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		Α	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		Α	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		Α	Rel-5	5.2.0	Corrections to Idle Mode Requirements and Test Cases for 1.28Mcps TDD	LCRTDD-RF

3GPP TSG RAN WG4 (Radio) Meeting #25 Secaucus, NJ, USA 11 - 15 November, 2002

R4-021567

	CHANGE REQUES	CR-Form-v7
*	25.123 CR 279 # rev #	Current version: 4.6.0 **
For <u>HELP</u> on u	sing this form, see bottom of this page or look at t	the pop-up text over the \ symbols.
Proposed change a	affects: UICC apps業 ME X Radio	Access Network Core Network
Title: Ж	Handover Test Case Correction for 1.28Mcps T	-DD
Source: #	RAN WG4	
Work item code: 第	LCRTDD-RF	<i>Date:</i> ♯ <mark>26/11/2002</mark>
Category:	F Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Release: Rel-4 Use one of the following releases: 2 (GSM Phase 2) ase) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
Reason for change	: # Unclear test case parameters with intra-fre test cases for 1.28 Mcps TDD Option wrt. I	
Summary of chang	 The missing RF parameters for DwPCH_E intra-frequency handover and inter-frequency A.5.1.6 and Table A.5.1.8 correspondingly DwPCH_Ec/Ior = 0 dB in timeslot Îor/Ioc: same values, as for timeslot 	ncy handover test cases in Table : DwPTS
Consequences if not approved:	# Terminals can not pass the test. Misinterprimplementations of test cases in terminal to Isolated Impact Analysis: This CR has no isolated impact, as it corrects a terminal to Isolated Impact Analysis:	est specifications.
Clauses affected:	₩ A.5.1.2.1, A.5.1.2.2	
Other specs affected:	Y N X Other core specifications X Test specifications O&M Specifications	l.122
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 \(\mathcal{H} \) 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

Para	ameter	Unit	Value	Comment
DPCH parame	eters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Contro			On	
Target quality	value on DPCH	BLER	0.01	
Initial	Active cell		Cell 1	
conditions	Neighbouring cell		Cell 2	
Final condition	Active cell		Cell 2	
0		dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trigge	er	ms	0	
Filter coefficie	nt		0	
Monitored cell	list size		6 TDD neighbours on Channel 1	
T1		S	5	
T2	T2		5	
T3		S	5	

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

<u>Parameter</u>	Unit					Cell 1						
Timeslot Number			<u>0</u>			DwPTS			<u>5</u>			
		<u>T1</u>	T2	T3	<u>T1</u>	T2	T3	<u>T1</u>	T2	T3		
UTRA RF Channel					Cl							
Number					<u>Cr</u>	annel 1	•					
PCCPCH_Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>			
DwPCH_Ec/lor						<u>0</u>						
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		No	ote1	<u>n.a.</u>		
OCNS_Ec/lor	<u>dB</u>		<u>-3</u>						Note2	2		
\hat{I}_{or}/I_{oc}	<u>dB</u>		3 3 3									
	dBm/											
I_{oc}	1.28	<u>-70</u>										
	MHz											
PCCPCH_RSCP	<u>dBm</u>	<u>-70</u> <u>n.a.</u> <u>n.a.</u>										
Propagation Condition		AWGN										
<u>Parameter</u>	<u>Unit</u>					Cell 2						
Timeslot Number			<u>0</u>			<u>DwPTS</u>			<u>5</u>			
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>		
UTRA RF Channel					Ch	annel 1						
<u>Number</u>						idililoi i						
PCCPCH_Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>			
DwPCH_Ec/lor						<u>0</u>				1		
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		<u>n</u>	<u>ı.a.</u>	Not e1		
OCNS Ec/lor	<u>dB</u>		<u>-3</u>						Note2)		
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-Inf.</u>	<u>5</u>		<u>-Inf.</u>	<u>5</u>		<u>-</u>	Inf.	<u>5</u>		
<u>I_{oc}</u>	<u>dBm/</u> <u>1.28</u> MHz	<u>-70</u>										
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 t							e total	power	from t	ne cell		
to be coved to												

to be equal to I

Parameter Parameter	Unit			C	ell 1					Ce	 2					
Timeslot Number			0			5			0			5				
		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1 T2		T3			
UTRA RF Channel Number				Cha	nnel 1					Char	nel 1	nel 1				
PCCPCH_Ec/lor	d₿		-3			n.a.			-3			n.a.	•			
DPCH_Ec/lor	d₿		n.a.		Not	Note1 n.a.			n.a.			.a.	Note1			
OCNS_Ec/lor	d₿		-3			Note2			-3			Note	2			
$\frac{\hat{I}_{or}/I_{oc}}{I_{oc}}$	d₿		3		3			-Inf.		5	-Inf.		5			
-I _{oc}	dBm/ 1.28 MHz						-7	0								
PCCPCH_RSCP	dBm		-70			n.a.		-Inf. - 68			n.a.					
Propagation Condition		-AWGN														
Note 1: The DPCH level is controlled by the power centrol 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																

Test Requirements A.5.1.2.1.2

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

Para	meter	Unit	Value	Comment
DPCH para	meters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Cont	rol		On	
Target quali DPCH	ty value on	BLER	0.01	
Initial	Active cell		Cell 1	
conditions	Neighbour cell		Cell 2	
Final conditions	Active cell		Cell 2	
Threshold n frequency	on used	dBm	-75	Absolute RSCP threshold for event 2C
0		dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trig	ger	ms	0	
Filter coeffic	cient		0	
Monitored c	ell list size		6 TDD neighbours on Channel 1 6 TDD neighbours on Channel 2	
T1		S	5	
T2		S	10	
T3		s	5	

Table A.5.1.8: Cell Specific parameters for inter-frequency handover

<u>Parameter</u>	Unit					Cell 1						
Timeslot Number			0			DwPTS			<u>5</u>			
		T1	T2	T3	T1	T2	T3	T1	T2	T3		
UTRA RF Channel					Cl							
Number					<u>Cr</u>	nannel 1	-					
PCCPCH_Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>			
DwPCH_Ec/lor						<u>0</u>						
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		N	ote1	<u>n.a.</u>		
OCNS_Ec/lor	<u>dB</u>		<u>-3</u>						Note2	<u> </u>		
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>3</u> <u>3</u> <u>3</u>										
	dBm/				•					•		
I_{oc}	1.28	<u>-70</u>										
	MHz											
PCCPCH_RSCP	<u>dBm</u>	-70 <u>n.a.</u> <u>n.a.</u>										
Propagation Condition		AWGN										
<u>Parameter</u>	<u>Unit</u>					Cell 2						
Timeslot Number			<u>0</u>			<u>DwPTS</u>			<u>5</u>			
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>		
UTRA RF Channel					Ch	nannel 2						
Number PCCPCH Fo/lor	dB		-3									
PCCPCH_Ec/lor DwPCH_Ec/lor	<u>ub</u>		<u>-3</u>			0			<u>n.a.</u>			
DWFCH_EC/IOI						<u>U</u>				Not		
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		<u>n</u>	<u>ı.a.</u>	Not e1		
OCNS Ec/lor	<u>dB</u>		<u>-3</u>						Note2)		
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-Inf.</u>	9	9	<u>-Inf.</u>	9		<u>-</u>	Inf.	9		
7	dBm/											
I_{oc}	<u>1.28</u>											
	MHz		_		I							
PCCPCH_RSCP	<u>dBm</u>	<u>-Inf.</u>	<u>-6</u>	<u> </u>		<u>n.a.</u>			<u>n.a.</u>			
Propagation Condition						<u>AWGN</u>						
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												
Note 2: The power of t		<u>s chann</u>	el that i	s added	d shall r	nake the	e total	power	r trom tl	ne cell		

to be equal to I

Unit			Ce	II 1					Cell 2								
		0		5				0		5							
	T 4	T2	T3	1 4	T2	T3	T 4	T2	T3	T 4	T2	T3					
		Channel 1 Channel 2															
d₿	-3 n.a3								n.a.								
d₿		n.a.		Note1 n.a.				n.a.		n.a		Note1					
d₿		-3			Note2			-3		Note2)2					
dB		-3		9	}		-Inf 9 -Inf					9					
dBm/1.28 MHz						-7	70										
dBm	3m -70 n.aInf -64							n.a	.								
	-AWGN																
	dB dB dB dB dBm/1.28 MHz	dB d	dB -3 dB -3 dB -3 dB -3 dB -3	## Channel	## Channel 1 ##	0 5 T1 T2 Channel 1 dB -3 Note1 dB -3 Note2 dB -3 Note2 dB -3 3 dBm/1.28 MHz MHz	0 5 T1 T2 T3 Channel 1 dB -3 Note1 n.a. dB -3 Note2 n.a. dB -3 Note2 n.a. dBm/1.28 MHz n.a. n.a. dBm -70 n.a.	0 5 T1 T2 T3 T1 Channel 1 Channel 1 dB -3 Note1 n.a. dB -3 Note2 -Inf dBm/1.28 MHz -70 n.a. -Inf	T1	0 5 0 T1 T2 T3 T1 T2 T3 Channel 1 Channel 1 dB -3 Note1 n.a. n.a. n.a. dB -3 Note2 -3 -1nf 9 dBm/1.28 MHz MHz -70 n.a. -Inf -64	T1	T1					

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%.

3GPP TSG RAN WG4 (Radio) Meeting #25 Secaucus, NJ, USA 11 - 15 November, 2002

R4-021568

		CHAN	GE REQ	UEST	•		CR-Form-v7
*	25.123	CR 280	≋ rev	æ	Current vers	5.2.0	æ
For <u>HELP</u> on u	sing this fo	rm, see bottom o	f this page or	look at th	e pop-up text	t over the 策 sy	mbols.
Proposed change	affects:	UICC apps 	ME X	Radio A	access Netwo	rk Core N	letwork
Title: ♯	Handove	r Test Case Corr	ection for 1.28	Mcps TE)D		
Source: #	RAN WG	64					
Work item code: ₩	LCRTDD)-RF			Date: ♯	26/11/2002	
Category: #	۸				Dalassa, 4	Rel-5	
Category:	Use one of F (con A (con B (ad) C (fur D (ed) Detailed ex	the following cated rection) rresponds to a correlation of feature), netional modification in the first modification of the a supplementations of the a supplementations.	rection in an ear		2	the following re (GSM Phase 2 (Release 1996 (Release 1997 (Release 1999 (Release 4) (Release 5) (Release 6)	?) ?) ?)
						,	
Reason for change		lear test case par cases for 1.28 M					nandover
Summary of chang	intra	missing RF para a-frequency hand 1.6 and Table A.s	over and inter	-frequenc andingly:	cy handover to		
		Îor/loc: same	e values, as fo	or timeslo	t 0		
Consequences if not approved:	impl <u>Isolat</u>	minals can not pa ementations of te ed Impact Analysis CR has no isolated	est cases in te s:	rminal te	st specificatio		
Clauses affected:	₩ A.5.	1.2.1, A.5.1.2.2					
Other specs affected:	Y N X X	Other core spe Test specificati	ons	ж 34.	122		
Other comments:	₩ Equ	ivalent CRs in otl	ner Releases:	CR279 c	at F to 25 12	3 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 \(\mathcal{H} \) 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

Para	ameter	Unit	Value	Comment
DPCH parame	eters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Contro			On	
Target quality	value on DPCH	BLER	0.01	
Initial	Active cell		Cell 1	
conditions	Neighbouring cell		Cell 2	
Final condition	Active cell		Cell 2	
0		dB	0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trigge	er	ms	0	
Filter coefficie	nt		0	
Monitored cell	list size		6 TDD neighbours on Channel 1	
T1		S	5	
T2	T2		5	
T3		S	5	

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

<u>Parameter</u>	Unit					Cell 1						
Timeslot Number			0			DwPTS			<u>5</u>			
		T1	T2	T3	T1	T2	T3	T1	T2	T3		
UTRA RF Channel					Cl							
Number					<u>Cr</u>	nannel 1	-					
PCCPCH_Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>			
DwPCH_Ec/lor						<u>0</u>						
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		No	ote1	<u>n.a.</u>		
OCNS_Ec/lor	<u>dB</u>		<u>-3</u>						Note2	<u> </u>		
\hat{I}_{or}/I_{oc}	<u>dB</u>		<u>3</u> <u>3</u> <u>3</u>									
	dBm/											
I_{oc}	1.28	<u>-70</u>										
	<u>MHz</u>											
PCCPCH_RSCP	<u>dBm</u>	-70 n.a. n.a.										
Propagation Condition		AWGN										
<u>Parameter</u>	<u>Unit</u>				(Cell 2						
Timeslot Number			<u>0</u>			<u>DwPTS</u>			<u>5</u>			
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>		
UTRA RF Channel					Ch	nannel 1						
Number "	15							1				
PCCPCH_Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>			
DwPCH_Ec/lor						<u>0</u>						
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		<u>r</u>	<u>ı.a.</u>	Not e1		
OCNS Ec/lor	<u>dB</u>		<u>-3</u>						Note2			
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-Inf.</u>	<u> </u>	<u>5</u>	<u>-Inf.</u>	<u>5</u>		=	Inf.	<u>5</u>		
I	dBm/				•					•		
$\frac{I_{oc}}{}$	<u>1.28</u> MHz											
PCCPCH_RSCP	<u>dBm</u>	-Inf.	<u>-6</u>	<u>88</u>		n.a.			<u>n.a.</u>			
Propagation Condition						AWGN		•				
Note 1: The DPCH lev	el is cont	rolled b	y the po	wer co	ntrol loc)p						
Note 2: The power of t							e total	<u>pow</u> ei	r from tl	ne cell		
to be equal to												

to be equal to I

Parameter Parameter	Unit		Cell 1 Cell 2										
Timeslot Number			0			5			0			5	
		T4 T2 T3			T1	T2	T3	T1	T2	T3	#	T2	T3
UTRA RF Channel Number				Cha	nnel 1			Channel 1					
PCCPCH_Ec/lor	d₿		-3			n.a.			-3			n.a.	
DPCH_Ec/lor	d₿		n.a.		Not	e1	n.a.		n.a.		n.a.		Note1
OCNS_Ec/lor	d₿		-3			Note2		-3			Note2		2
$\frac{\hat{I}_{or}/I_{oc}}{I_{oc}}$	d₿		3		3			-Inf.	-Inf. 5		-	Inf.	5
$I_{\overline{oc}}$	dBm/ 1.28 MHz						-7	0	•		•		
PCCPCH_RSCP	dBm	-70 n.a.						-Inf.	-4	38		n.a.	
Propagation Condition		AWGN											
Note 1: The DPCH level is controlled by the power control loop													

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

Para	meter	Unit	Value	Comment
DPCH parar	meters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2.2
Power Cont	rol		On	
Target quality value on DPCH		BLER	0.01	
Initial Active cell			Cell 1	
conditions	Neighbour cell		Cell 2	
Final conditions	Active cell		Cell 2	
Threshold non used		dBm	-75	Absolute RSCP threshold for event 2C
frequency	frequency			
0			0	cell-individual-offset The value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trig	ger	ms	0	
Filter coeffic	ient		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	

Table A.5.1.8: Cell Specific parameters for inter-frequency handover

Parameter	Unit				(Cell 1				
Timeslot Number			0			DwPTS			<u>5</u>	
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>
UTRA RF Channel					Ch	nannel 1				
<u>Number</u>					<u> </u>	idilici	<u> </u>			
PCCPCH Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>	
DwPCH_Ec/lor						<u>0</u>				1
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>			<u>n.a.</u>		No	ote1	<u>n.a.</u>
OCNS Ec/lor	<u>dB</u>		<u>-3</u>						Note2	2
\hat{I}_{or}/I_{oc}	<u>dB</u>		<u>3</u>			<u>3</u>			<u>3</u>	
7	dBm/									
I_{oc}	<u>1.28</u>					<u>-70</u>				
	MHz				1			1		
PCCPCH_RSCP	<u>dBm</u>		<u>-70</u>			<u>n.a.</u>			<u>n.a.</u>	
Propagation Condition						AWGN				
<u>Parameter</u>	<u>Unit</u>					Cell 2				
<u>Timeslot Number</u>			0			DwPTS			<u>5</u>	
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>
UTRA RF Channel Number					<u>Ch</u>	annel 2	2			
PCCPCH_Ec/lor	<u>dB</u>		<u>-3</u>						<u>n.a.</u>	
DwPCH_Ec/lor						0				
DPCH_Ec/lor	<u>dB</u>		n.a.			n.a.		<u>n</u>	ı.a.	Not e1
OCNS_Ec/lor	dB		-3						Note2	<u> </u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-Inf.</u>	9	9	<u>-Inf.</u>	9)	<u>-</u> 1	Inf.	<u>9</u>
I_{oc}	<u>dBm/</u> 1.28				1	-70		ı		1
- 00	1.26 MHz					<u>-10</u>				
PCCPCH RSCP	<u>dBm</u>	<u>-Inf.</u>	<u>-6</u>	<u> </u>		<u>n.a.</u>			<u>n.a.</u>	
Propagation Condition						<u>AWGN</u>				
Note 1: The DPCH lev	el is cont	rolled b	y the po	wer co	ntrol loc	<u>pp</u>				
Note 2: The power of t	he OCNS	S chann	el that is	s adde	d shall r	nake th	e total	power	from t	ne cell
to be equal to				·			·			-

to be equal to I

Parameter Parameter	Unit	Cell 1 Cell 2											
Timeslot Number			0			5		0			5		
		T1	T2	13	T 4	T2	T3	T1	T2	T3	T 4	T2	T3
UTRA RF Channel Number			Channel 1 Channel 2										
PCCPCH_Ec/lor	d₿		-3 n.a.				-3			n.a.			
DPCH_Ec/lor	d₿		n.a.		No	t e1	n.a.	n.a.		n.	a	Note1	
OCNS_Ec/lor	d₿		-3			Note2		-3			Note2		
$\frac{\hat{I}_{or}/I_{oc}}{I_{oc}}$	d₿		-3		4	}		-Inf 9		-Inf		Q	
-I _{oc}	dBm/1.28 MHz						-7	70					
PCCPCH_RSCP	dBm		-70			n.a.		-Inf -64			n.a		
Propagation Condition		AWGN											
Note 1: The DPCH lev	el is controlle	ed by the	e powe	r contr	ol loop							•	

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%.

3GPP TSG RAN WG4 (Radio) Meeting #25 Secaucus, NJ, USA 11 - 15 November, 2002

R4-021569

			-								
	CHANGE REQUEST										
ж	25.123	CR <mark>281</mark>	жrev	æ	Current version:	4.6.0	Ж				

*	25.123 CR 281 # rev #	Current version: 4.6.0 **
For <u>HELP</u> on u	ring this form, see bottom of this page or look at t	the pop-up text over the % symbols.
Proposed change	ffects: UICC apps器 ME X Radio	Access Network Core Network
Title: भ	Maximum allowed UL TX Power Correction for	1.28Mcps TDD
Source: #	RAN WG4	
Work item code: ₩	LCRTDD-RF	Date: 26/11/2002
Category:	Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Release: # Rel-4 Use one of the following releases: 2 (GSM Phase 2) ase) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
Reason for change	The UE transmitted power measurement a PUEMAX to PUEMAX-10 dB. In case of lo Maximum allowed UL TX power are undefi	wer values the requirements for
Summary of chang	 1.28 Mcps TDD Option, the following beha outside the range covered by the UE trans For UE output powers that are outside to power measurement the UE output pow UL TX Power with more than the toler in TS 25.102. 	the range covered by the UE transmitted wer shall not exceed the Maximum allowed ances specified for the UL Power Control
Consequences if not approved:	Could result in misinterpretations and incorcases, where the UE estimation of maximuloutside the range of UE transmitted power so diverse UE behaviors could be implementable to expect a common reaction of the USolated Impact Analysis: No consequences, if UE implementations be	um allowed ULTX power would lay there would be no clear requirement, ented and the network would not be IE.
Clauses affected:	策 6A.3.2.2	
Other specs	Y N X Other core specifications %	

Clauses affected:	\mathfrak{R}	₩ 6A.3.2.2								
		Υ	Ν							
Other specs	\mathfrak{R}		X	Other core specifications	\mathfrak{R}					
affected:			X	Test specifications						

		X O&M Specifications	
Other comments:	Ж	Equivalent CRs in other Releases: CR2	282 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].

3GPP TSG RAN WG4 (Radio) Meeting #25 Secaucus, NJ, USA 11 - 15 November, 2002

R4-021570

	, ,		•				
		CHAN	IGE REQ	UES1			CR-Form-v7
*	25.123	CR <mark>282</mark>	жrev	ж	Current version:	5.2.0	¥

*	25	5.123 CR <mark>282</mark>	жrev	第 Current vers	5.2.0 [#]
For <u>HELP</u> or	n using	this form, see bottom of	this page or look	at the pop-up text	over the # symbols.
Proposed chang	je affec	cts: UICC apps#	ME X Ra	dio Access Networ	ck Core Network
Title:	ж <mark>Ма</mark>	aximum allowed UL TX P	ower Correction	for 1.28Mcps TDD	
Source:	₩ RA	AN WG4			
Work item code:	:∺ LC	RTDD-RF		<i>Date:</i> ♯	26/11/2002
Category:	Deta	e one of the following catego F (correction) A (corresponds to a correction) B (addition of feature), C (functional modification) D (editorial modification) ailed explanations of the abound in 3GPP TR 21.900.	ction in an earlier r	2 elease) R96 R97 R98 R99	Rel-5 the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)
Reason for chan	nge: #	The UE transmitted po PUEMAX to PUEMAX Maximum allowed UL	-10 dB. In case o	of lower values the	
Summary of cha	nge: ₩	 1.28 Mcps TDD Option outside the range cove For UE output popower measurem 	n, the following be ered by the UE tra owers that are outsi ent the UE output	ehaviour for UE ou ansmitted power m ide the range covered power shall not exce	tput powers that are
Consequences i not approved:	f ∺	cases, where the UE e	estimation of max E transmitted powers could be imple ion reaction of the	timum allowed ULT wer, there would be emented and the n e UE.	e no clear requirement, etwork would not be
Clauses affected	1 :	6A.3.2.2			
Other specs	ж	Y N Other core speci			

Clauses affected:	ж	6/	٩.3.	.2.2		
		Υ	Ν			
Other specs	ж		X	Other core specifications	\mathfrak{H}	
affected:			X	Test specifications		

		X O&M Specifications	
Other comments:	Ж	Equivalent CRs in other Releases: CR	281 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].

3GPP TSG RAN WG4 (Radio) Meeting #25 Secaucus, NJ, USA 11 - 15 November, 2002

R4-021571

CHANGE REQUEST												
ж	25.123 CR 283	жrev	ж	Current version:	4.6.0	ж						

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

Proposed chang	roposed change affects: UICC apps器 ME X Radio Access Network Core Network							
 :.	00	0	'	. D	(2	ONA TDD	
Title:	ж	Correct	ions to Idle Mode	Requirem	ents and Test	cases for 1.	28IVICPS TUD	
Source:	\mathfrak{R}	RAN W	G4					
Work item code	<i>:</i> Ж	LCRTD	D-RF			Date: ₩	26/11/2002	
Category:	\mathfrak{R}	F				Release: ₩	Rel-4	
		Use one	of the following car	tegories:		Use <u>one</u> of	the following rel	eases:
		F (0	orrection)			2	(GSM Phase 2))
		A (0	corresponds to a co	orrection in a	n earlier release) R96	(Release 1996)	
		B (a	nddition of feature),			R97	(Release 1997)	
		- 1	unctional modificat		e)	R98	(Release 1998)	
		D (6	editorial modification	n)		R99	(Release 1999)	

Detailed explanations of the above categories can

be found in 3GPP TR 21.900.

Reason for change:

The interpretation of current wording of requirements in the specification could lead to other interpretations and implementation to test specifications as intended.

Rel-4

Rel-5

Rel-6

(Release 4)

(Release 5)

(Release 6)

Clarification on explicit use of freedom and restrictions on the filtering of measurements for performance requirements for the evaluation of S criterion is needed.

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.

Summary of change: ₩

- 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_{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 Îor/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:	X Other core specifications X 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 \$\mathbb{X}\$ 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 fullfilled.

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 fullfilled.

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 $\frac{\text{measurements}}{\text{first measurement and}}$ 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 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].

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 $T_{measureTDD}$ (see table 4.1) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{measureTDD}$ 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 $T_{measureTDD}/2$.

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 $T_{evaluateTDD}$ (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 $T_{measureNTDD}$ (see table 4.1A) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{measureNTDD}$ 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 $T_{measureNTDD}/2$.

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

Par	ameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TXPW	R_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qn	devmin	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 c	ycle 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		Се	II 1			Се	II 2		Cell 3			
Timeslot Number		C)	8	3	(0 8		3	0			8
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number			Channel 1			Char	nnel 2		Channel 1				
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t _{offset}	<u> </u>	0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/lor	dB		Ť	-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	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	2: 0; C1,	C3:0; C		C2, C	1: 0; C2,	C3:0; C2		C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Observation	-ID			C1, C6:	U			C2, C6:	0	,			U
Qhyst1 _s	dB			<u>)</u>)				0				<u>) </u>	
Treselection	S							0 .		0			
Sintrasearch	dB			sent		not sent					sent		
Sintersearch	dB		not sent Cell 4					sent				sent	
						Cell 5 0 8					II 6		
Timeslot		C			3		-	1			<u> </u>		8
LITDA DE OL		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number			Char	nnel 1		Channel 2			Channel 2				
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t _{offset}		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS	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			C2:0; C4 C4, C6:				C2:0; C5; C5; C6:		,	1: 0; C6, C6, C4:0;		
Qhyst1 _s	dB)		`		0		`)	
Treselection	S	0			0				()			
Sintrasearch	dB	not sent			not sent				not	sent			
Sintersearch	dB	not sent						sent				sent	
I_{oc}	dBm/3, 84 MHz		-70										
Propagation Condition	32		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

Pa	rameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TXPW	/R_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qr	Qrxlevmin		-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	DRX cycle length		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		Се	II 1			Се	II 2			Се	ell 3	
Timeslot Number)	DW	PTS	(0	DW	PTS	(0	DW	PTS
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number			Channel 1			Chan	nel 2		Channel 1				
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/lor	dB			0	0			0	0			0	0
OCNS_Ec/lor	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			C3:0; C ² ; C1, C6:			2, C1: 0; 4:0C2, C					C2:0; C3; C3; C6:	
Qhyst1 _s	dB			0)				0	
Treselection	S			0			()				0	
Sintrasearch	dB		not	sent		not sent				not sent			
Sintersearch	dB		not sent			not sent					not	sent	
			Cell 4				Ce	II 5			Ce	ell 6	
Timeslot)	DW	PTS	0 DWPTS			0 DWPTS			PTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number			Char	nnel <u>1</u>		Channel 2			Channel <u>2</u>				
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/lor	dB			0	0			0	0			0	0
OCNS_Ec/lor	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			C2:0; C4; C4; C4;			1: 0; C5, C5, C4:0;			C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	dB			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: $T_{evaluateTDD} + T_{SI}$, where:

T_{evaluateTDD} A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{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: $T_{evaluateNTDD} + T_{SI}$, where:

T_{evaluateNTDD} A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluate NTDD} of 6.4s

according to Table 4.1A in section 4.2.

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

P	arameter	Unit	Value	Comment
Initial	Active cell		Cell1	1.28 Mcps TDD OPTION cell
condition	Neighbour cell		Cell2	TDD cell
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TXP	UE_TXPWR_MAX_RACH		21	The value shall be used for all cells in the test.
Access Ser	vice Class (ASC#0)			Selected so that no additional
- Pers	- Persistence value		1	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		Ce	II 1			Се	II 2	
Timeslot Number		()	DwPts	<u>DwPTS</u>	()	8	
		T1	T2	T 1	T 2	T1	T2	T 1	T 2
UTRA RF Channel Number			Channel 1				Char	nnel 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_t _{offset}		n.	n.a. n.a.		0	0	0	0	
PICH_Ec/lor	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 <u>dBm/</u>	1.28 MF	<u>lz</u>	-70 dBm/ 3.84 MHz			
PCCPCH_RSCP	dBm	[-63]	[-66]			[-66]	[-63]		
Qrxlevmin	dBm		-1	03			-1	03	
Qoffset1 _{s,n}	dB		C1,	C2: 0			C2, (C1: 0	
Qhyst1 _s	dB	0				()		
Treselection	S	0			0				
Sintersearch	dB	not sent			not sent				
Propagation Condition			AW	/GN			AW	'GN	

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:

 $T_{evaluateTDD} + T_{SI}$

where:

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

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_{TDDevaluate} + T_{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

P	arameter	Unit	Value	Comment
Initial	Active cell		Cell 1	3.84 Mcps TDD OPTION cell
condition	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.
	$Q_{rxlevmin}$		-103	
Access Ser	vice Class (ASC#0) sistence 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	DRX cycle length		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		Ce	ell 1	
Timeslot Number		0			8
		T1	T2	T 1	T 2
UTRA RF Channel Number			Cha	nnel 1	
PCCPCH_Ec/lor	dB	-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9
SCH_t _{offset}				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				
Timeslot Number		0		Dwl	PTS	
		T1	T2	T 1	T 2	
UTRA RF Channel Number			Chan	inel 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		()		
Treselection	S		()		
Sintersearch	dB		not	sent		
I_{oc}	dBm/1. 28 MHz	-70				
Propagation Condition			AW	GN		

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%.

The cell re-selection delay can be expressed as:

 $T_{evaluateNTDD} + T_{SI}$

where:

 $T_{evaluateNTDD} \\$

A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluate NTDD}}$ 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

Para	Parameter		Value	Comment
Initial condition	Active cell		Cell1	TDD cell
	Neighbour cells		Cell2	FDD cell
Final condition	Active cell		Cell2	
ŀ	HCS		Not used	
UE_TXPW	R_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	ce Class (ASC#0) tence 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 c	ycle length	S	1.28	The value shall be used for all cells in the test.
	T1		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		
Timeslot Number		()	8		n.a	n.a.	
		T1	T2	T 1	T 2	T 1	T 2	
UTRA RF Channel Number		Channel 1				Channel 2		
CPICH_Ec/lor	dB	n.	a.	n.	a.	-10	-10	
PCCPCH_Ec/lor	dB	-3	-3			-12	-12	
SCH_Ec/lor	dB	-9	-9	-9	-9	-12	-12	
SCH_t _{offset}		0	0	0	0	n.a.	n.a.	
PICH_Ec/lor	dB			-3	-3	-15	-15	
OCNS_EcIor	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				-1	15	
Qoffset1 _{s,n}	dB	C1, C2: -12				C2, C1: +12		
Qhyst1 _s	dB	0				0		
Treselection	S	0				0		
Propagation Condition		AWGN				AW	'GN	

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_TXPW	UE_TXPWR_MAX_RACH		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	DRX cycle length		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		
Timeslot Number		0		DwPTS	
		T1	T2	T 1	T 2
UTRA RF Channel Number		Channel 1			
PCCPCH_Ec/lor	dB	-3	-3		
DwPCH_Ec/lor	dB			0	0
OCNS_Ec/lor	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			
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-103</u>			
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			AWG	SN	

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/lor	dB	-10		
PCCPCH_Ec/lor	dB	-12		
SCH_Ec/lor	dB	-12		
PICH_Ec/lor	dB	-15		
OCNS_Ec/lor	dB	-0.941		
\hat{I}_{or}/I_{oc}	dB	-3	3	
CPICH_RSCP	dBm	-83	-77	
Cell_selection_and_ reselection_quality_measure		CPICH RS	СР	
Qrxlevmin	dBm	-115		
Qoffset1 _{s, n}	dB	C2, C1: +1	2	
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: $T_{evaluateFDD} + T_{SI}$, where:

T_{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:

$$T_{evaluateFDD} + T_{SI}$$

where:

 $T_{evaluateFDD}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{evaluateFDD}$ 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.

3GPP TSG RAN WG4 (Radio) Meeting #25 Secaucus, NJ, USA 11 - 15 November, 2002

R4-021572

CHANGE REQUEST							CR-Form-v7	
*	25.123 CR	284	жrev		¥	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 appsЖ	ME X Radio Access Network Core Ne	twork
Title:	★ Correct	ions to Idle Mode Req	quirements and Test Cases for 1.28Mcps TDD	
Source:	₩ RAN W	G4		

Work item code:

** LCRTDD-RF

Date:

** 26/11/2002

Category: Release: # Rel-5 Use one of the following releases: Use one of the following categories: **F** (correction) (GSM Phase 2) 2 A (corresponds to a correction in an earlier release) R96 (Release 1996) (Release 1997) B (addition of feature), R97 **C** (functional modification of feature) (Release 1998) R98 (Release 1999) **D** (editorial modification) R99 Detailed explanations of the above categories can Rel-4 (Release 4) be found in 3GPP TR 21.900. Rel-5 (Release 5)

Reason for change: # The interpretation of cur

The interpretation of current wording of requirements in the specification could lead to other interpretations and implementation to test specifications as intended.

Rel-6

(Release 6)

Clarification on explicit use of freedom and restrictions on the filtering of measurements for performance requirements for the evaluation of S criterion is needed.

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.

Summary of change: ₩

- 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_{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 Îor/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:	ж	4.2.2	.1.2, 4.2.2.2.2, A.4.2.2.1.2,	A.4.2.2	2A.1, A.4.2.2A.2, A.4.2.3.1.2	
		Y N				
Other specs	Ж	X	Other core specifications	\mathfrak{H}		
affected:		X	Test specifications		34.122	
		X	O&M Specifications			
Other comments:	\mathfrak{R}					
		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 \$\mathbb{X}\$ 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 fullfilled.

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 fullfilled.

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 <u>first measurement and the last measurement used for filtering measurements</u> is at least $T_{measureNTDD}/2$ (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 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].

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 $T_{measureTDD}$ (see table 4.1) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{measureTDD}$ 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 $T_{measureTDD}/2$.

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 $T_{measureNTDD}$ (see table 4.1A) for intra-frequency cells that are identified and measured according to the measurement rules. $T_{measureNTDD}$ 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 $T_{measureNTDD}/2$.

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

Par	ameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
ŀ	HCS		Not used	
UE_TXPW	UE TXPWR MAX RACH		21	The value shall be used for all cells in the test.
Qr	devmin	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		Се	II 1			Се	II 2		Cell 3									
Timeslot Number		C)	8	3	()		3	(0		8						
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2						
UTRA RF Channel Number			Channel 1			Channel 2			Channel 1										
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3								
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9						
SCH_t _{offset}	<u> </u>	0	0	0	0	5	5	5	5	10	10	10	10						
PICH_Ec/lor	dB		Ť	-3	-3			-3	-3			-3	-3						
OCNS_Ec/lor	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	2: 0; C1,	C3:0; C		C2, C	1: 0; C2,	C3:0; C2		C3, C1: 0; C3, C2:0; C3,C4:0									
Observation	-ID			C1, C6:	U			C2, C6:	0	,	C3, C5:0		U						
Qhyst1 _s	dB			<u>)</u>)				0				<u>) </u>							
Treselection	S							0 .		0									
Sintrasearch	dB		not sent			not sent					sent								
Sintersearch	dB		not sent					sent				sent							
			Cell 4			Cell 5 0 8					II 6								
Timeslot		C			3		-	1			<u> </u>		8						
LITDA DE OL		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2						
UTRA RF Channel Number			Char	nnel 1		Channel 2			Channel 2										
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3								
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9						
SCH_t _{offset}		15	15	15	15	20	20	20	20	25	25	25	25						
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3						
OCNS	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			C2:0; C4 C4, C6:				C2:0; C5; C5; C6:		,	1: 0; C6, C6, C4:0;								
Qhyst1 _s	dB)		`		0		`)							
Treselection	S	0						0			()							
Sintrasearch	dB	not sent				not sent				not	sent								
Sintersearch	dB	not sent						sent				sent							
I_{oc}	dBm/3, 84 MHz		-70																
Propagation Condition	32						AW	/GN					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

Pa	rameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TXPW	/R_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}		1.28	The value shall be used for all cells in the test.
DRX	DRX cycle length		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		Се	II 1			Се	II 2			Се	ell 3	
Timeslot Number)	DW	PTS	(0	DW	PTS	(0	DW	PTS
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number			Channel 1		Channel 2			Channel 1					
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/lor	dB			0	0			0	0			0	0
OCNS_Ec/lor	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			C3:0; C ² ; C1, C6:			2, C1: 0; 4:0C2, C					C2:0; C3; C3; C6:	
Qhyst1 _s	dB			0)				0	
Treselection	S			0			()		0			
Sintrasearch	dB		not	sent		not sent				not sent			
Sintersearch	dB		not sent			not sent					not	sent	
		Cell 4				Ce	II 5			Ce	ell 6		
Timeslot)	DW	PTS	0 DWPTS			0 DWPTS				
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number			Char	nnel <u>1</u>		Channel 2			Channel <u>2</u>				
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/lor	dB			0	0			0	0			0	0
OCNS_Ec/lor	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			C2:0; C4; C4; C4;			1: 0; C5, C5, C4:0;			C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	dB			0)				0	
Treselection	S		(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: $T_{evaluateTDD} + T_{SI}$, where:

T_{evaluateTDD} A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{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: $T_{evaluateNTDD} + T_{SI}$, where:

T_{evaluateNTDD} A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluate NTDD} of 6.4s

according to Table 4.1A in section 4.2.

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

P	arameter	Unit	Value	Comment
Initial	Active cell		Cell1	1.28 Mcps TDD OPTION cell
condition	Neighbour cell		Cell2	TDD cell
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TXP	UE_TXPWR_MAX_RACH		21	The value shall be used for all cells in the test.
Access Ser	vice Class (ASC#0)			Selected so that no additional
- Persistence value			1	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			
Timeslot Number		()	DwPts	<u>DwPTS</u>	()	8		
		T1	T2	T 1	T 2	T1	T2	T 1	T 2	
UTRA RF Channel Number			Char	nnel 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_t _{offset}		n.a. n.a.		0	0	0	0			
PICH_Ec/lor	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 <u>dBm/</u>	1.28 MF	<u>lz</u>	-70 dBm/ 3.84 MHz			Z	
PCCPCH_RSCP	dBm	[-63]	[-66]			[-66]	[-63]			
Qrxlevmin	dBm		-1	03			-1	03		
Qoffset1 _{s,n}	dB	C1, C2: 0				C2, (C1: 0			
Qhyst1 _s	dB	0				()			
Treselection	S	0			0					
Sintersearch	dB	not sent			not sent					
Propagation Condition			AW	'GN			AW	'GN		

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:

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

where:

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

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_{TDDevaluate} + T_{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

P	arameter	Unit	Value	Comment
Initial	Active cell		Cell 1	3.84 Mcps TDD OPTION cell
condition	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.
	$Q_{rxlevmin}$		-103	
Access Ser	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_{Sl}		S	1,28	The value shall be used for all cells in the test.
DRX	DRX cycle length		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		Ce	ell 1	
Timeslot Number		0			8
		T1	T2	T 1	T 2
UTRA RF Channel Number			Cha	nnel 1	
PCCPCH_Ec/lor	dB	-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9
SCH_t _{offset}				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				
Timeslot Number		()	Dwl	PTS	
		T1	T2	T 1	T 2	
UTRA RF Channel Number			Chan	nnel 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		()		
Treselection	S		()		
Sintersearch	dB		not	sent		
I_{oc}	dBm/1. 28 MHz	-70				
Propagation Condition			AW	'GN		

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:

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

where:

 $T_{evaluateNTDD}$ A DI

A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluate NTDD}}$ 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

Para	ameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	TDD cell
	Neighbour cells		Cell2	FDD cell
Final condition	Active cell		Cell2	
ŀ	HCS		Not used	
UE_TXPW	R_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				Се	II 2	
Timeslot Number		()		3	n.a	n.a.	
		T1	T2	T 1	T 2	T 1	T 2	
UTRA RF Channel Number		Channel 1				Channel 2		
CPICH_Ec/lor	dB	n.	a.	n.	a.	-10	-10	
PCCPCH_Ec/lor	dB	-3	-3			-12	-12	
SCH_Ec/lor	dB	-9	-9	-9	-9	-12	-12	
SCH_t _{offset}		0	0	0	0	n.a.	n.a.	
PICH_Ec/lor	dB			-3	-3	-15	-15	
OCNS_EcIor	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				-7	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		-1	02		-1	15	
Qoffset1 _{s,n}	dB		C1, C	2: -12		C2, C	1: +12	
Qhyst1 _s	dB		()		(0	
Treselection	S		()		(0	
Propagation Condition			AW	'GN		AW	'GN	

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

Pa	rameter	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_TXPW	UE_TXPWR_MAX_RACH		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}		1.28	The value shall be used for all cells in the test.
DRX	DRX cycle length		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			
Timeslot Number		0		DwPTS	
		T1	T2	T 1	T 2
UTRA RF Channel Number		Channel 1			
PCCPCH_Ec/lor	dB	-3	-3		
DwPCH_Ec/lor	dB			0	0
OCNS_Ec/lor	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	<u>-103</u>			
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/lor	dB	-10		
PCCPCH_Ec/lor	dB	-12		
SCH_Ec/lor	dB	-12		
PICH_Ec/lor	dB	-15		
OCNS_Ec/lor	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: $T_{evaluateFDD} + T_{SI}$, where:

T_{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:

$$T_{evaluateFDD} + T_{SI}$$

where:

 $T_{evaluateFDD}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{evaluate\,FDD}$ 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.