

TSG RAN Meeting #18
New Orleans, US, 3 - 6 December, 2002

RP-020786

Title CRs (Rel-4 and Rel-5 Category A) to TS 25.123
Source TSG RAN WG4
Agenda Item 7.4.4

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-021567	25.123	279		F	Rel-4	4.6.0	Handover Test Case Correction for 1.28Mcps TDD	LCRTDD-RF
R4-021568	25.123	280		A	Rel-5	5.2.0	Handover Test Case Correction for 1.28Mcps TDD	LCRTDD-RF
R4-021569	25.123	281		F	Rel-4	4.6.0	Maximum allowed UL TX Power Correction for 1.28Mcps TDD	LCRTDD-RF
R4-021570	25.123	282		A	Rel-5	5.2.0	Maximum allowed UL TX Power Correction for 1.28Mcps TDD	LCRTDD-RF
R4-021571	25.123	283		F	Rel-4	4.6.0	Corrections to Idle Mode Requirements and Test Cases for 1.28Mcps TDD	LCRTDD-RF
R4-021572	25.123	284		A	Rel-5	5.2.0	Corrections to Idle Mode Requirements and Test Cases for 1.28Mcps TDD	LCRTDD-RF

CHANGE REQUEST

⌘ **25.123 CR 279** ⌘ rev ⌘ Current version: **4.6.0** ⌘

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

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

Title:	⌘ Handover Test Case Correction for 1.28Mcps TDD		
Source:	⌘ RAN WG4		
Work item code:	⌘ LCRTDD-RF	Date:	⌘ 26/11/2002
Category:	⌘ F	Release:	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2 (GSM Phase 2)	
	A (corresponds to a correction in an earlier release)	R96 (Release 1996)	
	B (addition of feature),	R97 (Release 1997)	
	C (functional modification of feature)	R98 (Release 1998)	
	D (editorial modification)	R99 (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Unclear test case parameters with intra-frequency and inter-frequency handover test cases for 1.28 Mcps TDD Option wrt. DwPCH_Ec/Ior levels.
Summary of change:	⌘ The missing RF parameters for DwPCH_Ec/Ior are included in the tables for intra-frequency handover and inter-frequency handover test cases in Table A.5.1.6 and Table A.5.1.8 correspondingly: <ul style="list-style-type: none"> DwPCH_Ec/Ior = 0 dB in timeslot DwPTS Ior/Ioc: same values, as for timeslot 0
Consequences if not approved:	⌘ Terminals can not pass the test. Misinterpretations and incorrect implementations of test cases in terminal test specifications. <u>Isolated Impact Analysis:</u> This CR has no isolated impact, as it corrects a test case.

Clauses affected:	⌘ A.5.1.2.1, A.5.1.2.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X	X	X	X		X	⌘	34.122
Y	N										
X	X										
X	X										
	X										
Other comments:	⌘ Equivalent CRs in other Releases: CR280 cat. A to 25.123 v5.2.0										

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.

A.5.1.2 1.28Mcps TDD option

A.5.1.2.1 Handover to intra-frequency cell

A.5.1.2.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the intra-frequency handover delay in CELL_DCH state in the single carrier case as reported in section 5.1.2.1.2.

The test parameters are given in Table A.5.1.5 and A.5.1.6 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used, and that PCCPCH RSCP and SFN-CFN observed timed difference shall be reported together with Event 1G. The test consists of three successive time periods, with a time duration of T1, T2 and T3 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration with activation time at the beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE so that the whole message is available at the UE the RRC procedure delay prior to the beginning of T3. The RRC procedure delay is defined [16].

Table A.5.1.5: General test parameters for intra-frequency handover

Parameter	Unit	Value	Comment
DPCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Control		On	
Target quality value on DPCH	BLER	0.01	
Initial conditions	Active cell	Cell 1	
	Neighbouring cell	Cell 2	
Final condition	Active cell	Cell 2	
O	dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		6 TDD neighbours on Channel 1	
T1	s	5	
T2	s	5	
T3	s	5	

Table A.5.1.6: Cell specific test parameters for intra-frequency handover

Parameter	Unit	Cell 1								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1								
PCCPCH_Ec/Ior	dB	-3						n.a.		
DwPCH_Ec/Ior					0					
DPCH_Ec/Ior	dB	n.a.			n.a.			Note1	n.a.	
OCNS_Ec/Ior	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	3			3			3		
I_{oc}	dBm/ 1.28 MHz	-70								
PCCPCH_RSCP	dBm	-70			n.a.			n.a.		
Propagation Condition		AWGN								
Parameter	Unit	Cell 2								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1								
PCCPCH_Ec/Ior	dB	-3						n.a.		
DwPCH_Ec/Ior					0					
DPCH_Ec/Ior	dB	n.a.			n.a.			n.a.	Note1	
OCNS_Ec/Ior	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	-Inf.	5		-Inf.	5		-Inf.	5	
I_{oc}	dBm/ 1.28 MHz	-70								
PCCPCH_RSCP	dBm	-Inf.	-68		n.a.			n.a.		
Propagation Condition		AWGN								
Note 1: The DPCH level is controlled by the power control loop										
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}										

Parameter	Unit	Cell-1						Cell-2					
		0			5			0			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel-1						Channel-1					
PCCPCH_Ec/Ior	dB	-3			n.a.			-3			n.a.		
DPCH_Ec/Ior	dB	n.a.			Note1	n.a.		n.a.			n.a.	Note1	
OCNS_Ec/Ior	dB	-3			Note2			-3			Note2		
\hat{I}_{or}/I_{oc}	dB	3			3			-Inf.	5		-Inf.	5	
I_{oc}	dBm/ 1.28 MHz	-70											
PCCPCH_RSCP	dBm	-70			n.a.			-Inf.	-68		n.a.		
Propagation Condition		-AWGN											
Note 1: The DPCH level is controlled by the power control loop													
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}													

A.5.1.2.1.2 Test Requirements

The UE shall start to transmit the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3.

The rate of correct handovers observed during repeated tests shall be at least 90%.

A.5.1.2.2 Handover to inter-frequency cell

A.5.1.2.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the inter-frequency handover delay in CELL_DCH in the dual carrier case as reported in section 5.1.2.1.2.

The test consists of three successive time periods, with a time duration T1, T2 and T3. The test parameters are given in tables A.5.1.7 and A.5.1.8 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 2C shall be used. The PCCPCH RSCP and SFN-CFN observed timed difference of the best cell on the unused frequency shall be reported together with Event 2C reporting. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration with activation time at beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE so that the whole message is available at the UE the RRC procedure delay prior to the beginning of T3. The RRC procedure delay is defined [16]

Table A.5.1.7: General test parameters for inter-frequency handover

Parameter		Unit	Value	Comment
DPCH parameters			DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Control			On	
Target quality value on DPCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbour cell		Cell 2	
Final conditions	Active cell		Cell 2	
Threshold non used frequency		dBm	-75	Absolute RSCP threshold for event 2C
O		dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trigger		ms	0	
Filter coefficient			0	
Monitored cell list size			6 TDD neighbours on Channel 1 6 TDD neighbours on Channel 2	
T1		s	5	
T2		s	10	
T3		s	5	

TableA.5.1.8: Cell Specific parameters for inter-frequency handover

Parameter	Unit	Cell 1								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1								
PCCPCH_Ec/I _{or}	dB	-3						n.a.		
DwPCH_Ec/I _{or}					0					
DPCH_Ec/I _{or}	dB	n.a.			n.a.			Note1	n.a.	
OCNS_Ec/I _{or}	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	3			3			3		
I_{oc}	dBm/ 1.28 MHz	-70								
PCCPCH_RSCP	dBm	-70			n.a.			n.a.		
Propagation Condition		AWGN								
Parameter	Unit	Cell 2								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 2								
PCCPCH_Ec/I _{or}	dB	-3						n.a.		
DwPCH_Ec/I _{or}					0					
DPCH_Ec/I _{or}	dB	n.a.			n.a.			n.a.	Note1	
OCNS_Ec/I _{or}	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	-Inf.	9		-Inf.	9		-Inf.	9	
I_{oc}	dBm/ 1.28 MHz	-70								
PCCPCH_RSCP	dBm	-Inf.	-64		n.a.			n.a.		
Propagation Condition		AWGN								
Note 1: The DPCH level is controlled by the power control loop										
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}										

Parameter	Unit	Cell-1						Cell-2					
		0			5			0			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel-1						Channel-2					
PCCPCH_Ec/I _{or}	dB	-3			n.a.			-3			n.a.		
DPCH_Ec/I _{or}	dB	n.a.			Note1	n.a.		n.a.			n.a.	Note1	
OCNS_Ec/I _{or}	dB	-3			Note2			-3			Note2		
\hat{I}_{or}/I_{oc}	dB	-3			3			-Inf.	9		-Inf.	9	
I_{oc}	dBm/1.28 MHz	-70											
PCCPCH_RSCP	dBm	-70			n.a.			-Inf.	-64		n.a.		
Propagation Condition		AWGN											
Note 1: The DPCH level is controlled by the power control loop													
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}													

A.5.1.2.2.2 Test Requirements

The UE shall start to transmit the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3.

The rate of correct handovers observed during repeated tests shall be at least 90%.

CHANGE REQUEST

⌘ **25.123 CR 280** ⌘ rev ⌘ Current version: **5.2.0** ⌘

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

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

Title:	⌘ Handover Test Case Correction for 1.28Mcps TDD		
Source:	⌘ RAN WG4		
Work item code:	⌘ LCRTDD-RF	Date:	⌘ 26/11/2002
Category:	⌘ A	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	R96	(GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R97	(Release 1996)
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	D (editorial modification)	Rel-4	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-5	(Release 4)
		Rel-6	(Release 5)
			(Release 6)

Reason for change:	⌘ Unclear test case parameters with intra-frequency and inter-frequency handover test cases for 1.28 Mcps TDD Option wrt. DwPCH_Ec/Ior levels.
Summary of change:	⌘ The missing RF parameters for DwPCH_Ec/Ior are included in the tables for intra-frequency handover and inter-frequency handover test cases in Table A.5.1.6 and Table A.5.1.8 correspondingly: <ul style="list-style-type: none"> • DwPCH_Ec/Ior = 0 dB in timeslot DwPTS • Ior/Ioc: same values, as for timeslot 0
Consequences if not approved:	⌘ Terminals can not pass the test. Misinterpretations and incorrect implementations of test cases in terminal test specifications. <u>Isolated Impact Analysis:</u> This CR has no isolated impact, as it corrects a test case.

Clauses affected:	⌘ A.5.1.2.1, A.5.1.2.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;">X</td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X	X	X	X		X	⌘	34.122
Y	N										
X	X										
X	X										
	X										
Other comments:	⌘ Equivalent CRs in other Releases: CR279 cat. F to 25.123 v4.6.0										

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A.5.1.2 1.28Mcps TDD option

A.5.1.2.1 Handover to intra-frequency cell

A.5.1.2.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the intra-frequency handover delay in CELL_DCH state in the single carrier case as reported in section 5.1.2.1.2.

The test parameters are given in Table A.5.1.5 and A.5.1.6 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used, and that PCCPCH RSCP and SFN-CFN observed timed difference shall be reported together with Event 1G. The test consists of three successive time periods, with a time duration of T1, T2 and T3 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration with activation time at the beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE so that the whole message is available at the UE the RRC procedure delay prior to the beginning of T3. The RRC procedure delay is defined [16].

Table A.5.1.5: General test parameters for intra-frequency handover

Parameter	Unit	Value	Comment
DPCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Control		On	
Target quality value on DPCH	BLER	0.01	
Initial conditions	Active cell	Cell 1	
	Neighbouring cell	Cell 2	
Final condition	Active cell	Cell 2	
O	dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		6 TDD neighbours on Channel 1	
T1	s	5	
T2	s	5	
T3	s	5	

Table A.5.1.6: Cell specific test parameters for intra-frequency handover

Parameter	Unit	Cell 1								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1								
PCCPCH_Ec/Ior	dB	-3						n.a.		
DwPCH_Ec/Ior					0					
DPCH_Ec/Ior	dB	n.a.			n.a.			Note1	n.a.	
OCNS_Ec/Ior	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	3			3			3		
I_{oc}	dBm/ 1.28 MHz	-70								
PCCPCH_RSCP	dBm	-70			n.a.			n.a.		
Propagation Condition		AWGN								
Parameter	Unit	Cell 2								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1								
PCCPCH_Ec/Ior	dB	-3						n.a.		
DwPCH_Ec/Ior					0					
DPCH_Ec/Ior	dB	n.a.			n.a.			n.a.	Note1	
OCNS_Ec/Ior	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	-Inf.	5		-Inf.	5		-Inf.	5	
I_{oc}	dBm/ 1.28 MHz	-70								
PCCPCH_RSCP	dBm	-Inf.	-68		n.a.			n.a.		
Propagation Condition		AWGN								
Note 1: The DPCH level is controlled by the power control loop										
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}										

Parameter	Unit	Cell-1						Cell-2					
		0			5			0			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel-1						Channel-1					
PCCPCH_Ec/Ior	dB	-3			n.a.			-3			n.a.		
DPCH_Ec/Ior	dB	n.a.			Note1	n.a.		n.a.			n.a.	Note1	
OCNS_Ec/Ior	dB	-3			Note2			-3			Note2		
\hat{I}_{or}/I_{oc}	dB	3			3			-Inf.	5		-Inf.	5	
I_{oc}	dBm/ 1.28 MHz	-70											
PCCPCH_RSCP	dBm	-70			n.a.			-Inf.	-68		n.a.		
Propagation Condition		AWGN											
Note 1: The DPCH level is controlled by the power control loop													
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}													

A.5.1.2.1.2 Test Requirements

The UE shall start to transmit the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3.

The rate of correct handovers observed during repeated tests shall be at least 90%.

A.5.1.2.2 Handover to inter-frequency cell

A.5.1.2.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the inter-frequency handover delay in CELL_DCH in the dual carrier case as reported in section 5.1.2.1.2.

The test consists of three successive time periods, with a time duration T1, T2 and T3. The test parameters are given in tables A.5.1.7 and A.5.1.8 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 2C shall be used. The PCCPCH RSCP and SFN-CFN observed timed difference of the best cell on the unused frequency shall be reported together with Event 2C reporting. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration with activation time at beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE so that the whole message is available at the UE the RRC procedure delay prior to the beginning of T3. The RRC procedure delay is defined [16]

Table A.5.1.7: General test parameters for inter-frequency handover

Parameter		Unit	Value	Comment
DPCH parameters			DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Control			On	
Target quality value on DPCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbour cell		Cell 2	
Final conditions	Active cell		Cell 2	
Threshold non used frequency		dBm	-75	Absolute RSCP threshold for event 2C
O		dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trigger		ms	0	
Filter coefficient			0	
Monitored cell list size			6 TDD neighbours on Channel 1 6 TDD neighbours on Channel 2	
T1		s	5	
T2		s	10	
T3		s	5	

TableA.5.1.8: Cell Specific parameters for inter-frequency handover

Parameter	Unit	Cell 1								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1								
PCCPCH_Ec/Ior	dB	-3						n.a.		
DwPCH_Ec/Ior					0					
DPCH_Ec/Ior	dB	n.a.			n.a.			Note1	n.a.	
OCNS_Ec/Ior	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	3			3			3		
I_{oc}	dBm/1.28 MHz	-70								
PCCPCH_RSCP	dBm	-70			n.a.			n.a.		
Propagation Condition		AWGN								
Parameter	Unit	Cell 2								
		0			DwPTS			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 2								
PCCPCH_Ec/Ior	dB	-3						n.a.		
DwPCH_Ec/Ior					0					
DPCH_Ec/Ior	dB	n.a.			n.a.			n.a.	Note1	
OCNS_Ec/Ior	dB	-3						Note2		
\hat{I}_{or}/I_{oc}	dB	-Inf.	9		-Inf.	9		-Inf.	9	
I_{oc}	dBm/1.28 MHz	-70								
PCCPCH_RSCP	dBm	-Inf.	-64		n.a.			n.a.		
Propagation Condition		AWGN								
Note 1: The DPCH level is controlled by the power control loop										
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}										

Parameter	Unit	Cell-1						Cell-2					
		0			5			0			5		
Timeslot Number		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel-1						Channel-2					
PCCPCH_Ec/Ior	dB	-3			n.a.			-3			n.a.		
DPCH_Ec/Ior	dB	n.a.			Note1	n.a.		n.a.			n.a.	Note1	
OCNS_Ec/Ior	dB	-3			Note2			-3			Note2		
\hat{I}_{or}/I_{oc}	dB	-3			3			-Inf	9		-Inf	9	
I_{oc}	dBm/1.28 MHz	-70											
PCCPCH_RSCP	dBm	-70			n.a.			-Inf	-64		n.a.		
Propagation Condition		AWGN											
Note 1: The DPCH level is controlled by the power control loop													
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{oc}													

A.5.1.2.2.2 Test Requirements

The UE shall start to transmit the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3.

The rate of correct handovers observed during repeated tests shall be at least 90%.

CHANGE REQUEST

⌘ **25.123 CR 281** ⌘ rev ⌘ Current version: **4.6.0** ⌘

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

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

Title:	⌘ Maximum allowed UL TX Power Correction for 1.28Mcps TDD		
Source:	⌘ RAN WG4		
Work item code:	⌘ LCRTDD-RF	Date:	⌘ 26/11/2002
Category:	⌘ F	Release:	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2 (GSM Phase 2)	
	A (corresponds to a correction in an earlier release)	R96 (Release 1996)	
	B (addition of feature),	R97 (Release 1997)	
	C (functional modification of feature)	R98 (Release 1998)	
	D (editorial modification)	R99 (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ The UE transmitted power measurement accuracy is only defined for the range PUEMAX to PUEMAX-10 dB. In case of lower values the requirements for Maximum allowed UL TX power are undefined.
Summary of change:	⌘ For the requirements on Maximum allowed UL TX Power in section 6A.3.2.2 for 1.28 Mcps TDD Option, the following behaviour for UE output powers that are outside the range covered by the UE transmitted power measurement is added: <ul style="list-style-type: none"> • For UE output powers that are outside the range covered by the UE transmitted power measurement the UE output power shall not exceed the Maximum allowed UL TX Power with more than the tolerances specified for the UL Power Control in TS 25.102.
Consequences if not approved:	⌘ Could result in misinterpretations and incorrect test case implementation. For the cases, where the UE estimation of maximum allowed ULTX power would lay outside the range of UE transmitted power, there would be no clear requirement, so diverse UE behaviors could be implemented and the network would not be able to expect a common reaction of the UE. <u>Isolated Impact Analysis:</u> No consequences, if UE implementations behave as indicated in the CR.

Clauses affected:	⌘ 6A.3.2.2								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"> </td> <td style="padding: 2px;">X</td> </tr> </table>	Y	N		X		X	Other core specifications	⌘
	Y	N							
		X							
	X								
Test specifications	⌘								

O&M Specifications

Other comments: ⌘

Equivalent CRs in other Releases: CR282 cat. A to 25.123 v5.2.0

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.

6A.3 Maximum allowed UL TX Power

6A.3.1 Introduction

UTRAN may limit the power the UE is using on the uplink by setting the maximum allowed UL TX power IE defined in [16].

6A.3.2 Requirements

6A.3.2.1 3.84 Mcps option

For each measurement period, the UE shall with the use of the UE transmitted power measurement, estimate if it has reached the Maximum allowed UL TX Power or not. With tolerances as defined for the UE transmitted power measurement accuracy (section 9.1.2.1.1), the UE output power shall not exceed the Maximum allowed UL TX Power, as set by the UTRAN.

For UE output powers that are outside the range covered by the UE transmitted power measurement the UE output power shall not exceed the Maximum allowed UL TX Power with more than the tolerances specified for the UL Power Control in [5].

6A.3.2.2 1.28 Mcps option

For each measurement period, the UE shall with the use of the UE transmitted power measurement, estimate if it has reached the Maximum allowed UL TX Power or not. With tolerances as defined for the UE transmitted power measurement accuracy (section 9.1.2.1.1), the UE output power shall not exceed the Maximum allowed UL TX Power, as set by the UTRAN.

[For UE output powers that are outside the range covered by the UE transmitted power measurement the UE output power shall not exceed the Maximum allowed UL TX Power with more than the tolerances specified for the UL Power Control in \[5\].](#)

CHANGE REQUEST

⌘ **25.123 CR 282** ⌘ rev ⌘ Current version: **5.2.0** ⌘

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

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

Title:	⌘ Maximum allowed UL TX Power Correction for 1.28Mcps TDD		
Source:	⌘ RAN WG4		
Work item code:	⌘ LCRTDD-RF	Date:	⌘ 26/11/2002
Category:	⌘ A	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ The UE transmitted power measurement accuracy is only defined for the range PUEMAX to PUEMAX-10 dB. In case of lower values the requirements for Maximum allowed UL TX power are undefined.
Summary of change:	⌘ For the requirements on Maximum allowed UL TX Power in section 6A.3.2.2 for 1.28 Mcps TDD Option, the following behaviour for UE output powers that are outside the range covered by the UE transmitted power measurement is added: <ul style="list-style-type: none"> • For UE output powers that are outside the range covered by the UE transmitted power measurement the UE output power shall not exceed the Maximum allowed UL TX Power with more than the tolerances specified for the UL Power Control in TS 25.102.
Consequences if not approved:	⌘ Could result in misinterpretations and incorrect test case implementation. For the cases, where the UE estimation of maximum allowed ULTX power would lay outside the range of UE transmitted power, there would be no clear requirement, so diverse UE behaviors could be implemented and the network would not be able to expect a common reaction of the UE. <u>Isolated Impact Analysis:</u> No consequences, if UE implementations behave as indicated in the CR.

Clauses affected:	⌘ 6A.3.2.2								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> <tr> <td style="padding: 2px 5px;"> </td> <td style="padding: 2px 5px;">X</td> </tr> </table>	Y	N		X		X	Other core specifications	⌘
	Y	N							
		X							
	X								
Test specifications	⌘								

O&M Specifications

Other comments: ⌘

Equivalent CRs in other Releases: CR281 cat. F to 25.123 v4.6.0

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.

6A.3 Maximum allowed UL TX Power

6A.3.1 Introduction

UTRAN may limit the power the UE is using on the uplink by setting the maximum allowed UL TX power IE defined in [16].

6A.3.2 Requirements

6A.3.2.1 3.84 Mcps option

For each measurement period, the UE shall with the use of the UE transmitted power measurement, estimate if it has reached the Maximum allowed UL TX Power or not. With tolerances as defined for the UE transmitted power measurement accuracy (section 9.1.2.1.1), the UE output power shall not exceed the Maximum allowed UL TX Power, as set by the UTRAN.

For UE output powers that are outside the range covered by the UE transmitted power measurement the UE output power shall not exceed the Maximum allowed UL TX Power with more than the tolerances specified for the UL Power Control in [5].

6A.3.2.2 1.28 Mcps option

For each measurement period, the UE shall with the use of the UE transmitted power measurement, estimate if it has reached the Maximum allowed UL TX Power or not. With tolerances as defined for the UE transmitted power measurement accuracy (section 9.1.2.1.1), the UE output power shall not exceed the Maximum allowed UL TX Power, as set by the UTRAN.

[For UE output powers that are outside the range covered by the UE transmitted power measurement the UE output power shall not exceed the Maximum allowed UL TX Power with more than the tolerances specified for the UL Power Control in \[5\].](#)

CHANGE REQUEST

⌘ **25.123 CR 283** ⌘ rev ⌘ Current version: **4.6.0** ⌘

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

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

Title:	⌘	Corrections to Idle Mode Requirements and Test Cases for 1.28Mcps TDD	
Source:	⌘	RAN WG4	
Work item code:	⌘	LCRTDD-RF	Date: ⌘ 26/11/2002
Category:	⌘	F	Release: ⌘ Rel-4
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		F (correction)	2 (GSM Phase 2)
		A (corresponds to a correction in an earlier release)	R96 (Release 1996)
		B (addition of feature),	R97 (Release 1997)
		C (functional modification of feature)	R98 (Release 1998)
		D (editorial modification)	R99 (Release 1999)
		Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘	<p>The interpretation of current wording of requirements in the specification could lead to other interpretations and implementation to test specifications as intended.</p> <p>Clarification on explicit use of freedom and restrictions on the filtering of measurements for performance requirements for the evaluation of S criterion is needed.</p> <p>Also corrections to the test cases and some additions of test parameters in Annex A.4. are needed for clarification to aim correct implementation in test specifications.</p>
Summary of change:	⌘	<ul style="list-style-type: none"> Clarification for measurement and evaluation of cell selection criteria S of serving cell: The first and the last measurement used for filtering of measurements for cell selection criterion S evaluation have to have a time difference in between of at least $T_{\text{measureNTDD}}/2$. For the requirements for measurement of intra-frequency cells for 1.28Mcps TDD the requirement for P-CCPCH RSCP to be the measurement quantity is removed as it is obsolete with 1.28Mcps TDD. UTRA RF Channel Numbers for cells 4 and 6 are included in test case TDD/TDD cell re-selection multi carrier case for 1.28Mcps TDD Option. Correction to loc values, removal of square brackets for \hat{I}_{or}/loc, P-CCPCH_RSCP values and correction of calculation of test requirements for test case 3.84 Mcps TDD cell re-selection for 1.28 Mcps TDD UE. Inclusion of Qrxlevmin parameter in test case TDD/FDD cell re-selection for 1.28 Mcps TDD Option.

Consequences if not approved: ⌘ The requirements are not complete and would lead to different implementation of S criteria evaluation. If requirements would remain as stated, possible misinterpretation could occur and incomplete and incorrect test specifications would be possible. Missing or incomplete idle mode test cases.
Isolated Impact Analysis:
 The proposed changes do not impact current implementation.
 For the test cases there is no impact on implementation as this requirements only align the test requirements with the core requirements.

Clauses affected: ⌘ 4.2.2.1.2, 4.2.2.2.2, A.4.2.2.1.2, A.4.2.2A.1, A.4.2.2A.2, A.4.2.3.1.2

Other specs affected: ⌘

Y	N
	X
X	
	X

Other core specifications ⌘ 34.122
 Test specifications
 O&M Specifications

Other comments: ⌘ Equivalent CRs in other Releases: CR284 cat. A to 25.123 v5.2.0

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.

4 Idle Mode

4.1 Cell Selection

4.1.1 Introduction

After a UE has switched on and a PLMN has been selected, the Cell selection process takes place, as described in [18]. This process allows the UE to select a suitable cell where to camp on in order to access available services. In this process the UE can use stored information (*Stored information cell selection*) or not (*Initial cell selection*).

4.2 Cell Re-selection

4.2.1 Introduction

4.2.1.1 3.84 Mcps TDD option

The cell reselection procedure allows the UE to select a more suitable cell and camp on it.

When the UE is in either *Camped Normally state* or *Camped on Any Cell* state on a TDD cell, the UE shall attempt to identify, synchronise and monitor intra-frequency, inter-frequency and inter-RAT cells indicated in the measurement control system information of the serving cell. UE measurement activity is also controlled by measurement rules defined in [18], allowing the UE to limit its measurement activity if certain conditions are fulfilled.

4.2.1.2 1.28 Mcps TDD option

The cell reselection procedure allows the UE to select a more suitable cell and camp on it.

When the UE is in either *Camped Normally state* or *Camped on Any Cell* state on a TDD cell, the UE shall attempt to identify, synchronise and monitor intra-frequency, inter-frequency and inter-RAT cells indicated in the measurement control system information of the serving cell. UE measurement activity is also controlled by measurement rules defined in [18], allowing the UE to limit its measurement activity if certain conditions are fulfilled.

4.2.2 Requirements

4.2.2.1 Measurement and evaluation of cell selection criteria S of serving cell

4.2.2.1.1 3.84 Mcps TDD option

The UE shall measure the PCCPCH RSCP level of the serving cell and evaluate the cell selection criterion S_{rxlev} defined in [18] for the serving cell at least every DRX cycle. The UE shall filter the PCCPCH RSCP measurement of the serving cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{measureTDD}/2$ (see table 4.1).

If the UE has evaluated in N_{serv} successive measurements that the serving cell does not fulfil the cell selection criterion S, the UE shall initiate the measurements of all neighbour cells indicated in the measurement control system information, regardless of the measurement rules currently limiting UE measurement activities.

If the UE has not found any new suitable cell based the on searches and measurements of the neighbour cells indicated in the measurement control system information for 12 s, the UE shall initiate cell selection procedures for the selected PLMN as defined in [18].

4.2.2.1.2 1.28 Mcps TDD option

The UE shall measure the PCCPCH RSCP level of the serving cell and evaluate the cell selection criterion S defined in [18] for the serving cell at least every DRX cycle. The UE shall filter the PCCPCH RSCP level of the serving cell using

at least 2 measurements, which are taken so that the time difference between the ~~measurements~~ first measurement and the last measurement used for filtering is at least $T_{\text{measureNTDD}}/2$ (see table 4.1A).

If the UE has evaluated in N_{serv} consecutive DRX cycles that the serving cell does not fulfil the cell selection criterion S the UE shall initiate the measurements of all neighbour cells indicated in the measurement control system information, regardless of the measurement rules currently limiting UE measurement activities.

If the UE has not found any new suitable cell based on searches and measurements of the neighbour cells indicated in the measurement control system information for 12 s, the UE shall initiate cell selection procedures for the selected PLMN as defined in [18].

After this 12 s period a UE in Cell_PCH or URA_PCH is considered to be “out of service area” and shall perform actions according to [16].

4.2.2.2 Measurement of intra-frequency cells

4.2.2.2.1 3.84 Mcps option

The UE shall measure PCCPCH RSCP at least every $T_{\text{measureTDD}}$ (see table 4.1) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{\text{measureTDD}}$ is defined in Table 4.1. The UE shall filter PCCPCH RSCP measurements of each measured intra-frequency cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{\text{measureTDD}}/2$.

The filtering shall be such that the UE shall be capable of evaluating that an intra-frequency cell has become better ranked than the serving cell within $T_{\text{evaluateTDD}}$ (see table 4.1), from the moment the intra-frequency cell became at least 2 dB better ranked than the current serving cell, provided that Treselection timer is set to zero.

If Treselection timer has a non zero value and the intra frequency cell is better ranked than the serving cell, the UE shall evaluate this intra frequency cell for the Treselection time. If this cell remains better ranked within this duration, then the UE shall reselect that cell.

4.2.2.2.2 1.28 Mcps option

The UE shall measure PCCPCH RSCP at least every $T_{\text{measureNTDD}}$ (see table 4.1A) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{\text{measureNTDD}}$ is defined in Table 4.1A. The UE shall filter PCCPCH RSCP measurements of each measured intra-frequency cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{\text{measureNTDD}}/2$.

The filtering shall be such that the UE shall be capable of evaluating that an intra-frequency cell has become better ranked than the serving cell within $T_{\text{evaluateNTDD}}$ (see table 4.1A), from the moment the intra-frequency cell became at least 2 dB better ranked than the current serving cell, provided that Treselection timer is set to zero ~~and PCCPCH RSCP is used as measurement quantity for cell reselection.~~

If Treselection timer has a non zero value and the intra frequency cell is better ranked than the serving cell, the UE shall evaluate this intra frequency cell for the Treselection time. If this cell remains better ranked within this duration, then the UE shall reselect that cell.

<NEXT CHANGED SECTION>

A.4.2.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

A.4.2.2.1 Test Purpose and Environment

This test is to verify the requirement for the cell re-selection delay in the multi carrier case reported in section 4.2.2.

A.4.2.2.1.1 3.84 Mcps TDD option

This scenario implies the presence of 2 carriers and 6 cells as given in Table A.4.3 and A.4.4. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3: General test parameters for Cell Re-selection in Multi carrier case

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T _{SI}	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.4: Cell re-selection multi carrier multi cell case

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/I _{or}	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_offset		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/I _{or}	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/I _{or}	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	6	0	6	0	0	6	0	6	-3	-3	-3	-3
PCCPCH RSCP	dBm	-67	-73			-73	-67			-76	-76		
Qoffset1 _{s,n}	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		8		0		8		0		8	
UTRA RF Channel Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 2			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/I _{or}	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_offset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/I _{or}	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/I _{or}	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PCCPCH RSCP	dBm	-76	-76			-76	-76			-76	-76		
Qoffset1 _{s,n}	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
I_{oc}	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

A.4.2.2.1.2 1.28 Mcps TDD option

This scenario implies the presence of 2 carriers and 6 cells as given in Table A.4.3A and A.4.4A. The UE is requested to monitor neighbouring cells on 2 carriers. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3A: General test parameters for Cell Re-selection in Multi carrier case

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-103	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T _{SI}	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.4A: Cell re-selection multi carrier multi cell case

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/I _{or}	dB			0	0			0	0			0	0
OCNS_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
\hat{I}_{or}/I_{oc}	dB	10	7	10	7	7	10	7	10	-1	-1	-1	-1
PCCPCH RSCP	dBm	-63	-66			-66	-63			-74	-74		
Qoffset1 _{s,n}	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 2			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/I _{or}	dB			0	0			0	0			0	0
OCNS_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
\hat{I}_{or}/I_{oc}	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 _{s,n}	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
I _{oc}	dBm/ 1.28 MHz	-70											
Propagation Condition		AWGN											

A.4.2.2.2 Test Requirements

A.4.2.2.2.1 3.84 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateTDD}} + T_{\text{SI}}$, where:

$T_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateTDD}}$ of 6.4s according to Table 4.1 in section 4.2.2.7.

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.2.2.2 1.28 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateNTDD}} + T_{\text{SI}}$, where:

$T_{\text{evaluateNTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateNTDD}}$ of 6.4s according to Table 4.1A in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.2A Scenario 2A: 3.84 Mcps TDD cell re-selection for 1.28 Mcps TDD UE

A.4.2.2A.1 Test Purpose and Environment

This test is to verify the requirement for the 1.28 Mcps TDD OPTION/TDD cell re-selection delay reported in section 4.2.

This scenario implies the presence of 1 low chip rate (1.28 Mcps TDD OPTION) and 1 high chip rate (TDD) cell as given in Table A.4.3B and A.4.4B.

The ranking of the cells shall be made according to the cell reselection criteria specified in TS25.304.

Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3B: General test parameters for TDD low chip rate to TDD high chip rate cell re-selection

Parameter		Unit	Value	Comment
Initial condition	Active cell		Cell1	1.28 Mcps TDD OPTION cell
	Neighbour cell		Cell2	TDD cell
Final condition	Active cell		Cell2	
HCS			Not used	
UE_TXPWR_MAX_RACH		dBm	21	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value			1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T_{SI}		s	1,28	The value shall be used for all cells in the test.
DRX cycle length		s	1,28	The value shall be used for all cells in the test.

Table A.4.4B: Test parameters for TDD low chip rate to TDD high chip rate cell re-selection

Parameter	Unit	Cell 1				Cell 2			
		0		DwPTS DwPTS		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2			
PCCPCH_Ec/Ior	dB	-3	-3			-3	-3		
DwPCH_Ec/Ior	dB			0	0	n.a.		n.a.	
SCH_Ec/Ior	dB	n.a.		n.a.		-9	-9	-9	-9
SCH_offset		n.a.		n.a.		0	0	0	0
PICH_Ec/Ior	dB							-3	-3
OCNS_Ec/Ior	dB	n.a.		n.a.		-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	{10}	{7}			{7}	{10}	{7}	{10}
I_{oc}	dBm/3.84 MHz	-70 dBm/ 1.28 MHz				-70 dBm/ 3.84 MHz			
PCCPCH_RSCP	dBm	{63}	{66}			{66}	{63}		
Qrxlevmin	dBm	-103				-103			
Qoffset1s,n	dB	C1, C2: 0				C2, C1: 0			
Qhyst1s	dB	0				0			
Treselection	s	0				0			
Sintersearch	dB	not sent				not sent			
Propagation Condition		AWGN				AWGN			

A.4.2.2A.2 Test Requirements

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: [The cell re-selection delay can be expressed as:](#)

$$T_{\text{evaluateTDD}} + T_{SI}$$

where:

$T_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateTDD}}$ of 6.4s according to Table 4.1A in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in [16] for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

~~NOTE: The re-selection delay equals $T_{\text{TDEvaluate}} + T_{\text{rep}}$ repetition period of the broadcast information of the selected cell~~

A.4.2.2B Scenario 2B: 3.84 Mcps/1.28 Mcps TDD cell re-selection

A.4.2.2B.1 Test Purpose and Environment

This test is to verify the requirement for the 3.84 Mcps/1.28 Mcps TDD cell re-selection delay reported in section 4.2.

This scenario implies the presence of 1 3.84 Mcps TDD serving cell, and 1 1.28 Mcps TDD cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 3.84Mcps TDD carrier and 1 1.28Mcps TDD carrier. Test parameters are given in Table A.4.3C, A4.4C, and A.4.4D. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3C: General test parameters for 3.84 Mcps /1.28 Mcps TDD cell re-selection

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell 1	3.84 Mcps TDD OPTION cell
	Neighbour cell	Cell 2	1.28 Mcps TDD OPTION cell
Final condition	Active cell	Cell 2	1.28 Mcps TDD OPTION cell
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Q_{rxlevmin}	dBm	-103	
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T_{SI}	s	1,28	The value shall be used for all cells in the test.
DRX cycle length	s	1,28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.4C: Cell 1 specific test parameters for 3.84 Mcps TDD/1.28 Mcps TDD cell re-selection

Parameter	Unit	Cell 1			
		0		8	
Timeslot Number		T1	T2	T 1	T 2
UTRA RF Channel Number		Channel 1			
PCCPCH_Ec/lor	dB	-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9
SCH_toffset		0			
PICH_Ec/lor	dB			-3	-3
OCNS_Ec/lor	dB	-3.12			
\hat{I}_{or}/I_{oc}	dB	10	7	10	7
PCCPCH_RSCP	dBm	-63	-66		
Qoffset1 _{s,n}	dB	C1, C2: 0			
Qhyst1 _s	dB	0			
Treselection	s	0			
Sintersearch	dB	not sent			
I_{oc}	dBm/3.84 MHz	-70			
Propagation Condition		AWGN			

Table A.4.4D: Cell 2 specific test parameters for 3.84 Mcps TDD/1.28 Mcps TDD cell re-selection

Parameter	Unit	Cell 2			
		0		DwPTS	
Timeslot Number		T1	T2	T 1	T 2
UTRA RF Channel Number		Channel 2			
PCCPCH_Ec/lor	dB	-3	-3		
DwPCH_Ec/lor	dB			0	0
OCNS_Ec/lor	dB	-3			
\hat{I}_{or}/I_{oc}	dB	7	10	7	10
PCCPCH_RSCP	dBm	-66	-63		
Qoffset1 _{s,n}	dB	C2, C1: 0			
Qhyst1 _s	dB	0			
Treselection	s	0			
Sintersearch	dB	not sent			
I_{oc}	dBm/1.28 MHz	-70			
Propagation Condition		AWGN			

A.4.2.2B.2 Test Requirements

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: The cell re-selection delay can be expressed as:

$$T_{\text{evaluateNTDD}} + T_{\text{SI}}$$

where:

$T_{\text{evaluateNTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateNTDD}}$ of 6.4s according to Table 4.1 in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in [16] for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.3 Scenario 3: TDD/FDD cell re-selection

A.4.2.3.1 Test Purpose and Environment

A.4.2.3.1.1 3.84 Mcps TDD option

This test is to verify the requirement for the TDD/FDD cell re-selection delay reported in section 4.2.2.

This scenario implies the presence of 1 UTRA TDD and 1 UTRA FDD cell as given in Table A.4.5 and A.4.6. The maximum repetition period of the relevant system information blocks that need to be received by the UE to camp on a cell shall be 1280 ms.

Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5: General test parameters for the TDD/FDD cell re-selection

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	TDD cell
	Neighbour cells	Cell2	FDD cell
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	During T1 cell 1 better ranked than cell 2
T2	s	15	During T2 cell 2 better ranked than cell 1

Table A.4.6: TDD/FDD cell re-selection

Parameter	Unit	Cell 1				Cell 2	
		0		8		n.a.	n.a.
Timeslot Number		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2	
CPICH_Ec/Ior	dB	n.a.		n.a.		-10	-10
PCCPCH_Ec/Ior	dB	-3	-3			-12	-12
SCH_Ec/Ior	dB	-9	-9	-9	-9	-12	-12
SCH_offset		0	0	0	0	n.a.	n.a.
PICH_Ec/Ior	dB			-3	-3	-15	-15
OCNS_Ec/Ior	dB	-3,12	-3,12	-3,12	-3,12	-0,941	-0,941
\hat{I}_{or}/I_{oc}	dB	3	-2	3	-2	-2	3
I_{oc}	dBm/3.8 4 MHz	-70					
CPICH_RSCP	dBm	n.a.		n.a.		-82	-77
PCCPCH_RSCP	dBm	-70	-75			n.a.	n.a.
Cell_selection_and reselection_quality measure		CPICH_RSCP				CPICH_RSCP	
Qrxlevmin	dBm	-102				-115	
Qoffset1 _{s,n}	dB	C1, C2: -12				C2, C1: +12	
Qhyst1 _s	dB	0				0	
Treselection	s	0				0	
Propagation Condition		AWGN				AWGN	

A.4.2.3.1.2 1.28 Mcps TDD option

This test is to verify the requirement for the 1.28 Mcps TDD OPTION/FDD cell re-selection delay reported in section 4.2.

This scenario implies the presence of 1 1.28Mps TDD serving cell, and 1 FDD cell to be selected. The UE is requested to monitor neighbouring cells on 1 1.28Mcps TDD carrier and 1 FDD carrier. Test parameters are given in Table A.4.5A, A4.6A, and A.4.6AA.

Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5A: General test parameters for the TDD/FDD cell re-selection

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	1.28 Mcps TDD OPTION cell
	Neighbour cells	Cell2	FDD cell
Final condition	Active cell	Cell2	FDD cell
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T _{SI}	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.6A: Cell 1 specific test parameters for 1.28 Mcps TDD/FDD cell re-selection

Parameter	Unit	Cell 1			
		0		DwPTS	
Timeslot Number		T1	T2	T1	T2
UTRA RF Channel Number		Channel 1			
PCCPCH_Ec/Ior	dB	-3	-3		
DwPCH_Ec/Ior	dB			0	0
OCNS_Ec/Ior	dB	-3			
\hat{I}_{or}/I_{oc}	dB	8	2	8	2
PCCPCH_RSCP	dBm	-65	-71		
Cell_selection_and_reselection_quality_measure		CPICH RSCP			
Qrxlevmin	dBm	-103			
Qoffset1 _{s,n}	dB	C1, C2: -12			
Qhyst1 _s	dB	0			
Treselection	s	0			
Sintersearch	dB	not sent			
I_{oc}	dBm/1.28 MHz	-70			
Propagation Condition		AWGN			

Table A.4.6AA: Cell 2 specific test parameters for 1.28 Mcps TDD/FDD cell re-selection

Parameter	Unit	Cell 2 (UTRA)	
		T1	T2
UTRA RF Channel Number		Channel 1	
CPICH_Ec/Ior	dB	-10	
PCCPCH_Ec/Ior	dB	-12	
SCH_Ec/Ior	dB	-12	
PICH_Ec/Ior	dB	-15	
OCNS_Ec/Ior	dB	-0.941	
\hat{I}_{or}/I_{oc}	dB	-3	3
CPICH_RSCP	dBm	-83	-77
Cell_selection_and_reselection_quality_measure		CPICH RSCP	
Qrxlevmin	dBm	-115	
Qoffset1 _{s,n}	dB	C2, C1: +12	
Qhyst1	dB	0	
Treselection	s	0	
Sintersearch	dB	not sent	
I_{oc}	dBm/3.84 MHz	-70	
Propagation Condition		AWGN	

A.4.2.3.2 Test Requirements

A.4.2.3.2.1 3.84 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateFDD}} + T_{\text{SI}}$, where:

$T_{\text{evaluateFDD}}$ See Table 4.1 in section 4.2.2.

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.3.2.2 1.28 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: The cell re-selection delay can be expressed as:

$$T_{\text{evaluateFDD}} + T_{\text{SI}}$$

where:

$T_{\text{evaluateFDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluate FDD}}$ of 6.4s according to Table 4.1A in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

CHANGE REQUEST

⌘ **25.123 CR 284** ⌘ rev ⌘ Current version: **5.2.0** ⌘

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

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

Title:	⌘	Corrections to Idle Mode Requirements and Test Cases for 1.28Mcps TDD	
Source:	⌘	RAN WG4	
Work item code:	⌘	LCRTDD-RF	Date: ⌘ 26/11/2002
Category:	⌘	A	Release: ⌘ Rel-5
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		F (correction)	2 (GSM Phase 2)
		A (corresponds to a correction in an earlier release)	R96 (Release 1996)
		B (addition of feature),	R97 (Release 1997)
		C (functional modification of feature)	R98 (Release 1998)
		D (editorial modification)	R99 (Release 1999)
		Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘	<p>The interpretation of current wording of requirements in the specification could lead to other interpretations and implementation to test specifications as intended.</p> <p>Clarification on explicit use of freedom and restrictions on the filtering of measurements for performance requirements for the evaluation of S criterion is needed.</p> <p>Also corrections to the test cases and some additions of test parameters in Annex A.4. are needed for clarification to aim correct implementation in test specifications.</p>
Summary of change:	⌘	<ul style="list-style-type: none"> Clarification for measurement and evaluation of cell selection criteria S of serving cell: The first and the last measurement used for filtering of measurements for cell selection criterion S evaluation have to have a time difference in between of at least $T_{\text{measureNTDD}}/2$. For the requirements for measurement of intra-frequency cells for 1.28Mcps TDD the requirement for P-CCPCH RSCP to be the measurement quantity is removed as it is obsolete with 1.28Mcps TDD. UTRA RF Channel Numbers for cells 4 and 6 are included in test case TDD/TDD cell re-selection multi carrier case for 1.28Mcps TDD Option. Correction to loc values, removal of square brackets for \hat{I}_{or}/loc, P-CCPCH_RSCP values and correction of calculation of test requirements for test case 3.84 Mcps TDD cell re-selection for 1.28 Mcps TDD UE. Inclusion of Qrxlevmin parameter in test case TDD/FDD cell re-selection for 1.28 Mcps TDD Option.

Consequences if not approved: ⌘ The requirements are not complete and would lead to different implementation of S criteria evaluation. If requirements would remain as stated, possible misinterpretation could occur and incomplete and incorrect test specifications would be possible. Missing or incomplete idle mode test cases.
Isolated Impact Analysis:
 The proposed changes do not impact current implementation.
 For the test cases there is no impact on implementation as this requirements only align the test requirements with the core requirements.

Clauses affected: ⌘ 4.2.2.1.2, 4.2.2.2.2, A.4.2.2.1.2, A.4.2.2A.1, A.4.2.2A.2, A.4.2.3.1.2

Other specs affected:

	Y	N		
		X	Other core specifications	⌘
	X		Test specifications	34.122
		X	O&M Specifications	

Other comments: ⌘ Equivalent CRs in other Releases: CR283 cat. F to 25.123 v4.6.0

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.

4 Idle Mode

4.1 Cell Selection

4.1.1 Introduction

After a UE has switched on and a PLMN has been selected, the Cell selection process takes place, as described in [18]. This process allows the UE to select a suitable cell where to camp on in order to access available services. In this process the UE can use stored information (*Stored information cell selection*) or not (*Initial cell selection*).

4.2 Cell Re-selection

4.2.1 Introduction

4.2.1.1 3.84 Mcps TDD option

The cell reselection procedure allows the UE to select a more suitable cell and camp on it.

When the UE is in either *Camped Normally state* or *Camped on Any Cell* state on a TDD cell, the UE shall attempt to identify, synchronise and monitor intra-frequency, inter-frequency and inter-RAT cells indicated in the measurement control system information of the serving cell. UE measurement activity is also controlled by measurement rules defined in [18], allowing the UE to limit its measurement activity if certain conditions are fulfilled.

4.2.1.2 1.28 Mcps TDD option

The cell reselection procedure allows the UE to select a more suitable cell and camp on it.

When the UE is in either *Camped Normally state* or *Camped on Any Cell* state on a TDD cell, the UE shall attempt to identify, synchronise and monitor intra-frequency, inter-frequency and inter-RAT cells indicated in the measurement control system information of the serving cell. UE measurement activity is also controlled by measurement rules defined in [18], allowing the UE to limit its measurement activity if certain conditions are fulfilled.

4.2.2 Requirements

4.2.2.1 Measurement and evaluation of cell selection criteria S of serving cell

4.2.2.1.1 3.84 Mcps TDD option

The UE shall measure the PCCPCH RSCP level of the serving cell and evaluate the cell selection criterion S_{rxlev} defined in [18] for the serving cell at least every DRX cycle. The UE shall filter the PCCPCH RSCP measurement of the serving cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{measureTDD}/2$ (see table 4.1).

If the UE has evaluated in N_{serv} successive measurements that the serving cell does not fulfil the cell selection criterion S, the UE shall initiate the measurements of all neighbour cells indicated in the measurement control system information, regardless of the measurement rules currently limiting UE measurement activities.

If the UE has not found any new suitable cell based the on searches and measurements of the neighbour cells indicated in the measurement control system information for 12 s, the UE shall initiate cell selection procedures for the selected PLMN as defined in [18].

4.2.2.1.2 1.28 Mcps TDD option

The UE shall measure the PCCPCH RSCP level of the serving cell and evaluate the cell selection criterion S defined in [18] for the serving cell at least every DRX cycle. The UE shall filter the PCCPCH RSCP level of the serving cell using

at least 2 measurements, which are taken so that the time difference between the [first measurement and the last measurement used for filtering measurements](#) is at least $T_{\text{measureNTDD}}/2$ (see table 4.1A).

If the UE has evaluated in N_{serv} consecutive DRX cycles that the serving cell does not fulfil the cell selection criterion S the UE shall initiate the measurements of all neighbour cells indicated in the measurement control system information, regardless of the measurement rules currently limiting UE measurement activities.

If the UE has not found any new suitable cell based on searches and measurements of the neighbour cells indicated in the measurement control system information for 12 s, the UE shall initiate cell selection procedures for the selected PLMN as defined in [18].

After this 12 s period a UE in Cell_PCH or URA_PCH is considered to be “out of service area” and shall perform actions according to [16].

4.2.2.2 Measurement of intra-frequency cells

4.2.2.2.1 3.84 Mcps option

The UE shall measure PCCPCH RSCP at least every $T_{\text{measureTDD}}$ (see table 4.1) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{\text{measureTDD}}$ is defined in Table 4.1. The UE shall filter PCCPCH RSCP measurements of each measured intra-frequency cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{\text{measureTDD}}/2$.

The filtering shall be such that the UE shall be capable of evaluating that an intra-frequency cell has become better ranked than the serving cell within $T_{\text{evaluateTDD}}$ (see table 4.1), from the moment the intra-frequency cell became at least 2 dB better ranked than the current serving cell, provided that Treselection timer is set to zero.

If Treselection timer has a non zero value and the intra frequency cell is better ranked than the serving cell, the UE shall evaluate this intra frequency cell for the Treselection time. If this cell remains better ranked within this duration, then the UE shall reselect that cell.

4.2.2.2.2 1.28 Mcps option

The UE shall measure PCCPCH RSCP at least every $T_{\text{measureNTDD}}$ (see table 4.1A) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{\text{measureNTDD}}$ is defined in Table 4.1A. The UE shall filter PCCPCH RSCP measurements of each measured intra-frequency cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{\text{measureNTDD}}/2$.

The filtering shall be such that the UE shall be capable of evaluating that an intra-frequency cell has become better ranked than the serving cell within $T_{\text{evaluateNTDD}}$ (see table 4.1A), from the moment the intra-frequency cell became at least 2 dB better ranked than the current serving cell, provided that Treselection timer is set to zero ~~and PCCPCH RSCP is used as measurement quantity for cell reselection.~~

If Treselection timer has a non zero value and the intra frequency cell is better ranked than the serving cell, the UE shall evaluate this intra frequency cell for the Treselection time. If this cell remains better ranked within this duration, then the UE shall reselect that cell.

<NEXT CHANGED SECTION>

A.4.2.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

A.4.2.2.1 Test Purpose and Environment

This test is to verify the requirement for the cell re-selection delay in the multi carrier case reported in section 4.2.2.

A.4.2.2.1.1 3.84 Mcps TDD option

This scenario implies the presence of 2 carriers and 6 cells as given in Table A.4.3 and A.4.4. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3: General test parameters for Cell Re-selection in Multi carrier case

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T _{SI}	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.4: Cell re-selection multi carrier multi cell case

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/I _{or}	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_offset		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/I _{or}	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/I _{or}	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	6	0	6	0	0	6	0	6	-3	-3	-3	-3
PCCPCH RSCP	dBm	-67	-73			-73	-67			-76	-76		
Qoffset1 _{s,n}	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		8		0		8		0		8	
UTRA RF Channel Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 2			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/I _{or}	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_offset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/I _{or}	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/I _{or}	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PCCPCH RSCP	dBm	-76	-76			-76	-76			-76	-76		
Qoffset1 _{s,n}	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
I_{oc}	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

A.4.2.2.1.2 1.28 Mcps TDD option

This scenario implies the presence of 2 carriers and 6 cells as given in Table A.4.3A and A.4.4A. The UE is requested to monitor neighbouring cells on 2 carriers. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3A: General test parameters for Cell Re-selection in Multi carrier case

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-103	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T _{SI}	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.4A: Cell re-selection multi carrier multi cell case

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/I _{or}	dB			0	0			0	0			0	0
OCNS_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
\hat{I}_{or}/I_{oc}	dB	10	7	10	7	7	10	7	10	-1	-1	-1	-1
PCCPCH RSCP	dBm	-63	-66			-66	-63			-74	-74		
Qoffset1 _{s,n}	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 2			
PCCPCH_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/I _{or}	dB			0	0			0	0			0	0
OCNS_Ec/I _{or}	dB	-3	-3			-3	-3			-3	-3		
\hat{I}_{or}/I_{oc}	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 _{s,n}	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
I _{oc}	dBm/ 1.28 MHz	-70											
Propagation Condition		AWGN											

A.4.2.2.2 Test Requirements

A.4.2.2.2.1 3.84 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateTDD}} + T_{\text{SI}}$, where:

$T_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateTDD}}$ of 6.4s according to Table 4.1 in section 4.2.2.7.

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.2.2.2 1.28 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateNTDD}} + T_{\text{SI}}$, where:

$T_{\text{evaluateNTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateNTDD}}$ of 6.4s according to Table 4.1A in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.2A Scenario 2A: 3.84 Mcps TDD cell re-selection for 1.28 Mcps TDD UE

A.4.2.2A.1 Test Purpose and Environment

This test is to verify the requirement for the 1.28 Mcps TDD OPTION/TDD cell re-selection delay reported in section 4.2.

This scenario implies the presence of 1 low chip rate (1.28 Mcps TDD OPTION) and 1 high chip rate (TDD) cell as given in Table A.4.3B and A.4.4B.

The ranking of the cells shall be made according to the cell reselection criteria specified in TS25.304.

Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3B: General test parameters for TDD low chip rate to TDD high chip rate cell re-selection

Parameter		Unit	Value	Comment
Initial condition	Active cell		Cell1	1.28 Mcps TDD OPTION cell
	Neighbour cell		Cell2	TDD cell
Final condition	Active cell		Cell2	
HCS			Not used	
UE_TXPWR_MAX_RACH		dBm	21	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value			1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T_{SI}		s	1,28	The value shall be used for all cells in the test.
DRX cycle length		s	1,28	The value shall be used for all cells in the test.

Table A.4.4B: Test parameters for TDD low chip rate to TDD high chip rate cell re-selection

Parameter	Unit	Cell 1				Cell 2			
		0		DwPTS/DwPTS		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3		
DwPCH_Ec/lor	dB			0	0	n.a.		n.a.	
SCH_Ec/lor	dB	n.a.		n.a.		-9	-9	-9	-9
SCH_offset		n.a.		n.a.		0	0	0	0
PICH_Ec/lor	dB							-3	-3
OCNS_Ec/lor	dB	n.a.		n.a.		-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	{10}	{7}			{7}	{10}	{7}	{10}
I_{oc}	dBm/3.84 MHz	-70 dBm/ 1.28 MHz				-70 dBm/ 3.84 MHz			
PCCPCH_RSCP	dBm	{63}	{66}			{66}	{63}		
Qrxlevmin	dBm	-103				-103			
Qoffset1 _{s,n}	dB	C1, C2: 0				C2, C1: 0			
Qhyst1 _s	dB	0				0			
Treselection	s	0				0			
Sintersearch	dB	not sent				not sent			
Propagation Condition		AWGN				AWGN			

A.4.2.2A.2 Test Requirements

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: [The cell re-selection delay can be expressed as:](#)

$$T_{\text{evaluateTDD}} + T_{SI}$$

where:

$T_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateTDD}}$ of 6.4s according to Table 4.1A in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in [16] for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

~~NOTE: The re-selection delay equals $T_{\text{TDEvaluate}} + T_{\text{rep}}$ repetition period of the broadcast information of the selected cell~~

A.4.2.2B Scenario 2B: 3.84 Mcps/1.28 Mcps TDD cell re-selection

A.4.2.2B.1 Test Purpose and Environment

This test is to verify the requirement for the 3.84 Mcps/1.28 Mcps TDD cell re-selection delay reported in section 4.2.

This scenario implies the presence of 1 3.84 Mcps TDD serving cell, and 1 1.28 Mcps TDD cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 3.84Mcps TDD carrier and 1 1.28Mcps TDD carrier. Test parameters are given in Table A.4.3C, A4.4C, and A.4.4D. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.3C: General test parameters for 3.84 Mcps /1.28 Mcps TDD cell re-selection

Parameter		Unit	Value	Comment
Initial condition	Active cell		Cell 1	3.84 Mcps TDD OPTION cell
	Neighbour cell		Cell 2	1.28 Mcps TDD OPTION cell
Final condition	Active cell		Cell 2	1.28 Mcps TDD OPTION cell
HCS			Not used	
UE_TXPWR_MAX_RACH		dBm	21	The value shall be used for all cells in the test.
Q_{rxlevmin}		dBm	-103	
Access Service Class (ASC#0) - Persistence value			1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T_{SI}		s	1,28	The value shall be used for all cells in the test.
DRX cycle length		s	1,28	The value shall be used for all cells in the test.
T1		s	30	
T2		s	15	

Table A.4.4C: Cell 1 specific test parameters for 3.84 Mcps TDD/1.28 Mcps TDD cell re-selection

Parameter	Unit	Cell 1			
		0		8	
Timeslot Number		T1	T2	T 1	T 2
UTRA RF Channel Number		Channel 1			
PCCPCH_Ec/lor	dB	-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9
SCH_toffset		0			
PICH_Ec/lor	dB			-3	-3
OCNS_Ec/lor	dB	-3.12			
\hat{I}_{or}/I_{oc}	dB	10	7	10	7
PCCPCH_RSCP	dBm	-63	-66		
Qoffset1 _{s,n}	dB	C1, C2: 0			
Qhyst1 _s	dB	0			
Treselection	s	0			
Sintersearch	dB	not sent			
I_{oc}	dBm/3.84 MHz	-70			
Propagation Condition		AWGN			

Table A.4.4D: Cell 2 specific test parameters for 3.84 Mcps TDD/1.28 Mcps TDD cell re-selection

Parameter	Unit	Cell 2			
		0		DwPTS	
Timeslot Number		T1	T2	T 1	T 2
UTRA RF Channel Number		Channel 2			
PCCPCH_Ec/lor	dB	-3	-3		
DwPCH_Ec/lor	dB			0	0
OCNS_Ec/lor	dB	-3			
\hat{I}_{or}/I_{oc}	dB	7	10	7	10
PCCPCH_RSCP	dBm	-66	-63		
Qoffset1 _{s,n}	dB	C2, C1: 0			
Qhyst1 _s	dB	0			
Treselection	s	0			
Sintersearch	dB	not sent			
I_{oc}	dBm/1.28 MHz	-70			
Propagation Condition		AWGN			

A.4.2.2B.2 Test Requirements

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: The cell re-selection delay can be expressed as:

$$T_{\text{evaluateNTDD}} + T_{\text{SI}}$$

where:

$T_{\text{evaluateNTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluateNTDD}}$ of 6.4s according to Table 4.1 in section 4.2.

T_{SI} Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in [16] for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.3 Scenario 3: TDD/FDD cell re-selection

A.4.2.3.1 Test Purpose and Environment

A.4.2.3.1.1 3.84 Mcps TDD option

This test is to verify the requirement for the TDD/FDD cell re-selection delay reported in section 4.2.2.

This scenario implies the presence of 1 UTRA TDD and 1 UTRA FDD cell as given in Table A.4.5 and A.4.6. The maximum repetition period of the relevant system information blocks that need to be received by the UE to camp on a cell shall be 1280 ms.

Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5: General test parameters for the TDD/FDD cell re-selection

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	TDD cell
	Neighbour cells	Cell2	FDD cell
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	During T1 cell 1 better ranked than cell 2
T2	s	15	During T2 cell 2 better ranked than cell 1

Table A.4.6: TDD/FDD cell re-selection

Parameter	Unit	Cell 1				Cell 2	
		0		8		n.a.	n.a.
Timeslot Number		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2	
CPICH_Ec/Ior	dB	n.a.		n.a.		-10	-10
PCCPCH_Ec/Ior	dB	-3	-3			-12	-12
SCH_Ec/Ior	dB	-9	-9	-9	-9	-12	-12
SCH_offset		0	0	0	0	n.a.	n.a.
PICH_Ec/Ior	dB			-3	-3	-15	-15
OCNS_Ec/Ior	dB	-3,12	-3,12	-3,12	-3,12	-0,941	-0,941
\hat{I}_{or}/I_{oc}	dB	3	-2	3	-2	-2	3
I_{oc}	dBm/3.8 4 MHz	-70					
CPICH_RSCP	dBm	n.a.		n.a.		-82	-77
PCCPCH_RSCP	dBm	-70	-75			n.a.	n.a.
Cell_selection_and reselection_quality measure		CPICH_RSCP				CPICH_RSCP	
Qrxlevmin	dBm	-102				-115	
Qoffset1 _{s,n}	dB	C1, C2: -12				C2, C1: +12	
Qhyst1 _s	dB	0				0	
Treselection	s	0				0	
Propagation Condition		AWGN				AWGN	

A.4.2.3.1.2 1.28 Mcps TDD option

This test is to verify the requirement for the 1.28 Mcps TDD OPTION/FDD cell re-selection delay reported in section 4.2.

This scenario implies the presence of 1 1.28Mps TDD serving cell, and 1 FDD cell to be selected. The UE is requested to monitor neighbouring cells on 1 1.28Mcps TDD carrier and 1 FDD carrier. Test parameters are given in Table A.4.5A, A4.6A, and A.4.6AA.

Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5A: General test parameters for the TDD/FDD cell re-selection

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	1.28 Mcps TDD OPTION cell
	Neighbour cells	Cell2	FDD cell
Final condition	Active cell	Cell2	FDD cell
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T _{SI}	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

Table A.4.6A: Cell 1 specific test parameters for 1.28 Mcps TDD/FDD cell re-selection

Parameter	Unit	Cell 1			
		0		DwPTS	
Timeslot Number		T1	T2	T1	T2
UTRA RF Channel Number		Channel 1			
PCCPCH_Ec/Ior	dB	-3	-3		
DwPCH_Ec/Ior	dB			0	0
OCNS_Ec/Ior	dB	-3			
\hat{I}_{or}/I_{oc}	dB	8	2	8	2
PCCPCH_RSCP	dBm	-65	-71		
Cell_selection_and_reselection_quality_measure		CPICH RSCP			
Qrxlevmin	dBm	-103			
Qoffset1 _{s,n}	dB	C1, C2: -12			
Qhyst1 _s	dB	0			
Treselection	s	0			
Sintersearch	dB	not sent			
I_{oc}	dBm/1.28 MHz	-70			
Propagation Condition		AWGN			

Table A.4.6AA: Cell 2 specific test parameters for 1.28 Mcps TDD/FDD cell re-selection

Parameter	Unit	Cell 2 (UTRA)	
		T1	T2
UTRA RF Channel Number		Channel 1	
CPICH_Ec/Ior	dB	-10	
PCCPCH_Ec/Ior	dB	-12	
SCH_Ec/Ior	dB	-12	
PICH_Ec/Ior	dB	-15	
OCNS_Ec/Ior	dB	-0.941	
\hat{I}_{or}/I_{oc}	dB	-3	3
CPICH_RSCP	dBm	-83	-77
Cell_selection_and_reselection_quality_measure		CPICH RSCP	
Qrxlevmin	dBm	-115	
Qoffset1 _{s,n}	dB	C2, C1: +12	
Qhyst1	dB	0	
Treselection	s	0	
Sintersearch	dB	not sent	
I_{oc}	dBm/3.84 MHz	-70	
Propagation Condition		AWGN	

A.4.2.3.2 Test Requirements

A.4.2.3.2.1 3.84 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateFDD}} + T_{\text{SI}}$, where:

$T_{\text{evaluateFDD}}$	See Table 4.1 in section 4.2.2.
T_{SI}	Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

A.4.2.3.2.2 1.28 Mcps TDD option

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: The cell re-selection delay can be expressed as:

$$T_{\text{evaluateFDD}} + T_{\text{SI}}$$

where:

$T_{\text{evaluateFDD}}$	A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluate FDD}}$ of 6.4s according to Table 4.1A in section 4.2.
T_{SI}	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.