_{Other\ RAT}}$ is expressed in dBm.

$\boldsymbol{CIO_{Other\ RAT}}$ is the cell individual offset for the cell of the other system.

$\boldsymbol{T_{Other\ RAT}}$ is the absolute threshold that applies for the other system in that measurement.

$\boldsymbol{H_{3c}}$ 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 2 GSM 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	#	0				1			
BSIC	#	BSIC 1				BSIC 2			
RF Signal Level	dBm	-90	-75	-80	-75	-75	-75	-75	-75

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. 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 1 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 0.9 s, 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	Version
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	undefined	
- TGPL1	12	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC identification	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	

- N identify abort	66	
- T Reconfirm abort	Not Present	
- TGPSI	3	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC re-confirmation	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	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	-3
- Cell selection and re-selection info	Not present
- BSIC	BSIC2
- Band indicator	DCS 1800 band used
- BCCH ARFCN	7
- Cell for measurement	Not present
- inter-RAT measurement quantity	
- Measurement quantity for UTRAN quality estimate	Not included
CHOICE system	GSM

- Measurement quantity	GSM carrier RSSI
- Filter coefficient	0
- BSIC verification required	required
- inter-RAT reporting quantity	
CHOICE system	GSM
- Observed time difference to to GSM cell reporting indicator	FALSE
- GSM carrier RSSI reporting indicator	TRUE
CHOICE report criteria	
- Inter-RAT measurements reporting criteria	
- Parameters required for each event (1 to<maxMeasEvent>)	<MaxMeasEvent>=1
- Inter-RAT event identity	3c
- Threshold own system	Not included
- W	Not included
- Threshold other system	-74
- 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	(Current CFN + (250 – TTI/10msec))mod 256
- 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.35.54 Test requirement

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

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

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

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 2 GSM 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	T0	T1
Test Channel	#	GSM Ch.1		GSM Ch.2	
BCCH ARFCN	#	1		7	
CELL identity	#	0		1	
BSIC	#	BSIC 1		BSIC 2	
RF Signal Level	dBm	-70	-90	-90	-70

The 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"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/are the best GSM cell/Cells just after the initiation of the measurement SS should wait long enough for the reception of this message as UE that needs compressed mode takes time to activate compressed mode patterns as well as complete BSIC verification before sending the report
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 1 s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3d.
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	Version
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	undefined	
- TGPL1	12	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability) depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC identification	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	66	
- T Reconfirm abort	Not Present	
- TGPSI	3	
- TGPS Status Flag	Deactivate	

- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC re-confirmation	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	8	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	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
- Threshold other system	Not present
- Hysteresis	5
- Time to Trigger	200 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	(Current CFN + (250 – TTI/10msec))mod 256
- 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 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	Optional to have both Cells since a UE requiring compressed mode for inter-RAT measurements may take longer time for BSIC verification and hence need not include both the Cells
- GSM carrier RSSI	Check that measurement result is reasonable. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 0
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable (Optional as this can be included only if BSIC verification is completed)
CHOICE BSIC	Verified BSIC (Optional as this can be included only if BSIC verification is completed)
- inter-RAT cell id	Check that it is set to 1(Optional)
- Observed time difference to GSM cell	Check that the IE is not present (Optional)
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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to 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 it is set to 0.
- 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.
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=3
- 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.

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 modified section>

<Start of next modified section>

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	unde fined	16	See note 2~~16~~	Set-up to monitor 12 GSM neighbours every second measurement period, i.e. every second 480ms period.
GSM Initial BSIC identification	Note 1	Inf.	8	14	Not sent	unde fined	24	See note 2~~24~~	Equal to Pattern 6 in TS 25.133 table 8.7.
GSM BSIC re-confirmation	Note 1	Inf.	8	14	Not sent	unde fined	24	See note 2~~24~~	Equal to Pattern 12 in TS 25.133 table 8.8.

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

NOTE 2: For R99 and Rel-4: TGPL2 is not sent. For Rel-5 and later releases: Not applicable.

Initial Condition

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

UE: "CS-DCCH + DTCH_DCH", state 6-9 as specified in clause 7.4 of TS 34.108.

Test procedure

Table 8.4.1.40.4-2 Inter-RAT cell specific data

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

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

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

The UE is initially in "CS-DCCH + DTCH_DCH", state 6-9 as specified in clause 7.4 of TS 34.108. UTRA cell 1 is the only cell in the active set of the UE. The SS sends a PHYSICAL CHANNEL RECONFIGURATION message to the UE to configure the compressed mode pattern sequence parameters to the UE. Three compressed mode patterns are configured, according to the message specified below. When the PHYSICAL CHANNEL RECONFIGURATION COMPLETE is received from the UE, the SS sends a MEASUREMENT CONTROL message to the UE, to set up inter-RAT measurements on 12 GSM cells. Event 3c is set up in this message, and compressed mode is activated.

At instant T1, the RF signal strength for GSM cell 1 increases as described in table 8.4.1.40.4-2, since the cell individual offset for GSM cell 1 is 10 dB, event 3c shall be triggered in the UE. A MEASUREMENT REPORT shall be sent to the SS. Note that GSM cell 2 has not triggered event 3c even though the RF signal strength for GSM cell 2 is the same as for cell 1, because the cell individual offset for GSM cell 2 is -3 dB.

At instant T2, the RF signal strength for GSM cell 1 drops as described in table 8.4.1.40.4-2, and at instant T3, it increases again to its previous level. No MEASUREMENT REPORT shall be received from the UE, since GSM cell 1 has already triggered event 3c, and since the RF signal strength has not dropped enough for the leaving condition to be met. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		PHYSICAL CHANNEL RECONFIGURATION	Compressed mode pattern sequence parameters are loaded to UE.
3	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
4	←		MEASUREMENT CONTROL	SS configures event 3c in the UE, compressed mode is started.
5				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
6				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.40.4-2.
7	→		MEASUREMENT REPORT	After about 1.6 s, the UE sends a MEASUREMENT REPORT to SS triggered by event 3c.
8				SS re-adjusts the downlink transmission power settings according to columns "T2" in table 8.4.1.40.4-2.
9				SS re-adjusts the downlink transmission power settings according to columns "T3" in table 8.4.1.40.4-2.
10				SS waits for approximately 10 seconds and verifies that no MEASUREMENT REPORT messages are detected on uplink DCCH.
11	←→		CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

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

Information Element	Value/remark	Version
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	undefined	
- TGPL1	16	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TGPSI	2	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC identification	
- TGPRC	Infinity	
- TGSN	8	
- TGL1	14	
- TGL2	Not present	
- TGD	undefined	
- TGPL1	24	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	66	
- T Reconfirm abort	Not Present	

- TGPSI	3	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	GSM BSIC re-confirmation	
- TGPRC	Infinity	
- TGSN	8	
- TGL1	14	
- TGL2	Not present	
- TGD	Undefined	
- TGPL1	24	
- TGPL2	Not present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
CHOICE UL/DL Mode	UL&DL or UL-only or DL-only (depends on UE's Measurement capability)	
- Downlink compressed mode method	SF/2	
- Uplink compressed mode method	SF/2	
- Downlink frame type	A	
- DeltaSIR1	1.0	
- DeltaSIRAfter1	0.5	
- DeltaSIR2	Not Present	
- DeltaSIR2After2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	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=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	-3
- 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	17
- 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	17
- 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	-74
- 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	
- TGPS reconfiguration CFN	(Current CFN + (256 - 11 – TTI/10msec))mod 256
- Transmission gap pattern sequence (1 to <MaxTGPS>)	<MaxTGPS>=33f35s
- TGPSI	1
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – 11 – TTI/10msec)) mod 256
- TGPSI	2
- TGPS status flag	Activate
- TGCFN	(Current CFN + (256 – 7 – TTI/10msec)) mod 256
- TGPSI	3
- TGPS status flag	Activate

- TGCFN	(Current CFN + (256 – 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. RXLEV is mapped to a value between 0 and 63. The RSSI bits are numbered b0 to b5, where b0 is the least significant bit. When mapping the RXLEV value to the RSSI bit string, the first/ leftmost bit of the bit string contains the most significant bit.
CHOICE BSIC	Check it is set to verified BSIC
- inter-RAT cell id	Check that it is set to either 0 or 1
- Observed time difference to GSM cell	Check that the IE is not included
- GSM carrier RSSI	Check that measurement result is reasonable
CHOICE BSIC	Verified BSIC
- inter-RAT cell id	Check that is set to 1 if the previous inter-RAT cell id was set to 0 or to 0 if the previous cell if was set to 1.
- Observed time difference to GSM cell	Check that the IE is not present
Measured results on RACH	Check that not present
Additional Measured results	Check that not present
Event results	Check that the IE is included
- CHOICE event result	Check that this is set to inter-RAT measurement event results
- Inter-RAT event identity	Check that this is set to 3c
- Cells to report (1 to <maxCellMeas>)	Check that <maxCellMeas> is set to 1
- CHOICE BSIC	Check that this is set to verified BSIC
- Inter-RAT cell id	Check that this is set to 0.

8.4.1.40.5 Test Requirement

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

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

<End of modified section>

<Start of next modified section>

8.4.1.42 Measurement Control and Report: Change of Compressed Mode Method

8.4.1.42.1 Definition

8.4.1.42.2 Conformance requirement

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):

2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive" at the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE1: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

NOTE2: The deactivation of pattern sequences only occurs as a result of RRC messages received by the UE, i.e. the UE does not set the "Current TGPS Status Flag" to "inactive" after the final gap of a finite length pattern sequence.

1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";

1> update into the variable TGPS_IDENTITY the configuration information defined by IE group" transmission gap pattern sequence configuration parameters ";

1> after the instant in which the message is to be executed, as specified in subclause 8.6.3.1:

2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in the variable TGPS_IDENTITY is set to "activate" at the time indicated by IE "TGCFN"; and

2> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "active".

NOTE1: If the pattern is activated with a message that includes the IE "Activation time", and if the CFN value indicated by the IE "Activation Time" and the CFN value indicated by the TGCFN are included in the same TTI (but not at the TTI boundary) common to all the transport channels that are multiplexed onto the reference CCTrCh (as defined in subclause 8.6.3.1), and if the CFN value indicated by the TGCFN is equal or higher than the CFN value indicated by the IE "Activation Time" (as defined in subclause 8.6.3.1) value, the UE behaviour is not specified.

NOTE2: If the pattern is activated with a message used to perform timing re-initialised hard handover, the UE can start evaluating the activation of the pattern (i.e. compare the value of the CFN in the new configuration with the value of the TGCFN) at any time between the message activation time and the completion of the synchronisation procedure A.

2> if the IE "DPCH compressed mode info" is included in a message used to perform a Hard Handover with change of frequency (see subclause 8.3.5); or

2> if the IE "DPCH compressed mode info" is included in a message used to transfer the UE from Cell_FACH to Cell_DCH, and the cell in which the UE transited from CELL_FACH state is not included in the active set for the CELL_DCH state (see subclause 8.4.1.7.2):

3> not begin the inter-frequency measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence.

2> else:

3> begin the inter-frequency measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence.

2> begin the inter-RAT measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":

3> start the concerned pattern sequence immediately at that CFN.

1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in subclause 8.2.11.2.

….

Uplink and downlink compressed mode methods are described in TS 25.212. For UL "higher layer scheduling" compressed mode method and transport format combination selection, see TS 25.321.

Reference

3GPP TS 25.331 clause 8.6.6.15.

8.4.1.42.3 Test purpose

To confirm that the UE supports change of compressed mode method included in a RADIO BEARER SETUP message.

To confirm that the UE supports change of compressed mode method included in a RADIO BEARER RELEASE message.

8.4.1.42.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 on frequency f_1, cell 4 on frequency f_2 and cell 5 on frequency f_3.

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

This test case applies only for UEs requiring compressed mode to perform inter- frequency measurements and supporting both PS and CS domains.

Test Procedure

Table 8.4.1.42-1 illustrates the downlink power to be applied for the 3 cells, as well as the frequency and scrambling code for each cell.

Table 8.4.1.42-1a

Parameter	Unit	Cell 1					
Frequency		f_1					
Scrambling code		Scrambling code 1					
		T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	-60	-70	-70	-60	-70	-70

Table 8.4.1.42-1b

Parameter	Unit	Cell 4						Cell 5					
Frequency		f_2						f_3					
Scrambling code		Scrambling code 3						Scrambling code 2					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	-95	-60	-60	-60	-60	-60	-95	-95	-60	-95	-95	-60

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to download compressed mode parameters in the UE but without activating compressed mode. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

The SS waits for 2560 ms for the UE to activate compressed mode.

At instant T1, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

The SS initiates an MT CS call, establishes a CS domain RAB and changes the compressed mode method to (from HLS to SF/2), by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T2, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

At instant T3, the downlink power is changed according to what is shown in table 8.4.1.42-1.The increased quality of the used frequency should result in clearing of the concerning TRIGGERED_2B_EVENT.

The SS establishes PS domain RAB and changes compressed mode method (from SF/2 to HLS) by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T4, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, the SS releases the PS domain RAB and changes compressed mode method (from HLS to SF/2) by sending a RADIO BEARER RELEASE message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER RELEASE COMPLETE message.

At instant T5, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using HLS method) without activating compressed mode
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters
3	←		MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE and activates compressed mode

4			The SS changes the power of the cells according to column T1 in table 8.4.1.42-1.
5	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
5a	←	PAGING TYPE 2	Initiates MT CS call
5b	→	INITIAL DIRECT TRANSFER (PAGING RESPONSE)	RR
5c	←	DOWNLINK DIRECT TRANSFER (AUTHENTICATION REQUEST)	MM
5d	→	UPLINK DIRECT TRANSFER (AUTHENTICATION RESPONSE)	MM
5e	←	SECURITY MODE COMMAND	
5f	→	SECURITY MODE COMPLETE	
5g	←	DOWNLINK DIRECT TRANSFER (SET UP)	CC
5h	→	UPLINK DIRECT TRANSFER (CALL CONFIRMED)	CC
6	←	RADIO BEARER SETUP	SS establishes CS domain RAB (speech) and changes to SF/2 compressed mode method
7	→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the compressed mode method change.
7a	→	UPLINK DIRECT TRANSFER (ALERTING)	CC (This message is optional)
7b	→	UPLINK DIRECT TRANSFER (CONNECT)	CC
7c	←	DOWNLINK DIRECT TRANSFER (CONNECT ACKNOWLEDGE)	CC
8			The SS changes the power of the cells according to column T2 in table 8.4.1.42-1.
9	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
10			The SS changes the power of the cells according to T3 in table 8.4.1.42-1 (so the UE can trigger event 2b again for both frequencies if suitable conditions arise)
11	←	RADIO BEARER SETUP	SS establishes PS domain RAB and changes compressed mode method to HLS.
12	→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the compressed mode method change.
13			The SS changes the power

			of the cells according to column T4 in table 8.4.1.42-1.
14	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
15	←	RADIO BEARER RELEASE	SS releases the PS domain RAB and changes compressed mode method to SF/2.
16	→	RADIO BEARER RELEASE COMPLETE	The UE acknowledges the release of the RAB and the compressed mode method change.
17			The SS changes the power of the cells according to column T5 in table 8.4.1.42-1.
18	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

All messages shall use the same content as defined in [9] TS 34.108 clause 9, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 1)

Information Element	Value/Remark	Version
Activation time	Not Present	
New U-RNTI	Not Present	
New C-RNTI	Not Present	
New DSCH-RNTI	Not Present	
RRC State indicator	CELL_DCH	
UTRAN DRX cycle length coefficient	Not Present	
CN information info	Not Present	
URA identity	Not Present	
Downlink counter synchronisation info	Not Present	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
CHOICE *channel requirement*	Not Present	
CHOICE *mode*	FDD	
- Downlink PDSCH information	Not Present	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	Not Present	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	

- TGD	0	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity mode	Not Present	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	
Downlink information for each radio link	Not Present	

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_3
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present

- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm
- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

MEASUREMENT REPORT (Step 5,14)

Information Element	Value/Remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	
- Inter-frequency measured results list	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- UTRA carrier RSSI	Check that this IE is absent

- Inter-frequency cell measurement results	Check that the value of this IE is set to 1 cell reported
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3

PAGING TYPE 2 (Step 5a)

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

RADIO BEARER SETUP (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Speech to CELL_DCH from CELL_DCH in CS", with the following modifications:

Information Element	Value/Remark	Version

- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	

MEASUREMENT REPORT (Step 9,18)

Information Element	Value/Remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	
- Inter-frequency measured results list	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that the value of this IE is set to 1 cell reported
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_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
- Frequency info	

-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that the value of this IE is set to 1 cell reported
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)

RADIO BEARER SETUP (Step 11)

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

Information Element	Value/Remark	Version

- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	

RADIO BEARER RELEASE (Step 15)

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

Information Element	Value/Remark	Version

- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	

8.4.1.42.5 Test Requirement

After step 1, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of compressed mode parameters that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 1.

After step 4, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2. That message shall only include cell 4 within the IE event results.

After step 6, the UE shall send a RADIO BEARER SETUP COMPLETE message to the SS to acknowledge the establishment of the RAB and the change of compressed mode method that were included in the RADIO BEARER SETUP message of step 6.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3.

After step 11, the UE shall send a RADIO BEARER SETUP COMPLETE message to acknowledge the establishment of the RAB and the compressed mode method change that were included in the RADIO BEARER SETUP message of step 11.

After step 13, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2. That message shall only include cell 4 within the IE event results.

After step 15, the UE shall send a RADIO BEARER RELEASE COMPLETE message to acknowledge the release of the RAB and the compressed mode method change that were included in the RADIO BEARER RELEASE message of step 15.

After step 17, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3.

8.4.1.43 Measurement Control and Report: Compressed Mode Reconfiguration

8.4.1.43.1 Definition

8.4.1.43.2 Conformance requirement

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):

2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive" at the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE1: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

NOTE2: The deactivation of pattern sequences only occurs as a result of RRC messages received by the UE, i.e. the UE does not set the "Current TGPS Status Flag" to "inactive" after the final gap of a finite length pattern sequence.

1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";

1> update into the variable TGPS_IDENTITY the configuration information defined by IE group" transmission gap pattern sequence configuration parameters ";

1> after the instant in which the message is to be executed, as specified in subclause 8.6.3.1:

2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in the variable TGPS_IDENTITY is set to "activate" at the time indicated by IE "TGCFN"; and

2> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "active".

NOTE1: If the pattern is activated with a message that includes the IE "Activation time", and if the CFN value indicated by the IE "Activation Time" and the CFN value indicated by the TGCFN are included in the same TTI (but not at the TTI boundary) common to all the transport channels that are multiplexed onto the reference CCTrCh (as defined in subclause 8.6.3.1), and if the CFN value indicated by the TGCFN is equal or higher than the CFN value indicated by the IE "Activation Time" (as defined in subclause 8.6.3.1) value, the UE behaviour is not specified.

NOTE2: If the pattern is activated with a message used to perform timing re-initialised hard handover, the UE can start evaluating the activation of the pattern (i.e. compare the value of the CFN in the new configuration with the value of the TGCFN) at any time between the message activation time and the completion of the synchronisation procedure A.

2> if the IE "DPCH compressed mode info" is included in a message used to perform a Hard Handover with change of frequency (see subclause 8.3.5); or

2> if the IE "DPCH compressed mode info" is included in a message used to transfer the UE from Cell_FACH to Cell_DCH, and the cell in which the UE transited from CELL_FACH state is not included in the active set for the CELL_DCH state (see subclause 8.4.1.7.2):

3> not begin the inter-frequency measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence.

2> else:

3> begin the inter-frequency measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence.

2> begin the inter-RAT measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":

3> start the concerned pattern sequence immediately at that CFN.

1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in subclause 8.2.11.2.

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

1> if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IEs "TGMP" and "Current TGPS Status Flag" in variable TGPS_IDENTITY):

2> set the variable CONFIGURATION_INCOMPLETE to TRUE.

1> if there is any pending "TGPS reconfiguration CFN" or any pending "TGCFN":

2> the UE behaviour is unspecified.

1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):

2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use;

3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive" at the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:

3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE1: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

NOTE2: The deactivation of pattern sequences only occurs as a result of RRC messages received by the UE, i.e. the UE does not set the "Current TGPS Status Flag" to "inactive" after the final gap of a finite length pattern sequence.

1> after the instant in which the message is to be executed, as specified in subclause 8.6.3.1:

2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate" at the time indicated by IE "TGCFN"; and

NOTE1: If the pattern is activated with a message that includes the IE "Activation time", and if the CFN value indicated by the IE "Activation Time" and the CFN value indicated by the TGCFN are included in the same TTI (but not at the TTI boundary) common to all the transport channels that are multiplexed onto the reference CCTrCh (as defined in subclause 8.6.3.1), and if the CFN value indicated by the TGCFN is equal or higher than the CFN value indicated by the IE "Activation Time" (as defined in subclause 8.6.3.1) value, the UE behaviour is not specified.

NOTE2: If the pattern is activated with a message used to perform timing re-initialised hard handover, the UE can start evaluating the activation of the pattern (i.e. compare the value of the CFN in the new configuration with the value of the TGCFN) at any time between the message activation time and the completion of the synchronisation procedure A.

2> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "active".

2> if the IE "DPCH compressed mode info" is included in a message used to perform a Hard Handover with change of frequency (see subclause 8.3.5); or

2> if the IE "DPCH compressed mode info" is included in a message used to transfer the UE from Cell_FACH to Cell_DCH, and the cell in which the UE transited from CELL_FACH state is not included in the active set for the CELL_DCH state (see subclause 8.4.1.7.2):

3> not begin the inter-frequency measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence.

2> else:

3> begin the inter-frequency measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence.

2> begin the inter-RAT measurement reporting corresponding to the pattern sequence measurement purpose of each activated pattern sequence;

2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":

3> start the concerned pattern sequence immediately at that CFN.

For transmission gap pattern sequences stored in variable TGPS_IDENTITY, but not identified in IE "TGPSI" (either due to the absence of the IE "DPCH compressed mode info" in the received message or due to not receiving the corresponding TGPSI value in the IE "DPCH compressed mode info"), the UE shall:

1> if the received message implies a timing re-initialised hard handover (see subclause 8.3.5.1):

2> deactivate such transmission gap pattern sequences at the beginning of the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message; and

2> set IE "Current TGPS Status Flag" in corresponding UE variable TGPS_IDENTITY to 'inactive'.

1> if the received message not implies a timing re-initialised hard handover (see subclause 8.3.5.1):

2> continue such transmission gap pattern sequence according to IE "Current TGPS Status Flag" in the corresponding UE variable TGPS_IDENTITY.

Uplink and downlink compressed mode methods are described in [27]. For UL "higher layer scheduling" compressed mode method and transport format combination selection, see [15].

Reference

3GPP TS 25.331 clause 8.6.6.15.

8.4.1.43.3 Test purpose

To confirm that the UE supports de- activation of compressed mode included in a RADIO BEARER SETUP message.

To confirm that the UE supports reconfiguration of transport channel parameters (rate reduction PS RAB) and change of compressed mode method included in a TRANSPORT CHANNEL RECONFIGURATION message.

To confirm that the UE supports change of compressed mode included in a RADIO BEARER RELEASE message.

To confirm that the UE supports reconfiguration of transport channel parameters (rate increase PS RAB) without performing hard handover included in a TRANSPORT CHANNEL RECONFIGURATION message.

8.4.1.43.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 on frequency f_1, cell 4 on frequency f_2 and cell 5 on frequency f_3.

UE: "CS-DCCH + DTCH_DCH" (state 6-9) as specified in clause 7.4 of TS 34.108.

This test case applies only for UEs requiring compressed mode to perform inter- frequency measurements and supporting both PS and CS domains.

Test Procedure

Table 8.4.1.43-1 illustrates the downlink power to be applied for the 3 cells, as well as the frequency and scrambling code for each cell.

Table 8.4.1.43-1a

Parameter	Unit	Cell 1					
Frequency		f_1					
Scrambling code		Scrambling code 1					
		T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	-60	-70	-70	-60	-70	-70

Table 8.4.1.43-1b

Parameter	Unit	Cell 4						Cell 5					
Frequency		f_2						f_3					
Scrambling code		Scrambling code 3						Scrambling code 2					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	-95	-60	-60	-95	-60	-60	-95	-95	-60	-95	-95	-60

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

Next, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to download compressed mode parameters in the UE without activating compressed mode. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b) and activates compressed mode, by sending a MEASUREMENT CONTROL message to the UE.

The SS waits for 2560 ms for the UE to activate compressed mode.

The test operator is prompted to setup a PS call. The SS establishes a PS domain RAB and de-activates compressed mode, by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T1, the downlink power is changed according to what is shown in table 8.4.1.43-1. The SS shall then verify that the UE does not transmit a MEASUREMENT REPORT message.

Next the SS downloads compressed mode parameters and activates compressed mode (using HLS method) by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to reconfigure transport channel parameters (rate reduction PS RAB) and to change compressed mode method (to SF/2). The UE shall answer with a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message.

At instant T2, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

At instant T3, the downlink power is changed according to what is shown in table 8.4.1.43-1.The increased quality of the used frequency should result in clearing of the concerning TRIGGERED_2B_EVENT.

Next, SS transmits a RADIO BEARER RELEASE message to release the CS domain RAB and change compressed mode method (from SF/2 to HLS). The UE shall answer with a RADIO BEARER RELEASE COMPLETE message.

At instant T4, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to reconfigure transport channel parameters (rate increase PS RAB) – without performing hard handover. The UE shall answer with a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message.

At instant T5, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using SF/2 method) without activating compressed mode.
2	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters.
3	←		MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE and activates compressed mode.
3a				SS waits for 2560 ms.
3b	→		INITIAL DIRECT TRANSFER (SERVICE REQUEST)	GMM (Session setup is initiated for multi call from UE side).
3c	←		DOWNLINK DIRECT TRANSFER (AUTHENTICATION AND CIPHERING REQUEST)	GMM
3d	→		UPLINK DIRECT TRANSFER (AUTHENTICATION AND CIPHERING RESPONSE)	GMM
3e	←		SECURITY MODE COMMAND	
3f	→		SECURITY MODE COMPLETE	
3g	→		UPLINK DIRECT TRANSFER (ACTIVATE PDP CONTEXT REQUEST)	SM
4	←		RADIO BEARER SETUP	SS establishes PS domain RAB and de- activates compressed mode.
5	→		RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the de- activation of

			compressed mode
5a	←	DOWNLINK DIRECT TRANSFER (ACTIVATE PDP CONTEXT ACCEPT)	SM
6			The SS changes the power of the cells according to column T1 in table 8.4.1.43-1.
7			SS verifies that the UE does not transmit a MEASUREMENT REPORT message to the SS.
8	←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using HLS method) and activates compressed mode.
9	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters and the activation of compressed mode.
10	→	MEASUREMENT REPORT	Frequency f2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
11	←	TRANSPORT CHANNEL RECONFIGURATION	SS reconfigures transport channel parameters (rate reduction PS RAB) and changes compressed mode method to SF/2. Rate should be reduced to 0 kbps – no PS RAB room left to use for gap.
12	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the transport channel reconfiguration and the change of compressed mode method
13			The SS changes the power of the cells according to column T2 in table 8.4.1.43-1.
14	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
15			The SS changes the power of the cells according to T3 in table 8.4.1.43-1 (so the UE can trigger event 2b again for both frequencies).
16	←	RADIO BEARER RELEASE	SS releases the CS domain RAB and changes compressed mode method to HLS.
17	→	RADIO BEARER RELEASE COMPLETE	The UE acknowledges the release of the RAB and the compressed mode method

			change.
18			The SS changes the power of the cells according to column T4 in table 8.4.1.43-1.
19	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
20	←	TRANSPORT CHANNEL RECONFIGURATION	SS reconfigures transport channel parameters (rate increase PS RAB) – without performing hard handover.
21	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the transport channel parameters change.
22			The SS changes the power of the cells according to column T5 in table 8.4.1.43-1.
23	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

All messages shall use the same content as defined in [9] TS 34.108 clause 9, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 1)

Information Element	Value/Remark	Version
Activation time	Not Present	
New U-RNTI	Not Present	
New C-RNTI	Not Present	
New DSCH-RNTI	Not Present	
RRC State indicator	CELL_DCH	
UTRAN DRX cycle length coefficient	Not Present	
CN information info	Not Present	
URA identity	Not Present	
Downlink counter synchronisation info	Not Present	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
CHOICE *channel requirement*	Not Present	
CHOICE *mode*	FDD	
- Downlink PDSCH information	Not Present	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	Not Present	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Deactivate	
- TGCFN	Not present	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	

- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity mode	Not Present	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	
Downlink information for each radio link	Not Present	

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_3
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2

- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm
- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN + (256 – TTI/10msec))mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256

RADIO BEARER SETUP (Step 4)

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

Information Element	Value/Remark
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	De-activate
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 8)

Information Element	Value/Remark	Version
Activation time	Not Present	
New U-RNTI	Not Present	
New C-RNTI	Not Present	

New DSCH-RNTI	Not Present	
RRC State indicator	CELL_DCH	
UTRAN DRX cycle length coefficient	Not Present	
CN information info	Not Present	
URA identity	Not Present	
Downlink counter synchronisation info	Not Present	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
CHOICE *channel requirement*	Not Present	
CHOICE *mode*	FDD	
- Downlink PDSCH information	Not Present	
Downlink information common for all radio links		
- Downlink DPCH info common for all RL	Not Present	
- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity mode	Not Present	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	
Downlink information for each radio link	Not Present	

MEASUREMENT REPORT (Step 10,19)

Information Element	Value/Remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2

Measured Results	
- Inter-frequency measured results list	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that the value of this IE is set to 1 cell reported
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3

TRANSPORT CHANNEL RECONFIGURATION (Step 11)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in 34.108 [9], with the following exceptions:

Information Element	Value/remark	Version
UL Transport channel information for all transport channels	Do not include TFCs with TF's other than TF0 for PS RAB	
Added or Reconfigured UL TrCH information	Reconfigure PS RAB TFS, only include TF0	
DL Transport channel information common for all transport channel	Do not include TFCs with TF's other than TF0 for PS RAB	
Added or Reconfigured DL TrCH information	Reconfigure PS RAB TFS, only include TF0	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
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	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Uplink compressed mode method	SF/2(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	
- TX Diversity mode	Not Present	
- SSDT information	Not Present	
- Default DPCH Offset Value	Not Present	

MEASUREMENT REPORT (Step 14,23)

Information Element	Value/Remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	
- Inter-frequency measured results list	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3

- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that the value of this IE is set to 1 cell reported
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_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
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- UTRA carrier RSSI	Check that this IE is absent
- Inter-frequency cell measurement results	Check that the value of this IE is set to 1 cell reported
- Cell measured results	
- Cell Identity	Check that this IE is absent
- SFN-SFN observed time difference	Check that this IE is absent
- Cell synchronisation information	Check that this IE is absent
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)
- CPICH Ec/N0	Check that this IE is absent
- CPICH RSCP	Check that this IE is present
- Pathloss	Check that this IE is absent
Measured results on RACH	Check that this IE is absent
Additional measured results	Check that this IE is absent
Event results	
- Inter-frequency measurement event results	
- Inter-frequency event identity	2b
- Inter-frequency cells	
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)
- Frequency info	
-CHOICE mode	FDD
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance)
- UARFCN downlink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
- Non freq related measurement event results	
- Primary CPICH info	
- Primary scrambling code	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)

RADIO BEARER RELEASE (Step 16)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Non speech in CS" or "Speech in CS", with the following modifications:

Information Element	Value/Remark	Version

- DPCH compressed mode info		
- TGPSI	1	
- TGPS Status Flag	Activate	
- TGCFN	(Current CFN + (256 – TTI/10msec))mod 256	
- Transmission gap pattern sequence configuration parameters		
- TGMP	FDD Measurement	
- TGPRC	Infinity	
- TGSN	4	
- TGL1	7	
- TGL2	Not Present	
- TGD	undefined	
- TGPL1	3	
- TGPL2	Not Present	R99 and REL-4 only
- RPP	Mode 0	
- ITP	Mode 0	
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)	
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)	
- Downlink frame type	B	
- DeltaSIR1	2.0	
- DeltaSIRAfter1	1.0	
- DeltaSIR2	Not Present	
- DeltaSIRAfter2	Not Present	
- N identify abort	Not Present	
- T Reconfirm abort	Not Present	

TRANSPORT CHANNEL RECONFIGURATION (Step 20)

The content of the TRANSPORT CHANNEL RECONFIGURATION message at this step is identical to the message sub-type titled "Packet to CELL_DCH from CELL_DCH in PS" in 34.108 [9].

8.4.1.43.5 Test Requirement

After step 1, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters without activating compressed mode that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 1.

After step 4, the UE shall send a RADIO BEARER SETUP COMPLETE message to acknowledge the establishment of the PS domain RAB and the de- activation of compressed mode that were included in the RADIO BEARER SETUP message of step 4.

After step 6, the UE shall not transmit a MEASUREMENT REPORT message.

After step 8, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters and the activation of compressed mode that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 8.

After step 9, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2. That message shall only include cell 4 within the IE event results.

After step 11, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the change of transport channel parameters and the change of compressed mode method that were included in the TRANSPORT CHANNEL RECONFIGURATION message of step 11.

After step 13, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3.

After step 17, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message to the SS to acknowledge the release of the RAB and the change of compressed mode method that were included in the RADIO BEARER RELEASE message of step 17.

After step 18, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2. That message shall only include cell 4 within the IE event results.

After step 20, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the change of transport channel parameters that were included in the TRANSPORT CHANNEL RECONFIGURATION message of step 20.

After step 22, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3.

<End of modified section>

3GPP TSG-R5 Meeting #27
Bath, 25th – 29th April, 2005

Tdoc ⌘R5-050935

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1192** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to Package 3 RRC test case 8.4.1.37
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	25/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	According to **34.123-1 section 8.4.1.37.4:** Measurement Control message at step 2 shall be sent with Time to Trigger IE set as '0'. In the TTCN implementation continuous '0' bits are sent to UE in TPC Command to bring the UE Tx power to the minimum value. Once UE Tx Power reaches the minimum possible value, the UE shall trigger a measurement report. However, the UE transmission power will be increased when the measurement report is transmitted, but subsequent '0' bits in TPC Command will bring the UE Tx power again back to minimum value. This will again trigger another Measurement event in UE and will result in UE sending multiple Measurement reports at step 4 of the test case.
Summary of change:	⌘	Following changes are made to **34.123-1** section **8.4.1.37.4**: 1. Specific message contents of Measurement control message at step 2 is modified to change the value of IE Time to trigger to 10. 2. Step 4 in the Expected message sequence is modified to expect a measurement report after 10msec.
Consequences if not approved:	⌘	Test case may trigger multiple number of unexpected messages in a conformant UE.

Clauses affected:	⌘	8.4.1.37.4
Other specs	⌘	Y: ☐ N: [X] Other core specifications ⌘

affected:	X	Test specifications	34.123-3
	X	O&M Specifications	
Other comments:	⌘	This Test Case requires TTCN Change.	

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 >>

8.4.1.37 Measurement Control and Report: UE internal measurement, event 6c

8.4.1.37.1 Definition

8.4.1.37.2 Conformance requirement

When this event is ordered by UTRAN in a measurement control message, the UE shall send a measurement report when the UE Tx power reaches its minimum value.

Reference

3GPP TS 25.331 clause 14.6.2.3.

8.4.1.37.3 Test Purpose

1. To confirm that the UE sends a measurement report for event 6c when the UE Tx power reaches its minimum value when event 6c has been configured in the UE through a MEASUREMENT CONTROL message.

8.4.1.37.4 Method of test

Initial Condition

System simulator: 1 UTRAN cell.

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

Test procedure

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

The SS sends a MEASUREMENT CONTROL message to the UE that configures event 6c.

For FDD and 1.28 Mcps TDD: The SS sends TPC_cmd equal to -1 until the transmitter power of the UE reaches its minimum value.

For 3.84 Mcps TDD: The SS sets the ISCP reported for the timeslot containing the uplink DPCH to the minimum reportable value (< -120)

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to the CELL_DCH state in the cell 1.
2	←		MEASUREMENT CONTROL	SS configures event 6c in the UE.
3	←			For FDD and 1.28 Mcps TDD: The SS sends TPC_cmd equal to -1 until the transmitter power of the UE reaches its minimum value, which shall be below –50 dBm.
3a	←			For 3.84 Mcps TDD: The SS sets the ISCP reported for the timeslot containing the uplink DPCH to the minimum reportable value (< -120)
4	→		MEASUREMENT REPORT	After about 10 ms, t~~T~~he UE sends a MEASUREMENT REPORT to SS triggered by event 6c.
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

MEASUREMENT CONTROL (Step 2) (FDD)

Information Element	Value/remark
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event triggered
Additional measurements list	Not Present
CHOICE measurement type	
- UE internal measurement	
- UE internal measurement quantity	UE Transmitter Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted power	TRUE
CHOICE mode	
- UE Rx-Tx time difference	FALSE
CHOICE report criteria	
- UE internal measurement reporting criteria	
- Parameters sent for each UE internal measurement event	1 event
- UE internal event identity	event 6c
- Time to trigger	~~0~~10

MEASUREMENT CONTROL (Step 2)(1.28 Mcps TDD)

Information Element	Value/remark
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- CHOICE *mode*	TDD
- measurement quantity	UE Transmitter Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted power	TRUE
- CHOICE mode	TDD
- CHOICE TDD option	1.28 Mcps TDD
- T_{ADV} info	FALSE
- CHOICE report criteria	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
- UE internal event identity	6c
- Time to trigger	0

MEASUREMENT CONTROL (Step 2) (3.84 Mcps TDD)

Information Element	Value/remark
Measurement Identity	6
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- CHOICE *mode*	TDD
- measurement quantity	UE Transmitter Power
- Filter coefficient	0
- UE internal reporting quantity	
- UE Transmitted power	TRUE
- CHOICE mode	TDD
- CHOICE TDD option	3.84 Mcps TDD
- Applied TA	FALSE
- CHOICE report criteria	UE internal measurement reporting criteria
- Parameters sent for each UE internal measurement event	
- UE internal event identity	6c
- Time to trigger	0

MEASUREMENT REPORT (Step 4) (FDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "UE internal measurement"
- UE internal measured results	
- UE Transmitted Power	Check that this IE is set a value that is equal to –50 dBm.
- UE Rx-Tx report entities	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6c
CHOICE *mode*	
Primary CPICH info	This IE should not be included

MEASUREMENT REPORT (Step 4) (1.28 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "UE internal measured results "
-CHOICE *mode*	Check to see if set to TDD
- UE Transmitted Power	Check that this IE is set a value that is below –49 dBm.
- CHOICE TDD option	Check to see if set to"1.28 Mcps TDD"
- T_{ADV}	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6c

MEASUREMENT REPORT (Step 4) (3.84 Mcps TDD)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "UE internal measured results "
-CHOICE *mode*	Check to see if set to TDD
- UE Transmitted Power	Check that this IE is set a value that is below –45 dBm.
- CHOICE TDD option	Check to see if set to"3.48 Mcps TDD"
- Applied TA	Check that this IE is not included
Measured results on RACH	Check that this IE is not included
Additional measured results	Check that this IE is not included
Event Results	
CHOICE *event result*	Check that this IE is set to UE internal measurement event results
UE internal measurement results	
UE internal event identity	Check that this IE is set to 6c

8.4.1.37.5 Test requirement

The UE shall then begin transmitting a MEASUREMENT REPORT message to SS triggered by event 6c when its transmit power has reached its minimum output power. The minimum transmitted power of the UE shall be less than –50dBm.(for FDD), -49dBm (for 1.28 Mcps TDD), and -45dBm (for 3.84 Mcps TDD)

<< END OF MODIFIED SECTION >>

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CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1193** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Clarification of Cell 3 CPICH level for "Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)", Test 8.4.1.5
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	15/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	In the initial conditions for test 8.4.1.5 Cell 1 and cell 2 are active, while cell 3 is switched off. However table 8.4.1.5-1 calls for a specific cell CPICH level at –122dBm/3.84MHz. This is inconsistent. A similar level is also specified in test 8.4.1.5A.
Summary of change:	⌘	a) Change cell 3 CPICH level at T0 in table 8.4.1.5-1 to be "off". b) Change cell 3 CPICH level at T0 in table 8.4.1.5A-1 to be "off".
Consequences if not approved:	⌘	The System Simulator will aim to set Cell 3 at T0 to a specific level, which is not the intention of the test. The requirement for an "off" cell in 34.108 v 5.4.0 table 6.1.4 is for the CPICH of an "off" cell to be ≤ -122dBm/3.84MHz. A nominal level of -122dBm/3.84MHz could violate this when uncertainties are taken into account.

Clauses affected:	⌘	8.4.1.5.4 and 8.4.1.5A.4.			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	This CR does not have impact on the TTCN.			

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

8.4.1.5 Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)

8.4.1.5.1 Definition

8.4.1.5.2 Conformance requirement

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

1> stop intra-frequency type measurement reporting;

1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or

1> if the transition is not due to a reconfiguration message:

2> delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY.

1> begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331).

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

1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;

1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH:

2> resume the measurement reporting.

1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331);

2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331):

3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5.3 Test Purpose

1. To confirm that the UE stops performing intra-frequency measurement reporting specified in a MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state.

2. To confirm that the UE reads the System Information Block type 11 or 12 messages when it enters CELL_FACH state from CELL_DCH state, and starts to monitor the cells listed in the IE "intra-frequency cell info list".

3 To confirm that the UE performs measurements on uplink RACH transmissions and appends the measured results in RACH messages, when it receives IE "intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" in the System Information Block type 11 or 12 messages.

4. To confirm that the UE applies the reporting criteria in IE "intra-frequency reporting criteria" in System Information Block Type 11 or 12 messages following a state transition from CELL_FACH to CELL_DCH, if no intra-frequency measurements applicable to CELL_DCH are stored.

8.4.1.5.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, while cell 3 is switched off..

SYSTEM INFORMATION BLOCK TYPE 1 (see specific message contents).

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

System Information Block type 11

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

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.5-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1 are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.5-1

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
CPICH Ec	dBm/ 3.84 MHz	-60	-60	-70	-85	OFF~~-122~~	-70

The UE is initially in CELL_DCH state. The System Information Block type 11 message is modified compared to the default message contents, in order to prevent the reporting of "Cell synchronisation information". No measurement to be applied by the UE in CELL_DCH state is specified in any of the System Information Block type 11 or 12 messages.

SS sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement for the measurement of cell 2's CPICH RSCP. At the same time, reporting of CPICH RSCP values of active set cells and monitored set cells are requested with the reporting criteria set to "periodic reporting" and "reporting interval" set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.
SS transmits PHYSICAL CHANNEL RECONFIGURATION message to move the UE to CELL_FACH. After receiving this message, the UE shall reconfigure itself and reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS starts T305 timer and SS monitors the uplink channels to verify that no MEASUREMENT REPORT messages are received.

SS reconfigures itself according to the settings in columns marked "T1" in table 8.4.1.5-1. SS transmits System Information Block type 12 messages in cell 1, which include cell 3 into the IE "intra-frequency cell info list" and modifies SIB11 to indicate that SIB12 is now being broadcast. IEs "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in the System Information Type 12 messages. Event type 1a reporting criterion is specified for intra-frequency measurements. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits until T305 has expired. The UE shall respond with a CELL UPDATE message, which comprises IE "Measured results on RACH" to report the readings of CPICH RSCP for cell 1 and cell 3. SS replies with CELL UPDATE CONFIRM message on the downlink DCCH. This message does not change the physical resources nor allocate any new RNTI identities. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, and configures dedicated physical channel for both uplink and downlink directions. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages.

SS shall receive the MEASUREMENT REPORT messages at 500 milliseconds interval.

SS verifies that it includes CPICH RSCP values of the cells 1and 3 in IE "Cell measured results" and the triggering of event '1a' on cell 3 in IE "Event results".

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

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in PS-DCCH+DTCH_DCH (state 6-10) in cell 1.
2			Void	
3			Void	
4			Void	
5	←		MEASUREMENT CONTROL	SS requests for measurement of cell 2´s CPICH RSCP value and reporting of CPICH RSCP values of active cells and monitored set cells.
6	→		MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval.
7	←		PHYSICAL CHANNEL RECONFIGURATION	SS moves the UE to CELL_FACH state.
8	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state. SS starts T305 timer.
9	←		Master Information Block System Information Block type 11, 12	SS reconfigures itself according to the settings stated in column "T1" of table 8.4.1.5-1. SIB 11 is modified to indicate that SIB12 is now broadcast and to add cell 2 as a neighbour cell. SIB 12 indicates that cell 3 is included in the IE "intra-frequency cell info list". SS waits for 1 minute and verifies that no MEASUREMENT REPORT messages are detected on the uplink.
10	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits until T305 has expired.
11	→		CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and cell 3 present in this message.
12	←		CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
13	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
14	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.

Step	Direction		Message	Comment
	UE	SS		
15	→		MEASUREMENT REPORT	Repeated at 500 milliseconds interval

Specific Message Content

System Information Block type 1 (FDD)

Use the default system information block with the same type specified in clause 6.1 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- UE Timers and constants in connected mode	
- T312	2

MEASUREMENT CONTROL (Step 5)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 6)

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

PHYSICAL CHANNEL RECONFIGURATION (Step 7)

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

MASTER INFORMATION BLOCK (Step 9)

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

Information Element	Value/Remarks
MIB Value Tag	A value that is different from the previous MIB value tag

System Information Block type 11 (Step 9)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1

- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin	-20dB
- Qrxlevmin	-115dBm
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present

- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 9)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	6
- Intra-frequency cell cells	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	0dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	FDD
- Reporting quantity	CPICH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting range constant	14.5dB
- Cells forbidden to affect reporting	Not present

- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	7
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting Interval	500 milliseconds
- Reporting cell status	
- CHOICE *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
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not present

SYSTEM INFORMATION CHANGE INDICATION (Step 10)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value tag	A value that is different from the previous MIB value tag

CELL UPDATE (Step 11)

Information Element	Value/remark
U-RNTI	Check to see if set to the same value assigned during the execution of procedure P3 or P5.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if it is set to "Periodical cell update"
Failure case	Check to see if it is absent
Measured results on RACH	
- Measurement result for current cell	
- CHOICE measurement quantity	Check to see if set to "CPICH RSCP"
- CPICH RSCP	Check to see if it is present
- Measurement results for monitored cells	
- SFN-SFN observed time difference	Check to see if it is absent
- Primary CPICH info	
- Primary scrambling code	Check to see if the same as cell 3's code.
- CHOICE measurement quantity	Check to see if set to "CPICH RSCP"
- CPICH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

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

MEASUREMENT REPORT (Step 15)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	

- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 1
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if it's the same code for cell 3
- CPICH Ec/No	Check to see if this IE is absent
- CPICH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1a'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'FDD'
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code for cell 3

8.4.1.5.5 Test Requirement

After step 5, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's CPICH RSCP value.

After step 8, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 5.

After step 10, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values CPICH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".

After step 14, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 9. It shall send MEASUREMENT REPORT messages at 500 milliseconds interval. In

these messages, triggering of event '1a' shall be reported in IE "Event results" with IE "Primary CPICH info" containing the primary scrambling code for cell 3.

The message shall contain IE "measured result" to report CPICH RSCP values of cell 1and 3.

8.4.1.5A Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)

8.4.1.5A.1 Definition

8.4.1.5A.2 Conformance requirement

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

1> stop intra-frequency type measurement reporting;

1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or

1> if the transition is not due to a reconfiguration message:

2> delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY.

1> begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331).

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5A.3 Test Purpose

1. To confirm that the UE stops performing intra-frequency measurement reporting specified in a MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state.

2. To confirm that the UE reads the System Information Block type 11 or 12 messages when it enters CELL_FACH state from CELL_DCH state, and starts to monitor the cells listed in the IE "intra-frequency cell info list".

3 To confirm that the UE performs measurements on uplink RACH transmissions and appends the measured results in RACH messages, when it receives IE "intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" in the System Information Block type 11 or 12 messages.

4. To confirm that the UE applies the reporting criteria in IE "intra-frequency reporting criteria" in System Information Block Type 11 or 12 messages following a state transition from CELL_FACH to CELL_DCH, if no intra-frequency measurements applicable to CELL_DCH are stored.

8.4.1.5A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, while cell 3 is switched off.

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For MASTER IFORMATION BLOCK and system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

MASTER INFORMATION BLOCK

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

Information Element	Value/Remarks
MIB Value Tag	1

System Information Block type 11

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

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present

- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.5A-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while column marked as "T1" will be applied during the test.

Table 8.4.1.5A-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
PCCPCH RSCP	dBm	-60	-60	-70	-75	-85	-85	OFF ~~-122~~	-70	-60

The UE is initially in CELL_DCH state. The System Information Block type 11 message is modified compared to the default message contents, in order to prevent the reporting of "Cell synchronisation information". No measurement to be applied by the UE in CELL_DCH state is specified in any of the System Information Block type 11 or 12 messages.

SS sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement for the measurement of cell 2's PCCPCH RSCP. At the same time, reporting of PCCPCH RSCP values of active set cells and monitored set cells are requested with the reporting criteria set to "periodic reporting" and "reporting interval" set to 16 seconds. The UE shall start transmitting MEASUREMENT REPORT messages at 16 seconds interval corresponding to the requested reporting event.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message to move the UE to CELL_FACH. After receiving this message, the UE shall reconfigure itself and reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS monitors the uplink channels to verify that no MEASUREMENT REPORT messages are received.

SS reconfigures itself according to the settings in columns marked "T1" in table 8.4.1.5A-1. SS transmits System Information Block type 12 messages in cell 1, which include cell 3 into the IE "intra-frequency cell info list" and modifies SIB11 to indicate that SIB12 is now being broadcast. IEs "Intra-frequency reporting quantity for RACH Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in the System Information Type 12 messages. Event type 1g reporting criterion is specified for intra-frequency measurements. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits until T305 has expired. The UE shall respond with a CELL UPDATE message, which comprises IE "Measured results on RACH" to report the readings of PCCPCH RSCP for cell 1 and cell 3. SS replies with CELL UPDATE CONFIRM message on the downlink DCCH. This message does not change the physical resources nor allocate any new RNTI identities. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, and configures dedicated physical channel for both uplink and downlink directions. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages.

SS reconfigures itself according to the settings in columns marked "T2" in table 8.4.1.5A-1. Event 1g is triggered since the best cell is changed to cell 3 from cell 1.

SS shall receive the MEASUREMENT REPORT messages.

SS verifies that it includes PCCPCH RSCP values of the cells 1, 2 and 3 in IE "Cell measured results" and the triggering of event '1g' on cell 3 in IE "Event results".

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in PS-DCCH+DTCH_DCH (state 6-10) in cell 1.
2	←		MEASUREMENT CONTROL	SS requests for measurement of cell 2´s PCCPCH RSCP value and reporting of PCCPCH RSCP values of active cell and monitored set cell.
3	→		MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval.
4	←		PHYSICAL CHANNEL RECONFIGURATION	SS moves the UE to CELL_FACH state.
5	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE reaches CELL_FACH state.
6	←		Master Information Block System Information Block type 11, 12	SS reconfigures itself according to the settings stated in column "T1" of table 8.4.1.5A-1. SIB 11 is modified to indicate that SIB12 is now broadcast and includes cell 2 as a neighbour cell. SIB 12 indicates that cell 3 is included in the IE "intra-frequency cell info list". Event 1g is also configured for cell 3. SS waits for 1 minute and verifies that no MEASUREMENT REPORT messages are detected on the uplink.
7	←		SYSTEM INFORMATION CHANGE INDICATION	SS waits until T305 has expired.
8	→		CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and cell 3 present in this message.
9	←		CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
10	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
11	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
11a				SS reconfigures itself according to the settings stated in column “T2” of table 8.4.1.5A-1.

Step	Direction		Message	Comment
	UE	SS		
12	→		MEASUREMENT REPORT	The UE shall report event 1G for change to best cell, cell3.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 2
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE mode	TDD
- Measurement quantity list	
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE

CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent

- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 1
- Proposed TGSN	Check to see if this IE is absent
- Primary CCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Timeslot list	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 2
- Proposed TGSN	Check to see if this IE is absent
- Primary CCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Timeslot list	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured result list	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

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

MASTER INFORMATION BLOCK (Step 6)

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

Information Element	Value/Remarks
MIB Value Tag	2

System Information Block type 11 (Step 6)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	

- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103 dBm
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	

- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	6
- Intra-frequency cell cells	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.3 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- $Qoffset_{s,n}$	0dB
- Maximum allowed UL TX power	30dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103dBm
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE mode - Measurement list - Measurement quantity	TDD PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	TDD
- Reporting quantity	PCCPCH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE

- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
- Reporting range constant	20.0 dB
- W	0.0
- Hysteresis	1.0 dB
- Time to trigger	60 ms
- Amount of reporting	absent
- Reporting Interval	absent
- Reporting cell status	
- CHOICE *reported cell*	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	3
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not present

SYSTEM INFORMATION CHANGE INDICATION (Step 7)

Information Element	**Value/Remarks**

BCCH modification info - MIB Value tag	 2

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to the same value assigned during the execution of procedure P3 or P5.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if it is set to "Periodical cell update"
Failure case	Check to see if it is absent
Measured results on RACH	
- Measurement result for current cell	
- SFN-SFN observed time difference - CHOICE mode - Cell parameters Id - PCCPCH RSCP - Measurement results for monitored cells	Not Checked TDD Check to see if the same as cell 1. Check to see if it is present
- SFN-SFN observed time difference	Not Checked
- CHOICE mode - Cell parameters Id	TDD Check to see if the same as cell 3.
- PCCPCH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

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

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent

- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 3
- Proposed TGSN	Check to see if this IE is absent
- Primary CCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Timeslot list	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- CHOICE mode	TDD
- Cell parameters Id	Check to see if it's the same for cell 1
- Proposed TGSN Reporting required	Check to see if this IE is absent
- Primary CCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Timeslot list	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Cell parameters Id	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1g'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'TDD'
- Cell parameters id	Check to see if it's the same for cell 3

8.4.1.5A.5 Test Requirement

After step 2, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's PCCPCH RSCP value.

After step 5, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 2.

After step 7, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values PCCPCH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".

After step 12, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 6. It shall send MEASUREMENT REPORT messages. In these messages, triggering of event '1g' shall be reported in IE "Event results" with IE " Cell parameters Id " containing the same for cell 3.

The message shall contain IE "measured result" to report PCCPCH RSCP values of cell 1, 2 and 3.

3GPP TSG-R5 Meeting #27
Bath, UK, 25th – 29th April 2005

Tdoc ⌘R5-050524

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1194** ⌘**rev** **-** ⌘ Current version: **5.b.1** ⌘

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

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

Title:	⌘	Correction to NAS MM test case 9.4.2.4 (GCF Work Item 12)
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	15/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	1) As per the expected sequence at Step 1 and Step 11 of the test case, the UE is expected to perform Periodic Location Update Procedure after 7 minutes. However, the default value of T3212 set in System information block 1 is 6 minutes. Additionally, T3212 cannot be set to 7 minutes since the value of the timer can be set with the precision of decihours. 2) As per the comments at Step 18 of the expected sequence: "The subsequent GMM attach should be rejected if received in the PS mode." However, at this point UE will not perform any GMM attach and hence the above comment is not required.
Summary of change:	⌘	1) At Step 1, Step 10 and Step 11 of the expected sequence, the reference for 7 minutes to T3212 for the periodic location update procedure is changed. 2) Removed the comment at Step 18 of the expected sequence.
Consequences if not approved:	⌘	Incorrect specification.

Clauses affected:	⌘	9.4.2.4.4			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	

	X	O&M Specifications

Other comments: ⌘ This CR does not require Prose Change.

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 >>

9.4.2.4 Location updating / rejected / roaming not allowed in this location area

9.4.2.4.1 Definition

9.4.2.4.2 Conformance requirement

1) If the network rejects a location updating from the UE with the cause "Roaming not allowed in this location area" the UE shall:

   1.1 not perform periodic updating;

   1.2 void;

   1.3 reject any request from CM entity for MM connection other than for emergency call;

   1.4 not perform IMSI detach.

2) If the network rejects a location updating from the UE with the cause "Roaming not allowed in this location area" the UE shall:

   2.1 perform normal location updating when a new location area is entered;

   2.2 accept a request for an emergency call, if it supports emergency speech call, by sending a RRC CONNECTION Request message with the establishment cause set to "emergency call";

   2.3 periodically search for its HPLMN.

3) The UE shall reset the list of "Forbidden location areas for roaming" when it is switched off or has its power source removed or when the USIM is removed.

4) The UE shall contain a list of "forbidden location areas for roaming". 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". The lists shall accommodate each 10 or more location area identifications.

Reference(s)

TS 24.008 clause 4.4.4.7.

9.4.2.4.3 Test purposes

Test purpose 1

To test that on receipt of a rejection using the Roaming cause code, the UE ceases trying to update on that cell, that this situation continues for at least one periodic location interval period, and that the corresponding list is re-set by switching off the UE or removing its power source.

Test purpose 2

To test that if no cell is available, the UE rejects a request from CM entity other than for emergency calls.

Test purpose 3

To test that at least 6 entries can be held in the list of "forbidden location areas for roaming" (the requirement in is to store at least 10 entries. This is not fully tested by the third procedure).

Test purpose 4

To test that if a cell of the Home PLMN is available then the UE returns to it in preference to any other available cell.

Test purpose 5

To test that if the USIM is removed the list of "forbidden location areas for roaming" is cleared.

9.4.2.4.4 Method of test

Initial conditions

The initial conditions shall be met before each of the different procedures.

- System Simulator:
  - for procedures 1, 2, 3 and 5: Two cells A and B, belonging to different location areas of the same PLMN with LAI a and b. The MCC of that PLMN is the same as that of the HPLMN. The MNC of that PLMN is different from that of the HPLMN;
  - for procedure 4: three cells A, B, C of the same PLMN which is not the HPLMN with 3 different location area codes. Cells should differ in signal strength by 10 dB with cell A being the strongest and cell C the weakest. There should be a 20 dB range between A and C. A should be set to a level of - 40 dBm;
  - IMSI attach/detach is allowed in every cell;
  - the T3212 time-out value is 1/10 hour in every cell,
  - for procedure 2 Sintrasearch values for cells A and B are 20 dB.
- User Equipment:
  - procedures 1, 2, 3 and 5: The UE has valid TMSI, CKSN and CK, IK. It is "idle updated" on cell B;
  - procedure 4: The UE has valid TMSI, CKSN and CK, IK. It is "idle updated" on cell A;
  - the list of "forbidden location areas for roaming" shall be empty (this may be achieved by either removing the USIM or switching the UE OFF then ON or removing the UE power source depending on ICS).

Related ICS/IXIT statement(s)

USIM removal possible while UE is powered Yes/No.

Switch off on button Yes/No.

Support of emergency speech call Yes/No.

Method to clear the list of location areas for roaming periodically.

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

Test Procedures

Procedure 1:

- The SS rejects a normal location updating with the cause value "Roaming not allowed in this location area". The RRC CONNECTION is released. The SS checks that the UE does not perform periodic location updating procedure. The UE is turned off and then on. The SS checks that the UE performs location updating on the cell on which its location update request had been rejected (this checks that the LA is not the forbidden list after switch on). This procedure is performed another time but the deletion of the list is checked while removing the USIM (instead of turning off the UE).

Procedure 2:

- The SS rejects a normal location updating with the cause value "Roaming not allowed in this location area". The RRC CONNECTION is released. The SS checks that the UE rejects a request from CM entity but supports an emergency call.

Procedure 3:

- The SS rejects a normal location updating with the cause value "Roaming not allowed in this location area". This is done for 6 different location areas. Then the SS checks that the UE does not attempt to begin a location updating procedure on the non-allowed location areas.

Procedure 4:

- The SS accepts a periodic location updating on a cell not belonging to the HPLMN. Then when the UE attempts to perform a periodic location updating to this cell, the SS rejects this location updating with the cause value "Roaming not allowed in this location area". Two cells are then available, one belonging to the HPLMN but with the weakest level. It is checked that the UE returns to its HPLMN.

Procedure 5: If USIM removal is possible while UE is powered:

- The SS rejects a normal location updating with the cause value "Roaming not allowed in this location area". The RRC CONNECTION is released. The SS checks that the UE does not perform periodic location updating procedure. The USIM is removed and inserted in the UE. The SS checks that the UE performs location updating on the cell on which its location update request had been rejected (this checks that the LA is not the forbidden list after switch on).

Different types of UE may use different methods to periodically clear the list of forbidden areas (e.g. every day at 12am) for roaming. If the list is cleared while the test is being run, it may be necessary to re-run the test.

Expected sequence

The following procedure is used during the test:

- change_LAI (x):
  - the purpose of this procedure is to change the value of Location Area Identifier of cell x;
  - the Location Area Identifier of cell x shall be changed. The code shall be chosen arbitrarily but shall be different from any previously used in this procedure. The code shall have the same MCC as the Home PLMN and shall not have the same MNC as the Home PLMN.

Procedure 1

Step	Direction		Message	Comments
	UE	SS		

			The following messages are sent and shall be received on cell A.
1	SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note).
2	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration". If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
3		Void	
4		Void	
5	→	LOCATION UPDATING REQUEST	Location Updating Type = normal.
6	←	LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
7	SS		The SS releases the RRC connection
8		Void	
9	SS		The SS waits at least 7 minutes for a possible location updating.
10	UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B.
11	UE		If possible (see ICS) the UE is switched off. Otherwise if possible the power is removed.
12	UE		Depending on what has been performed in step 11 the UE is brought back to operation and placed in an automatic mode. The subsequent GMM attach should be rejected if received in the PS mode.
13	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
14		Void	
15		Void	
16	→	LOCATION UPDATING REQUEST	Location Updating Type = normal.
16a	SS		The SS starts integrity protection.
17	←	LOCATION UPDATING ACCEPT	"Mobile Identity" not IE included.
18	SS		The SS releases the RRC connection.
19		Void	
NOTE:	The definitions for "Serving cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".		

Procedure 2

Step	Direction		Message	Comments
	UE	SS		

			The following messages are sent and shall be received on cell A.
1	SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note).
2	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration". This message is sent on cell A. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
3		Void	
4		Void	
5	→	LOCATION UPDATING REQUEST	
6	←	LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
7	SS		The SS releases the RRC connection.
8		Void	
			The following messages are sent and shall be received on cell B.
9	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration". If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
10		Void	
11		Void	
12	→	LOCATION UPDATING REQUEST	
13	←	LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
14	SS		The SS releases the RRC connection.
15		Void	
16	SS		The SS waits for a possible location updating procedure on both cells A and B for 2 minutes.
17	UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B within 2 minutes after the end of step 15.
18		Void	
19		Void	
20	UE		A MO CM connection is attempted.
21	UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B. This is checked during 30 s.
The following messages are sent and shall be received on cell A. Steps 22 to 31 are performed if the UE supports emergency speech call.			
22	UE		An emergency call is attempted.
23	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Emergency Call".
24		Void	
25		Void	
26	→	CM SERVICE REQUEST	"CM service type": Emergency call establishment.
27	←	CM SERVICE ACCEPT	
28	→	EMERGENCY SETUP	
29	←	RELEASE COMPLETE	"Cause" = unassigned number.
30	SS		The SS releases the RRC connection.
31		Void	
NOTE: The definitions for "Serving cell" and "Suitable neighbour cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Procedure 3

Step	Direction		Message	Comments
	UE	SS		
The following messages are sent and shall be received on cell A				
1		SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "Suitable neighbour cell". (see note)
2	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
3	←		RRC CONNECTION SETUP	
4	→		RRC CONNECTION SETUP COMPLETE	
5	→		LOCATION UPDATING REQUEST	
6	←		LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
7	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
8	→		RRC CONNECTION RELEASE COMPLETE	
The following messages are sent and shall be received on cell B.				
9	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
10	←		RRC CONNECTION SETUP	
11	→		RRC CONNECTION SETUP COMPLETE	
12	→		LOCATION UPDATING REQUEST	
13	←		LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
14	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
15	→		RRC CONNECTION RELEASE COMPLETE	
16		SS		Change_LAI (A) within 5 s after step 13.
The following messages are sent and shall be received on cell A.				
17	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
18	←		RRC CONNECTION SETUP	
19	→		RRC CONNECTION SETUP COMPLETE	
20	→		LOCATION UPDATING REQUEST	
21	←		LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
22	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
23	→		RRC CONNECTION RELEASE COMPLETE	
24		SS		Change_LAI (B) within 5 s after step 21.
The following messages are sent and shall be received on cell B.				
25	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
26	←		RRC CONNECTION SETUP	
27	→		RRC CONNECTION SETUP COMPLETE	
28	→		LOCATION UPDATING REQUEST	
29	←		LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location

Step	Direction		Message	Comments
	UE	SS		
				area".
30	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
31	→		RRC CONNECTION RELEASE COMPLETE	
32		SS		Change_LAI (A) within 5 s after step 29.
The following messages are sent and shall be received on cell A.				
33	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
34	←		RRC CONNECTION SETUP	
35	→		RRC CONNECTION SETUP COMPLETE	
36	→		LOCATION UPDATING REQUEST	
37	←		LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
38	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
39	→		RRC CONNECTION RELEASE COMPLETE	
40		SS		Change_LAI (B) within 5 s after step 37.
The following messages are sent and shall be received on cell B.				
41	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
42	←		RRC CONNECTION SETUP	
43	→		RRC CONNECTION SETUP COMPLETE	
44	→		LOCATION UPDATING REQUEST	
45	←		LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
46	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
47	→		RRC CONNECTION RELEASE COMPLETE	
48		SS		The SS waits for a possible location updating procedure on both cells A and B for 7 minutes.
49		UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B within 7 minutes after the end of step 47.
NOTE: The definitions for "Serving cell" and "Suitable neighbour cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Procedure 4

Step	Direction		Message	Comments
	UE	SS		

The following messages are sent and shall be received on cell A.			
1	SS		The SS waits for a periodic location updating procedure on cell A for T3212~~7~~ minutes after the initial conditions have been established.
2	→	RRC CONNECTION REQUEST	"Establishment cause": Registration.
3	←	RRC CONNECTION SETUP	
4	→	RRC CONNECTION SETUP COMPLETE	
5	→	LOCATION UPDATING REQUEST	Location Updating Type = periodic.
6	←	LOCATION UPDATING ACCEPT	"Mobile Identity" not IE included.
7	←	RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
8	→	RRC CONNECTION RELEASE COMPLETE	
9	SS		The location area identity of cell C shall be changed to that of a location area in the Home PLMN.
10	SS		The SS waits for a periodic location updating procedure on cell A for T3212~~7~~ minutes.
11	→	RRC CONNECTION REQUEST	"Establishment cause": Registration. This message is sent on cell A within T3212~~7~~ minutes after the end of step 8.
12	←	RRC CONNECTION SETUP	
13	→	RRC CONNECTION SETUP COMPLETE	
14	→	LOCATION UPDATING REQUEST	"Location updating type" = periodic.
15	←	LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
16	←	RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
17	→	RRC CONNECTION RELEASE COMPLETE	
The following messages are sent and shall be received on cell C.			
18	→	RRC CONNECTION REQUEST	"Establishment cause": Registration. ~~The subsequent GMM attach should be rejected if received in the PS mode.~~ If PS mode: a ROUTING AREA UPDATE REQUEST should be accepted.
19	←	RRC CONNECTION SETUP	
20	→	RRC CONNECTION SETUPCOMPLETE	
21	→	LOCATION UPDATING REQUEST	"Location updating type" = normal.
22	←	LOCATION UPDATING ACCEPT	"Mobile Identity" not IE included.
23	←	RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link.
24	→	RRC CONNECTION RELEASE COMPLETE	

Procedure 5

Step	Direction		Message	Comments
	UE	SS		

The following messages are sent and shall be received on cell A.			
1	SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note)
2	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration". If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
3		Void	
4		Void	
5	→	LOCATION UPDATING REQUEST	
6	←	LOCATION UPDATING REJECT	"Reject cause" IE is "Roaming not allowed in this location area".
7			The SS releases the RRC connection.
8		Void	
9	SS		The SS waits at least 7 minutes for a possible location updating.
10	UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B.
11	UE		The USIM is removed.
12	UE		The USIM is inserted into the ME. The subsequent GMM attach should be rejected if received in the PS mode.
13	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
14		Void	
15		Void	
16	→	LOCATION UPDATING REQUEST	Location Updating Type = normal.
16a	←	AUTHENTICATION REQUEST	
16b	→	AUTHENTICATION RESPONSE	
16c	SS		The SS starts integrity protection.
17	←	LOCATION UPDATING ACCEPT	"Mobile Identity" not IE included.
18	SS		The SS releases the RRC connection.
19		Void	
NOTE: The definitions for "Serving cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".			

Specific message contents

None.

9.4.2.4.5 Test requirement

1) 1.1 At step 10 in Procedure 1 the UE shall not perform periodic updating.

   1.2 Void.

   1.3 At step 21 in procedure 2 the UE shall not initiate an RRC connection establishment.

   1.4 After step 13 in Procedure 5 the UE shall perform location updating (at step 16; not perform IMSI detach).

2) 2.1 After step 9 in Procedure 2 the UE perform normal location updating (at step 12).

   2.2 At step 23 in Procedure 2 the UE shall initiate a RRC CONNECTION REQUEST message with the establishment cause set to "Emergency call";

   2.3 After step 14 in Procedure 4 the UE shall attempt to location updating with location updating type "periodic" (at step 21: UE returns to HPLMN in preference to any other available cell).

3) After step 12 in Procedure 5 the UE shall perform location updating (at step 16) when the USIM is removed.

4) At step 49 in Procedure 3 the UE shall not attempt to begin a location updating procedure.

<< END OF MODIFIED SECTION >>

3GPP TSG-R5 Meeting #27 *Tdoc ⌘R5-050659*
Bath, UK, 25th – 29th April 2005 **Agenda 8.8.4**

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** 1195 ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Corrections to low priority MM test case 9.4.5.4.3
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	12/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	LS T1-050252 received from CN1 on interpretation of initial HPLMN search timer specified in TS 23.122 at T1#26 meeting clarified it is left to implementation whether to start HPLMN search timer at power on or after successful registration.
Summary of change:	⌘	Test procedure and sequence updated to relax timing requirement tested between 2 minutes from power on and T minutes after successful registration.
Consequences if not approved:	⌘	Test case may fail an incorrect mobile

Clauses affected:	⌘	9.4.5.4.3

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

Other comments:	⌘	This CR affects R99 & later releases

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

9.4.5.4.3 Location updating / periodic search for HPLMN or higher priority PLMN / UE waits at least two minutes and at most T minutes

9.4.5.4.3.1 Definition

9.4.5.4.3.2 Conformance requirement

After switch on, the UE waits at least 2 minutes and at most T minutes before the first Search for HPLMN or higher priority PLMN is attempted.

References

TS 22.011 clause 3.2.2.5. and TS 23.122 4.4.3.3.

9.4.5.4.3.3 Test purpose

To verify that the UE waits at least 2 minutes and at most T minutes before attempting its first Search for HPLMN or higher priority PLMN.

9.4.5.4.3.4 Method of test

Initial Conditions

- System Simulator:
  - two cells A and B, belonging to different location areas with location identification a and b. Cell A shall be a cell of the HPLMN and Cell B shall be a cell of the VPLMN with a Country Code the same as that of Cell A. Initially Cell A shall not be broadcasting. IMSI attach/detach is not allowed on either cell.

  NB: i) Cell B will be mapped to Cell 4 as found in TS 34.108 clause 6.1.4.1.
- User Equipment:
  - the UE is switched off. The HPLMN Search Period on the USIM shall be set to 6 minutes. The location area information on the USIM is "deleted".

Related ICS/IXIT statements

Switch on/off button Yes/No.

Test Procedure

Only Cell B shall be broadcasting. The UE shall be switched on either by using the Power Switch or by applying power. A normal location updating is performed on Cell B. Cell A is made available. It is verified that the UE attempts to perform a location update on Cell A, after at least 2 minutes have passed following power on and at most T minutes after successful registration~~have passed following power on~~ .

Expected sequence

Step	Direction		Message	Contents
	UE	SS		
1		SS		The following messages shall be sent and received on Cell B. Set the cell type of Cell A to the "non-suitable cell". Set the cell type of Cell B to the "Serving cell". (see note)
1a		UE		The UE is switched on by either using the Power Switch or by applying power.
2	→		RRC CONNECTION REQUEST	"Establishment cause": Registration.
3	←		RRC CONNECTION SETUP	
4	→		RRC CONNECTION SETUP COMPLETE	
5	→		LOCATION UPDATING REQUEST	"Location Update Type": Normal.
6	←		LOCATION UPDATING ACCEPT	
7	←		RRC CONNECTION RELEASE	After sending this message the SS waits for the disconnection of the main signalling link.
8	→		RRC CONNECTION RELEASE COMPLETE	
9		SS		Set the cell type of cell A to the "Suitable neighbour cell". (see note) If PS mode: a routing area updating procedure should be performed.
10		SS		The SS waits a period of 2 minutes after the UE is switched on. During this time no messages shall be received on Cell A. The following messages shall be sent and received on cell A. Within 6 minutes after step 6 ~~the UE is switched on~~ the following messages shall be sent and received on cell A.
11	→		RRC CONNECTION REQUEST	"Establishment cause": Registration. This message shall be sent between 2 and 6 minutes after step 1
12	←		RRC CONNECTION SETUP	
13	→		RRC CONNECTION SETUP COMPLETE	
14	→		LOCATION UPDATING REQUEST	"Location Update Type": normal.
15	←		LOCATION UPDATING ACCEPT	
16	←		RRC CONNECTION RELEASE	After sending this message the SS waits for the disconnection of the main signalling link.
17	→		RRC CONNECTION RELEASE COMPLETE	
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.

9.4.5.4.3.5 Test requirement

At step 11 the UE shall attempt to perform a location update.

3GPP TSG-T WG1 Meeting #26
Bath, England, 25-29 April, 2005

Tdoc ⌘R5-050936

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1196** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

*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 [X] Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to GCF WI-10 NAS Test Cases 9.2.2
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	10/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	Step 2 of the expected sequence has a reference of CKSN2 which is incorrect. At this point, the UE has been assigned CKSN1 by the pre-amble. Step 3 and 34 have comments added to explain the value for CKSN should be different from the prvious value to provide a generic nature allowing the TTCN implementation to use to choose value appropriately.
Summary of change:	⌘	• Step 2, removed the reference of CKSN2 which is incorrect. • Step 3, the CKSN is set to different from Paging Response • Step 34, the CKSN is set to different from Location Updating Request
Consequences if not approved:	⌘	The prose will be incorrect and TTCN will be mis-aligned.

Clauses affected:	⌘	9.2.2.4
Other specs affected:	⌘	Y N ☐ X Other core specifications ☐ X Test specifications ☐ X O&M Specifications
	⌘	
Other comments:	⌘	(Revision of R5-050591 and R5-050793) No impact to TTCN

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

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

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

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

9.2.2 Authentication rejected by the network

9.2.2.1 Definition

9.2.2.2 Conformance requirement

1) After reception of an AUTHENTICATION REJECT message the UE shall:

   1.1 not perform normal location updating;

   1.2 not perform periodic location updating;

   1.3 not respond to paging with TMSI;

   1.4 reject any request from CM entity for MM connection except for emergency call;

   1.5 not perform IMSI detach if deactivated.

2) After reception of an AUTHENTICATION REJECT message the UE, if it supports emergency speech call, shall accept a request for an emergency call by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call" and include an IMEI as mobile identity in the CM SERVICE REQUEST message.

3) After reception of an AUTHENTICATION REJECT message the UE shall delete the stored LAI, CKSN and TMSI.

Reference(s)

TS 24.008 clause 4.3.2.5.

9.2.2.3 Test purpose

1) To check that ,after reception of an AUTHENTICATION REJECT message, the UE:

   1.1 does not perform normal location updating;

   1.2 does not perform periodic location updating;

   1.3 does not respond to paging with TMSI;

   1.4 rejects any request from CM entity for MM connection except for emergency call;

   1.5 does not perform IMSI detach if deactivated.

2) To check that, after reception of an AUTHENTICATION REJECT message the UE, if it supports emergency speech call, accepts a request for an emergency call by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call" and includes an IMEI as mobile identity in the CM SERVICE REQUEST message.

3) To check that, after reception of an AUTHENTICATION REJECT message and after having been deactivated and reactivated, the UE performs location updating using its IMSI as mobile identity and indicates deleted LAI and CKSN.

9.2.2.4 Method of test

Initial conditions

- System Simulator:
  - two cells: A and B, belonging to different location areas a and b;
  - IMSI attach/detach is allowed in both cells;

- the T3212 time-out value is 1/10 hour in both cells.

- User Equipment:

  - the UE has valid TMSI, CKSN ~~(CKSN2)~~, CK and IK. It is "idle updated" on cell B.

Related ICS/IXIT statement(s)

USIM removal possible while UE is powered Yes/No.

Switch off on button Yes/No.

Support of emergency speech call Yes/No.

Test procedure

The SS rejects an authentication. The RRC CONNECTION is released. The SS checks that the UE has entered the state MM IDLE substate NO IMSI, i.e. does not perform normal location updating, does not perform periodic updating, does not respond to paging, rejects any requests from CM entities except emergency calls and does not perform IMSI detach if USIM detachment is performed, switch off is performed, or the power is removed, depending on the UE (see ICS/IXIT).

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
The following messages are sent and shall be received on cell B				
1			Mobile terminated establishment of Radio Resource Connection	See TS 34.108 clause 7.1.2 Establishment Cause: Terminating Conversational Call..
2	→		PAGING RESPONSE	"Ciphering key sequence number" shall be the same as the value that was sent in the last AUTHENTICATION REQUEST. ~~message (= CKSN2).~~
3	←		AUTHENTICATION REQUEST	CKSN in this AUTHENTICATION REQUEST should be different from that received in PAGING RESPONSE message.
4	→		AUTHENTICATION RESPONSE	
5	←		AUTHENTICATION REJECT	
6	SS			The SS releases the RRC connection.
7			Void	
8	←		PAGING TYPE 1	The UE is paged in cell B. "UE identity " IE contains TMSI. Paging Cause: Terminating Conversational Call.
9	UE			The UE shall ignore this message. This is verified during 3 s.
10	SS			The SS waits for at least for 15 s.
11	UE			A MO CM connection is attempted.
12	UE			The UE shall not initiate an RRC connection establishment on cell A or cell B. This is checked during 30 s.
13	UE			If the UE supports emergency speech call (see ICS), an emergency call is attempted.
14	SS			The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Emergency call".
15			Void	
16			Void	
17	→		CM SERVICE REQUEST	"CM service type": Emergency call establishment. "Mobile identity": type of identity is set to IMEI.
18	←		CM SERVICE ACCEPT	
19	→		EMERGENCY SETUP	
20	←		RELEASE COMPLETE	"Cause" = unassigned number.
21	SS			The SS releases the RRC connection.
22			Void	
The following messages are sent and shall be received on cell A.				
23	SS			Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note)
24	UE			The UE performs cell reselection according to procedure as specified in (this however is not checked until step 29). The UE shall not initiate an RRC connection establishment on cell A or on cell B.
25	SS			The SS waits at least 7 minutes for a possible periodic updating. If PS mode: a routing area updating procedure should be performed.
26	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B.
27	UE			If possible (see ICS) USIM detachment is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed. A Detach Request can be received in PS mode.
28	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B. This is checked during 3 s.
29	UE			Depending on what has been performed in step 26 the UE is brought back to operation. The subsequent GMM attach should be rejected if received in the PS mode.
30	SS			The SS checks that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".

Step	Direction		Message	Comments
	UE	SS		
31			Void	
32			Void	
33	→		LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = no key available, "Mobile Identity" = IMSI, "LAI" = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE).
34	←		AUTHENTICATION REQUEST	CKSN in this AUTHENTICATION REQUEST should be different from that received in LOCATION UPDATING REQUEST message.~~"CKSN" = CKSN1.~~
35	→		AUTHENTICATION RESPONSE	
36	←		LOCATION UPDATING ACCEPT	"Mobile Identity" = TMSI.
37	→		TMSI REALLOCATION COMPLETE	
38		SS		The SS releases the RRC connection.
39			Void	
NOTE: The definitions for "Serving cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Specific message contents

None.

9.2.2.5 Test requirement

1)

1.1 At step 24 the UE shall not send any RRC CONNECTION REQUEST on cell A or on cell B.

1.2 At step 25 the UE shall not send any RRC CONNECTION REQUEST on cell A or on cell B.

1.3 At step 9 the UE shall not respond to paging.

1.4 At step 12 the UE shall not send any RRC CONNECTION REQUEST on cell A or on cell B.

1.5 At step 28 the UE shall not send any RRC CONNECTION REQUEST on cell A or on cell B.

2) At step 14 the UE shall send a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call"; and at step 17 the UE shall send a CM SERVICE REQUEST message with the "CM service type" set to "Emergency call establishment".

3) At step 33 the UE shall perform location updating using its IMSI as mobile identity and indicates deleted LAI and CKSN.

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1197** ⌘ **rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to GCF WI-12 MM Test Case 9.4.3.3
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	14/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	In step 1 in PS mode, the ROUTING AREA UPDATE REQUEST is rejected with the same cause as used in the LOCATION UPDATING REJECT, i.e. #22 (congestion). Then in step 10, UE initiate an RRC CONNECTION to perform the location update. As per 24.008 clause 4.7.5.1.5; UE in PS mode shall also initiate a ROUTING AREA UPDATE PROCEDURE. This shall be indicated in the expected sequence. (Revision of R5-050648)
Summary of change:	⌘	In step 10, a comment is added to indicate that in PS mode the ROUTING AREA UPDATE REQUEST message should be received.
Consequences if not approved:	⌘	The prose and TTCN will not be aligned.

Clauses affected:	⌘	9.4.3.3.4

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

Other comments:	⌘	This CR does not have impact on the TTCN.

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

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

9.4.3.3 Location updating / abnormal cases / attempt counter equal to 4

9.4.3.3.1 Definition

9.4.3.3.2 Conformance requirement

1) When four failures such as cases d) to h) of clause 4.4.4.9 of TS 24.008 have occurred during a normal location updating procedure the UE shall:

   1.1 perform location updating after T3212 expiry by sending a LOCATION UPATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating Type set to "normal location updating";

   1.2 if the T3212 initiated location updating was unsuccessful, then after T3211 expiry the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating Type IE set to "normal location updating".

2) When four failures such as cases d), f), g) and h) of clause 4.4.4.9 of TS 24.008 have occurred during a normal location updating procedure the UE shall not perform the IMSI detach procedure, when switchd off.

3) When four failures such as cases d), f), g) and h) of clause 4.4.4.9 of TS 24.008 have occurred during a normal location updating procedure the UE, if it supports emergency speech call, shall be able to perform an emergency call i.e. the UE is able to send a CM SERVICE REQUEST message with the CM Service Type IE set to "emergency call establishment", CKSN IE set to "no key is available" and Mobile Identity IE set to its IMSI and then send an EMERGENCY SETUP message.

4) When four failures such as cases d), f), g) and h) of clause 4.4.4.9 of TS 24.008 have occurred during a normal location updating procedure:

   4.1 the UE shall use a request from CM entity for MM connection for a service other than emergency call as a trigger for a normal location updating procedure and shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating Type IE set to "normal location updating";

   4.2 after a location updating triggered by a request from the CM layer which was .unsuccessful, after T3211 expiry the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating Type IE set to "normal location updating".

5) When four failures such as cases d), f), g) and h) of clause 4.4.4.9 of TS 24.008 have occurred during a normal location updating procedure:

   5.1 the UE shall perform a normal location updating procedure if it enters a new cell;

   5.2 if this location updating is unsuccessful, after T3211 expiry the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating type IE set to "normal location updating".

References

TS 24.008 clause 4.4.4.9.

9.4.3.3.3 Test purpose

To verify that the UE performs normal location updating procedures after T3212 expiry, when its attempt counter has reached value 4 and that the UE reset its attempt counter after a timer T3212 expiry.

To verify that the UE still follows the MM IDLE state and ATTEMPTING TO UPDATE substate requirements after its attempt counter has reached value 4.

To verify that the attempt counter is reset in the cases where it has to be done.

9.4.3.3.4 Method of test

Initial conditions

- System Simulator:
  - two cells: A and B, belonging to different location areas a and b;
  - IMSI attach/detach is allowed in both cells;
  - T3212 is set to 6 minutes.
- User Equipment:
  - the UE is "Idle updated" on cell B with a valid CKSN and a TMSI.

Related ICS/IXIT statements

USIM removal possible while UE is powered Yes/No.

Switch off on button Yes/No.

Support of emergency speech call Yes/No.

Test Procedure

The UE is made to perform a normal location updating. The SS triggers a failure in this procedure by modifying scrambing code of DL DPCH. After T3211 expiry the UE will try again the location updating procedure. The SS triggers again a failure by modifying it. This is done again 2 times. At this point the attempt counter shall be equal to 4. It is then checked that T3212 has been started and that at its expiry the UE will try a normal location updating procedure. It is verified that the UE has reset its attempt counter after timer T3212 expiry.

Then it is checked that, when the attempt counter has reached the value of 4, the UE is in the MM IDLE state and ATTEMPTING TO UPDATE substate, that is:

- not perform an IMSI detach procedure;
- support request for emergency call;
- use requests from CM layer other than emergency call as triggering of a normal location updating procedure;
- perform normal location updating procedure when a new cell is entered.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
The following messages are sent and shall be received on cell A.				
1		SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note).
2	→		RRC CONNECTION REQUEST	Establishment cause: Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
3	←		RRC CONNECTION SETUP	
4	→		RRC CONNECTION SETUP COMPLETE	
5	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = initial value, LAI = b, mobile station classmark 1 as given by the ICS and mobile identity = TMSI.
6	←		LOCATION UPDATING REJECT	IE Reject cause is set to #22 in table 10.5.95 of TS 24.008, causes #2, #3, #6, #11, #12, #13 and #15 being excluded.
7	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
8	→		RRC CONNECTION RELEASE COMPLETE	
9		UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
10	→		RRC CONNECTION REQUEST	Establishment cause: Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be received, no ROUTING AREA UPDATE ACCEPT message shall be sent to UE.
11	←		RRC CONNECTION SETUP	
12	→		RRC CONNECTION SETUP COMPLETE	
13	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
14		SS		The SS modifies the scrambling code of DL DPCH for generating lower layer failure.
15			(void)	
15a	→		CELL UPDATE	CCCH.
15b	←		RRC CONNECTION RELEASE	CCCH.
15c		SS		The SS re-modifies the scrambling code of DL DPCH to the original one.
15d		UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
16	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
17	←		RRC CONNECTION SETUP	
18	→		RRC CONNECTION SETUP COMPLETE	
19	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
20	←		AUTHENTICATION REQUEST	
21	→		AUTHENTICATION RESPONSE	Steps 20 and 21 are performed N times. N shall be chosen in such a way that T3210 expires.
22		UE		The UE shall cease transmission and then shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the expiry of T3210.
23	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
24	←		RRC CONNECTION SETUP	

Step	Direction		Message	Comments
	UE	SS		
25	→		RRC CONNECTION SETUP COMPLETE	
26	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
27	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
28	→		RRC CONNECTION RELEASE COMPLETE	
29	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3212 (tolerance -15s; 45s) at least after the RRC connection is released. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
30	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
31	←		RRC CONNECTION SETUP	
32	→		RRC CONNECTION SETUP COMPLETE	
33	→		LOCATION UPDATING REQUEST	location updating type: "normal location update" CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE) mobile station classmark 1 as given by the ICS and mobile identity = IMSI.
34	←		LOCATION UPDATING REJECT	IE Reject cause = #17 "network failure".
35	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
36	→		RRC CONNECTION RELEASE COMPLETE	
37	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
38	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
39	←		RRC CONNECTION SETUP	
40	→		RRC CONNECTION SETUP COMPLETE	
41	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE) mobile station classmark 1 as given by the ICS and mobile identity = IMSI.
42	←		AUTHENTICATION REQUEST	CKSN = initial CKSN.
43	→		AUTHENTICATION RESPONSE	
43a	←		SECURITY MODE COMMAND	
43b	→		SECURITY MODE COMPLETE	
44	←		LOCATION UPDATING ACCEPT	IE mobile Identity = new TMSI.
45	→		TMSI REALLOCATION COMPLETE	
46	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link. UE is now "idle, updated" in cell A.
47	→		RRC CONNECTION RELEASE COMPLETE	
The following messages are sent and shall be received on cell B.				
48	SS			Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". (see note).
49	→		RRC CONNECTION REQUEST	Establishment cause: Registration. If PS mode: a ROUTING AREA UPDATE REQUEST should be rejected with the same cause as used in the LOCATION UPDATING REJECT.
50	←		RRC CONNECTION SETUP	
51	→		RRC CONNECTION SETUP COMPLETE	

Step	Direction		Message	Comments
	UE	SS		
52	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = initial value, LAI = a, mobile station classmark 1 as given by the ICS and mobile identity = TMSI.
53	←		LOCATION UPDATING REJECT	IE Reject cause is set to #X in table 10.5.95 of TS 24.008, causes #2, #3, #6, #11, #12, #13 and #15 being excluded.
54	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
55	→		RRC CONNECTION RELEASE COMPLETE	
56	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
57	→		RRC CONNECTION REQUEST	If PS mode: a routing area updating procedure should be performed. Establishment cause: Registration.
58	←		RRC CONNECTION SETUP	
59	→		RRC CONNECTION SETUP COMPLETE	
60	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
61		SS		The SS modifies the scrambling code of DL DPCH for generating lower layer failure.
61a			(void)	
61b	→		CELL UPDATE	CCCH.
61c	←		RRC CONNECTION RELEASE	CCCH.
61d		SS		The SS re-modifies the scrambling code of DL DPCH to the original one.
61e	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
62	→		RRC CONNECTION REQUEST	If PS mode: a routing area updating procedure should be performed. Establishment cause: Registration.
63	←		RRC CONNECTION SETUP	
64	→		RRC CONNECTION SETUP COMPLETE	
65	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
66	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
67	→		RRC CONNECTION RELEASE COMPLETE	
68	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
69	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
70	←		RRC CONNECTION SETUP	
71	→		RRC CONNECTION SETUP COMPLETE	
72	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE) mobile station classmark 1 as given by the ICS and mobile identity = IMSI.
73		SS		performs step 53 and 54.
74	UE			performs step 55. If the UE supports emergency speech call, it is made to perform an emergency call.
75	→		RRC CONNECTION REQUEST	Establishment cause: Emergency call.
76	←		RRC CONNECTION SETUP	

Step	Direction		Message	Comments
	UE	SS		
77	→		RRC CONNECTION SETUP COMPLETE	
78	→		CM SERVICE REQUEST	CM service type = Emergency call establishment; CKSN = no key available; Mobile Identity = IMSI.
79	←		CM SERVICE ACCEPT	
80	→		EMERGENCY SETUP	
81	←		RELEASE COMPLETE	Cause = unassigned number.
82	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
83	→		RRC CONNECTION RELEASE COMPLETE	
84	UE			If possible (see ICS) USIM detachment is performed. Otherwise if possible (see ICS) switch off is performed. Otherwise the power is removed. A Detach Request can be received in PS mode.
85	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B. This is checked during 30 s.
86	UE			Depending on what has been performed in step 84 the UE is brought back to operation. The subsequent GMM attach should be rejected if received in the PS mode.
87	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
88	←		RRC CONNECTION SETUP	
89	→		RRC CONNECTION SETUP COMPLETE	
90	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
91	←		AUTHENTICATION REQUEST	CKSN = initial CKSN.
92	→		AUTHENTICATION RESPONSE	
92a	←		SECURITY MODE COMMAND	
92b	→		SECURITY MODE COMPLETE	
93	←		LOCATION UPDATING ACCEPT	IE mobile Identity = new TMSI.
94	→		TMSI REALLOCATION COMPLETE	
95	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link. UE is now "idle, updated" in cell B.
96	→		RRC CONNECTION RELEASE COMPLETE	
The following messages are sent and shall be received on cell A.				
97	SS			Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note).
98	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
99	←		RRC CONNECTION SETUP	
100	→		RRC CONNECTION SETUP COMPLETE	
101	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = initial value, LAI = b, mobile station classmark 1 as given by the ICS and mobile identity = TMSI.
102	←		LOCATION UPDATING REJECT	IE Reject cause is set to #38 in table 10.5.95 of TS 24.008, causes #2, #3, #6, #11, #12, #13 and #15 being excluded.
103	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
104	→		RRC CONNECTION RELEASE COMPLETE	
105	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
106	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
107	←		RRC CONNECTION SETUP	

Step	Direction		Message	Comments
	UE	SS		
108	→		RRC CONNECTION SETUP COMPLETE	
109	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
110		SS		The SS modifies the scrambling code of DL DPCH for generating lower layer failure.
111			(void)	
111a	→		CELL UPDATE	CCCH.
111b	←		RRC CONNECTION RELEASE	CCCH.
111c		SS		The SS re-modifies the scrambling code of DL DPCH to the original one.
111d	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
112	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
113	←		RRC CONNECTION SETUP	
114	→		RRC CONNECTION SETUP COMPLETE	
115	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
116	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
117	→		RRC CONNECTION RELEASE COMPLETE	
118	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
119	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
120	←		RRC CONNECTION SETUP	
121	→		RRC CONNECTION SETUP COMPLETE	
122	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE) mobile station classmark 1 as given by the ICS and mobile identity = IMSI.
123			(void)	
123a	UE			performs step 61a.
123b	→		CELL UPDATE	CCCH.
123c	←		RRC CONNECTION RELEASE	CCCH.
123d	SS			performs step 61d.
124	UE			A MO CM connection is attempted before T3212 expiry.
125	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
126	←		RRC CONNECTION SETUP	
127	→		RRC CONNECTION SETUP COMPLETE	
128	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
129			(void)	
129a	UE			performs step 61a.
129b	→		CELL UPDATE	CCCH.
129c	←		RRC CONNECTION RELEASE	CCCH.
129d	SS			performs step 61d.
130	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
131	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
132	←		RRC CONNECTION SETUP	
133	→		RRC CONNECTION SETUP COMPLETE	

Step	Direction		Message	Comments
	UE	SS		
134	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
135	←		AUTHENTICATION REQUEST	CKSN = initial CKSN.
136	→		AUTHENTICATION RESPONSE	
136a	←		SECURITY MODE COMMAND	
136b	→		SECURITY MODE COMPLETE	
137	←		LOCATION UPDATING ACCEPT	IE mobile Identity = new TMSI. If the location updating type in the LOCATION UPDATING REQUESTcontains 'FOR', then IE Follow-on Proceed is included in the ACCEPT and steps 139 to 143 will be omitted.
138	→		TMSI REALLOCATION COMPLETE	
139	←		RRC CONNECTION RELEASE	
140	→		RRC CONNECTION RELEASE COMPLETE	UE is now "idle, updated" in cell A.
141	→		RRC CONNECTION REQUEST	
142	←		RRC CONNECTION SETUP	
143	→		RRC CONNECTION SETUP COMPLETE	
144	→		CM SERVICE REQUEST	CKSN = initial value, Mobile identity = TMSI.
145	←		CM SERVICE REJECT	cause #17 (network failure).
146	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
147	→		RRC CONNECTION RELEASE COMPLETE	
The following messages are sent and shall be received on cell B.				
148		SS		Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". (see note).
149	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
150	←		RRC CONNECTION SETUP	
151	→		RRC CONNECTION SETUP COMPLETE	
152	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = initial value, LAI = a, mobile station classmark 1 as given by the ICS and mobile identity = TMSI.
153	←		LOCATION UPDATING REJECT	IE Reject cause is set to #38 in table 10.5.95 of TS 24.008, causes #2, #3, #6, #11, #12, #13 and #15 being excluded.
154	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link
155	→		RRC CONNECTION RELEASE COMPLETE	
156		UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
157	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
158	←		RRC CONNECTION SETUP	
159	→		RRC CONNECTION SETUP COMPLETE	
160	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
161		SS		The SS modifies the scrambling code of DL DPCH for generating lower layer failure.
162			(void)	
162a	→		CELL UPDATE	CCCH.
162b	←		RRC CONNECTION RELEASE	CCCH.
162c		SS		The SS re-modifies the scrambling code of DL DPCH to the original one.
162d		UE		The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.

Step	Direction		Message	Comments
	UE	SS		
163	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
164	←		RRC CONNECTION SETUP	
165	→		RRC CONNECTION SETUP COMPLETE	
166	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
167	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
168	→		RRC CONNECTION RELEASE COMPLETE	
169	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
170	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
171	←		RRC CONNECTION SETUP	
172	→		RRC CONNECTION SETUP COMPLETE	
173	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE) mobile station classmark 1 as given by the ICS and mobile identity = IMSI.
174	←		LOCATION UPDATING REJECT	IE Reject cause = "retry upon entry into a new cell".
174a	←		RRC CONNECTION RELEASE	The SS waits for the disconnection of the main signalling link.
174b	→		RRC CONNECTION RELEASE COMPLETE	
The following messages are sent and shall be received on cell A.				
175	SS			Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note).
176	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
177	←		RRC CONNECTION SETUP	
178	→		RRC CONNECTION SETUP COMPLETE	
179	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available , LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE) mobile station classmark 1 as given by the ICS and mobile identity = IMSI.
180	SS			performs the step 61.
181			(void)	
181a	→		CELL UPDATE	CCCH.
181b	←		RRC CONNECTION RELEASE	CCCH.
181c	SS			The SS re-modifies the scrambling code of DL DPCH to the original one.
181d	UE			The UE shall not initiate an RRC connection establishment on cell A or on cell B during T3211 seconds at least after the RRC connection is released.
182	→		RRC CONNECTION REQUEST	Establishment cause: Registration.
183	←		RRC CONNECTION SETUP	
184	→		RRC CONNECTION SETUP COMPLETE	
185	→		LOCATION UPDATING REQUEST	location updating type = normal, CKSN = no key available, LAI = deleted LAI (the MCC and MNC hold the previous values, the LAC is coded FFFE), Mobile Identity = IMSI.
186	←		AUTHENTICATION REQUEST	CKSN = initial CKSN.
187	→		AUTHENTICATION RESPONSE	
187a	←		SECURITY MODE COMMAND	
187b	→		SECURITY MODE COMPLETE	
188	←		LOCATION UPDATING ACCEPT	IE mobile Identity = new TMSI.
189	→		TMSI REALLOCATION COMPLETE	

Step	Direction		Message	Comments
	UE	SS		
190	←		RRC CONNECTION RELEASE	After the sending of this message, the SS waits for the disconnection of the main signalling link. UE is now "idle, updated" in cell A.
191	→		RRC CONNECTION RELEASE COMPLETE	
NOTE: The definitions for "Serving cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

Specific message contents

None.

9.4.3.3.5 Test requirement

1) 1.1 At step 33 the UE shall perform location updating procedure.

   1.2 At step 41 the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating type IE set to "normal location updating".

2) At step 85 the UE shall not perform the IMSI detach procedure.

3) At step78 the UE shall send a CM SERVICE REQUEST message with the CM Service Type IE set to "emergency call establishment", CKSN IE set to "no key is available" and Mobile Identity IE set to its IMSI.

   At step 80 the UE shall send an EMERGENCY SETUP message.

4)

   4.1 At step128 the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating type IE set to "normal location updating";

   4.2 At step 134 the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating type IE set to "normal location updating".

5)

   5.1 At step 179 the UE shall perform a normal location updating procedure if it enters a new cell;

   5.2 At step 185 the UE shall send a LOCATION UPDATING REQUEST message with the Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and the Location Updating type IE set to "normal location updating".

3GPP RAN WG5 Meeting #27
Bath, England, 25-29 April, 2005

Tdoc ⌘R5-050952

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1** **CR** **1198** ⌘**rev** **-** ⌘ Current version: **5.11.1** ⌘

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

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

Title:	⌘	Correction to GCF WI-10 NAS Test Case 9.4.1
Source:	⌘	3GPP TSG RAN WG5 (Testing)
Work item code:	⌘	TEI
Date:	⌘	10/04/2005
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	In step 36, the intention of the Initial UE Identity contains IMSI is unclear. This is clarified to indicate that this statement is applied to the PagingType1 message. The change will also align the prose with the TTCN implementation.
Summary of change:	⌘	The statement “Initial UE identity IE contains the IMSI” has been modified to indicate that this is specified for the PagingType1 message.
Consequences if not approved:	⌘	The prose will remain unclear and will not align with TTCN.

Clauses affected:	⌘	9.4.1.4

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

Other comments:	⌘	Revision of R5-050570 This change aligns the prose with the TTCN, hence no change to TTCN required.

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

9.4.1 Location updating / accepted

9.4.1.1 Definition

9.4.1.2 Conformance requirement

1.

1.1 if the network accepts a location updating from the UE and reallocates a TMSI in the LOCATION UPDATING ACCEPT message the UE shall acknowledge the reception of the new TMSI;

1.2 the UE shall answer to paging with this TMSI and include it in a PAGING RESPONSE message.

2 If the network accepts a location updating from the UE and the LOCATION UPDATING ACCEPT message contains neither TMSI nor IMSI, the UE shall answer to paging when addressed with the last allocated TMSI and include it in the PAGING RESPONSE message.

3.

3.1 if the network accepts a location updating from the UE by use of a LOCATION UPDATING ACCEPT message containing the IMSI of the UE, the UE shall not answer paging with the last allocated TMSI;

3.2 the UE shall still answer paging with IMSI.

Reference(s)

TS 24.008 clause 4.4.4.6.

9.4.1.3 Test purpose

1) To test the behaviour of the UE if the network accepts the location updating of the UE.

For the network response three different cases are identified:

1.1) TMSI is allocated;

1.2) location updating accept contains neither TMSI nor IMSI;

1.3) location updating accept contains IMSI.

9.4.1.4 Method of test

Initial conditions:

- System Simulator:
  - two cells, A and B, belonging to different location areas with location area identification a and b of the same PLMN;
  - IMSI attach/detach is allowed in both cells;
  - the T3212 time-out value is 1/10 hour in both cells.
- User Equipment:
  - the UE has a valid TMSI (=TMSI1) and CKSN (=CKSN1). It is "idle updated" on cell A.

Related ICS/IXIT statement(s)

None.

Test Procedure

The UE is made to select cell B. A normal location updating with TMSI reallocation is performed in cell B. The RRC CONNECTION is released. The SS checks, by paging, that the UE has stored the newly allocated TMSI. The RRC CONNECTION is released. The UE is made to select cell A. A normal location updating is performed in cell A. The LOCATION UPDATING ACCEPT message contains neither IMSI nor TMSI. The SS checks, by paging, that the UE has kept the old TMSI. The RRC CONNECTION is released. The UE is made to select cell B. A normal location updating is performed in cell B. The LOCATION UPDATING ACCEPT message contains an IMSI. The SS checks, by paging, that the UE has deleted its TMSI and responds to paging with IMSI.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". (see note)
2		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to: Registration. If PS mode: a routing area updating procedure should be performed.
3			Void	
4			Void	
5	→		LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = CKSN1, "location area identification" = a, "mobile station classmark 1" as given by the ICS and "mobile identity" = TMSI1. The MM message is included in the RRC messagge INITIAL DIRECT TRANSFER with the CN domain identity set to CS domain.
5a		SS		The SS starts integrity protection.
5b			Void	
6	←		LOCATION UPDATING ACCEPT	"Mobile identity" = new TMSI (=TMSI2), LAI = b.
7	→		TMSI REALLOCATION COMPLETE	
8		SS		
9			Void	
9a				SS waits 5 seconds to guarantee that the UE is in service.
10	←		Mobile terminated establishment of Radio Resource Connection	See TS 34.108 clause 7.1.2 "Initial UE identity" IE contains the new TMSI (= TMSI2) and the new LAI (=b). Establishment Cause: Terminating Conversational Call.
11	→		PAGING RESPONSE	"Mobile identity" IE contains the new TMSI (= TMSI2).
12		SS		The SS releases the RRC Connection.
13			Void	
14		SS		Set the cell type of cell A to the "Serving cell". Set the cell type of cell B to the "non-suitable cell". (see note)
15		SS		The SS verifies that the IE "Establishment cause" in the received RRC Connection REQUEST message is set to "Registration". If PS mode: a routing area updating procedure should be performed.
16			Void	
17			Void	
18a	→		LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = CKSN1, "location area identification" = b, "mobile station classmark 1" as given by the ICS and "mobile identity" = TMSI2.
18b		SS		The SS starts integrity protection.
18c			Void	
19	←		LOCATION UPDATING ACCEPT	"Mobile identity" IE not included. LAI = a
20		SS		
21			Void	The SS releases the RRC connection and waits 5 s to guarantee that the UE is in service.

Step	Direction	Message	Comments
	UE | SS		
22	←	Mobile terminated establishment of Radio Resource Connection	See TS 34.108 clause 7.12.2 "Initial UE identity" IE contains the TMSI (= TMSI2) and LAI (=a). Establishment Cause: Terminating Conversational Call.
23	→	PAGING RESPONSE	"Mobile identity" IE contains the TMSI (=TMSI2).
24	SS		The SS releases the RRC connection.
25		Void	
26	SS		Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the "non-suitable cell". (see note)
27	SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST is set to "Registration". If PS mode: a routing area updating procedure should be performed.
28		Void	
29		Void	
30a	→	LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = CKSN1, "location area identification" = a, "mobile station classmark 1" as given by the ICS and "mobile identity" = TMSI2.
30b	SS		The SS starts integrity protection.
30c		Void	
31	←	LOCATION UPDATING ACCEPT	"Mobile identity" IE contains IMSI and LAI (=b).
32	SS		
33		Void	The SS waits 5 s to guarantee that the UE is in service.
34	←	PAGING TYPE 1	"UE identity" IE contains the old TMSI (= TMSI2). Paging Cause: Terminating Conversational Call.
35	UE		The UE shall ignore this message. This is checked during 5 s.
36	←	Mobile terminated establishment of Radio Resource Connection	See TS 34.108 clause 7.1.2 ~~"Initial UE identity" IE contains the IMSI.~~The PagingType1 message sent from the SS should have the "Initial UE identity" IE containing the IMSI . Establishment Cause: Terminating Conversational Call.
37	→	PAGING RESPONSE	"Mobile identity" IE contains the IMSI.
38	SS		The SS releases the RRC connection.
39		Void	
NOTE:	The definitions for "Serving cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".		

Specific message contents

None.

9.4.1.5 Test requirement

At step 7 the UE shall acknowledge the reception of the new TMSI (TMSI2).

At step 11 the UE shall answer to paging with this TMSI (TMSI2).

At step 23 the UE shall answer to paging with the last allocated TMSI (TMSI2).

At step 35 the UE shall not answer paging with the last allocated TMSI, but at step 37 the UE shall still answer paging with IMSI.