RP-020284

TSG RAN Meeting #16 Marco Island, FL, USA, 4 - 7 June 2002

TitleCRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.133 (1)SourceTSG RAN WG4Agenda Item7.4.3

RAN4 Tdoc	Spec	Curr Ver	New Ver	CR	R	Cat	Ph	Title	Acronym
R4-020628	25.133	3.9.0	3.10.0	340	1	F	R99	GSM measurement test cases	TEI
R4-020629	25.133	4.4.0	4.5.0	341	1	Α	Rel-4	GSM measurement test cases	TEI
R4-020630	25.133	5.2.0	5.3.0	342	1	Α	Rel-5	GSM measurement test cases	TEI
R4-020563	25.133	3.9.0	3.10.0	346		F	R99	Removal of test case "Correct reporting of neighbors in Fading propagation condition"	TEI
R4-020564	25.133	4.4.0	4.5.0	347		A	Rel-4	Removal of test case "Correct reporting of neighbors in Fading propagation condition"	TEI
R4-020631	25.133	3.9.0	3.10.0	358	1	F	R99	Corrections to FDD-GSM cell re-selection test case	TEI
R4-020578	25.133	4.4.0	4.5.0	359		Α	Rel-4	Corrections to FDD-GSM cell re-selection test case	TEI
R4-020579	25.133	5.2.0	5.3.0	360		Α	Rel-5	Corrections to FDD-GSM cell re-selection test case	TEI
R4-020580	25.133	3.9.0	3.10.0	361		F	R99	Corrections to UTRAN carrier RSSI measurement accuracy requirement	TEI
R4-020581	25.133	4.4.0	4.5.0	362		A	Rel-4	Corrections to UTRAN carrier RSSI measurement accuracy requirement	TEI
R4-020624	25.133	5.2.0	5.3.0	363	1	A	Rel-5	Corrections to UTRAN carrier RSSI measurement accuracy requirement	TEI
R4-020632	25.133	3.9.0	3.10.0	364	1	F	R99	Corrections to cell re-selection test cases	TEI
R4-020585	25.133	4.4.0	4.5.0	365		A	Rel-4	Corrections to cell re-selection test cases	TEI
R4-020586	25.133	5.2.0	5.3.0	366		Α	Rel-5	Corrections to cell re-selection test cases	TEI

3GPP TSG RAN WG4 Meeting #22

R4-020628

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST										
¥	25.133 CR 340 * ev 1 * Current version: 3.9.0 *									
For <u>HELP</u> on us	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.									
Proposed change a	Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network									
Title: ೫	GSM measurement test cases									
Source: ೫	RAN WG4									
Work item code: ℜ	TEI Date: # 5/4/2002									
Category: ₩	FRelease: %R99Use one of the following categories: F (correction)Use one of the following releases: 2(GSM Phase 2)A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature), C (functional modification of feature)R97(Release 1997)C (functional modification of feature) D (editorial modification)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories can be found in 3GPP TR 21-900.REL-5(Release 5)									
Reason for change	To ensure the GSM measurement test requirements are also applicable for UE not requiring compressed mode									
Summary of chang	e: # To indicate this test is also applicable for UE not requiring compressed mode and that no compressed mode patterns should be sent to ensure the performance requirements are still met.									
Consequences if not approved:	# The requirements are not complete and would not specify the behaviour of UE not requiring compressed mode for GSM RAT measurements.									
	Isolation impact: This change should not have not impact on implementation since this is basic requirement									
Clauses affected:	¥ A5.4, A8.4									
Other specs affected:	 Conter core specifications Test specifications 									
Other comments:	₩ Equivalent CRs in other Releases: CR341r1 cat. A to 25.133 v4.4.0, CR342r1 cat. A to 25.133 v5.2.0									

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> 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.5.4 Inter-system Handover from UTRAN FDD to GSM

A.5.4.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell handover delay reported in section 5.4.2.1.

The test parameters are given in Table A.5.0D, A.5.0E and A.5.0F below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 3C shall be used.. 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 Handover from UTRAN command with activation time at beginning of T3 with a new active cell, cell 2. In GSM Handover command contained in that message, IE starting time shall not be included.

The requirements are also applicable for a UE not requiring compressed mode, in which case no compresed mode pattern should be sent for the parameters specifed in table A5.0D

Table A.5.0D: General test parameters for Correct reporting of GSM neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel	As specified in TS 25.101 section A.3.1
		12.2 kbps	
Power Control		On	
Target quality value	BLER	0.01	
on DTCH			
Compressed mode			Only applicable for UE requiring
patterns		DL Compressed mode reference	compressed mode patterns
- GSM carrier RSSI		pattern 2 in Set 2	
measurement			As specified in table A.22 TS 25.101
COM Initial DOIO		Pattern 2	section A.5
			As an action in castion 0.4.0.5.0.4 table
identification		Bottorn 2	As specified in section 8.1.2.5.2.1 table
GSM BSIC ro		Falleniz	0.7.
- GOW BOIC IE-			As specified in section 8.1.2.5.2.2 table
commation			8.8.
Active cell		Cell 1	
Inter-RAT		GSM Carrier RSSI	
measurement			
quantity			
BSIC verification		Required	
required			
Threshold other	dBm	-80	Absolute GSM carrier RSSI threshold
system			for event 3B and 3C.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list		24 FDD neighbours on Channel 1	Measurement control information is
size		6 GSM neighbours including ARFCN 1	sent before the compressed mode
			patterns starts.
N Identify abort		65	Taken from table 8.7.
T Reconfirm abort		5.0	Taken from table 8.8.
T1	S	20	
T2	S	5	
T3	S	5	

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Parameter	Unit	Cell 1 (UTRA)					
		T1, T2, T3					
CPICH_Ec/lor	dB	-10					
PCCPCH_Ec/lor	dB	-12					
SCH_Ec/lor	dB	-12					
PICH_Ec/lor	dB	-15					
DCH_Ec/lor	dB	Note 1					
OCNS_Ec/lor	dB	Note 2					
\hat{I}_{or}/I_{oc}	dB	0					
I _{oc}	dBm/3. 84 MHz	-70					
CPICH_Ec/lo	dB	-13					
Propagation							
Condition		AWGN					
Note 1: The DPCH level is controlled by the power control loop							
Note 2 : The power of the OCNS channel that is added shall make							
the total pow	er from the	the total power from the cell to be equal to I					

Table A.5.0E: Cell Specific Parameters for Handover UTRAN to GSM cell case (cell 1)

Table A.5.0F: Cell Specific Parameters for Handover UTRAN to GSM cell case (cell 2)

Baramatar	Unit	Cell 2 (GSM)		
Farameter	Unit	T1	T2, T3	
Absolute RF Channel Number		AR	FCN 1	
RXLEV	dBm	-85	-75	

A.5.4.2 Test Requirements

The UE shall begin to send access bursts on the new DCCH of the target cell 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.8.4 GSM measurements

A.8.4.1 Correct reporting of GSM neighbours in AWGN propagation condition

A.8.4.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter-RAT GSM measurements. The test will partly verify the requirements in section 8.1.2.5. The requirements are also applicable for a UE not requiring compressed mode, in which case no compressed mode pattern should be sent for the parameters specified in table A8.15.

The test consists of three successive time periods, with a time duration T1, T2 and T3. The test parameters are given in tables A.8.15, A.8.16 and A.8.17 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 3B and 3C shall be used.

Table A.8.15: General test parameters for Correct reporting of GSM neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Compressed mode patterns			Only applicable for UE requiring compressed mode patterns
- GSM carrier RSSI measurement		DL Compressed mode reference pattern 2 in Set 2	As specified in table A.22 TS 25.101 section A.5
- GSM Initial BSIC identification		Pattern 2	As specified in section 8.1.2.5.2.1 table 8.7.
- GSM BSIC re- confirmation		Pattern 2	As specified in section 8.1.2.5.2.2 table 8.8.
Active cell		Cell 1	
Inter-RAT measurement quantity		GSM Carrier RSSI	
BSIC verification required		required	
Threshold other system	dBm	-80	Absolute GSM carrier RSSI threshold for event 3B and 3C.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 FDD neighbours on Channel 1 6 GSM neighbours including ARFCN 1	Measurement control information is sent before the compressed mode patterns starts.
N Identify abort		65	Taken from table 8.7.
T Reconfirm abort		5.0	Taken from table 8.8.
T1	S	20	
T2	S	5	
T3	S	5	

Table A.8.16: Cell specific test parameters for Correct reporting of GSM neighbours in AWGN propagation condition (cell 1)

Parameter	Unit	Cell 1				
		T1, T2, T3				
UTRA RF Channel		Channel 1				
Number						
CPICH_Ec/lor	dB	-10				
PCCPCH_Ec/lor	dB	-12				
SCH_Ec/lor	dB	-12				
PICH_Ec/lor	dB	-15				
DPCH_Ec/lor	dB	Note 1				
OCNS		Note 2				
\hat{I}_{or}/I_{oc}	dB	0				
Inc	dBm/	-85				
0C	3.84					
	MHz					
CPICH_Ec/lo	dB	-13				
Propagation		AWGN				
Condition						
Note 1: The DPCH	evel is co	ntrolled by the power control loop.				
Note 2: The power of the OCNS channel that is added shall make the total						
power fro	m the cel	l to be equal to I _a .				

Baramatar	Unit	Cell 2			
Farameter	Unit	T1	T2	Т3	
Absolute RF Channel Number			ARFCN 1	I	
RXLEV	dBm	-85	-75	-85	

Table A.8.17: Cell specific test parameters for Correct reporting of GSM neighbours in AWGN propagation condition (cell 2)

A.8.4.1.2 Test Requirements

The UE shall send one Event 3C triggered measurement report for Cell2, with a measurement reporting delay less than 960 ms from the beginning of time period T2.

The UE shall send one Event 3B triggered measurement report for Cell2, with a measurement reporting delay less than 960 ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

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

3GPP TSG RAN WG4 Meeting #22

R4-020629

Sophia Antipolis, France 3rd - 5th April 2002

¥	25	<mark>.133</mark> CF	R <mark>341</mark>	ж	ev	<mark>1</mark> ^អ	Current vers	^{iion:} 4.4.0	Ħ
For HELP on using this form, see bottom of this page or look at the pop-up text over the $#$ symbols.									
Proposed change a	affec	<i>ts:</i> ೫ (Լ	J)SIM	ME/UE	X	Radio Ac	cess Networl	k Core Ne	etwork
Title: #	GS	M measure	ement test c	ases					
Source: ೫	RAN	WG4							
Work item code: Ж	TE						Date: ೫	5/4/2002	
Category: अ	A Use Deta be fo	one of the fo F (correction A (correspond B (addition C (functionant D (editorial iled explanant bund in 3GPI	ollowing categ n) onds to a corri of feature), al modification, modification, tions of the a <u>TR 21.900</u> .	gories: rection in a on of featur) bove categ	n earli e) gories	er release can	Release: % Use <u>one</u> of 2 (e) R96 R97 R98 R99 REL-4 REL-5	Rel-4 the following rel (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	eases:
Reason for change	e: X	To ensure the requiring control of the requirement	he GSM mea	ode	test rec	luirement	ts are also appl	icable for UE no	ot
Summary of chang	je:	To indicate compressed met.	this test is al mode patter	lso applica ns should	ble for be sen	UE not 1 t to ensur	equiring comp e the performa	ressed mode and nce requirement	d that no
Consequences if not approved:	¥	The requir requiring c not have n Isolation in basic requir	ements are ompressed ot impact of npact: This cl rement	not comp mode for n impleme hange shou	olete a GSM entatic	nd would RAT me on have not	d not specify teasurements.	the behaviour of This change s plementation sine	of UE not should ce this is
Clauses affected:	ж	A5.4. A8.	4						
Other specs affected:	ж	Other X Test s O&M S	core specific pecifications Specificatior	cations s ns	ж	TS34.1 specific	21– however ation exists	no rel 4 versio	n of this
Other comments:	Ħ	Equivaler cat. A to 2	nt CRs in ot 25.133 v5.2	her Relea	ses: (CR340r1	cat. F to 25.7	133 v3.9.0, CR	342r1

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

A.5.4 Inter-system Handover from UTRAN FDD to GSM

A.5.4.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell handover delay reported in section 5.4.2.1.

The test parameters are given in Table A.5.0D, A.5.0E and A.5.0F below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 3C shall be used.. 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 Handover from UTRAN command with activation time at beginning of T3 with a new active cell, cell 2. In GSM Handover command contained in that message, IE starting time shall not be included.

The requirements are also applicable for a UE not requiring compressed mode, in which case no compresed mode pattern should be sent for the parameters specifed in table A5.0D

Table A.5.0D: General test parameters for Correct reporting of GSM neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Compressed mode patterns - GSM carrier RSSI			Only applicable for UE requiring compressed mode patterns
measurement		DL Compressed mode reference pattern 2 in Set 2	As specified in table A.22 TS 25.101 section A.5
- GSM Initial BSIC			
identification		Pattern 2	As specified in section 8.1.2.5.2.1 table 8.7.
- GSM BSIC re-			
confirmation		Pattern 2	As specified in section 8.1.2.5.2.2 table 8.8.
Active cell		Cell 1	
Inter-RAT measurement quantity		GSM Carrier RSSI	
BSIC verification required		Required	
Threshold other system	dBm	-80	Absolute GSM carrier RSSI threshold for event 3B and 3C.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list		24 FDD neighbours on Channel 1	Measurement control information is
size		6 GSM neighbours including ARFCN 1	sent before the compressed mode patterns starts.
N Identify abort		65	Taken from table 8.7.
T Reconfirm abort		5.0	Taken from table 8.8.
T1	S	20	
T2	S	5	
T3	S	5	

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Parameter	Unit	Cell 1 (UTRA)	
		T1, T2, T3	
CPICH_Ec/lor	dB	-10	
PCCPCH_Ec/lor	dB	-12	
SCH_Ec/lor	dB	-12	
PICH_Ec/lor	dB	-15	
DCH_Ec/lor	dB	Note 1	
OCNS_Ec/lor	dB	Note 2	
\hat{I}_{or}/I_{oc}	dB	0	
I _{oc}	dBm/3. 84 MHz	-70	
CPICH_Ec/lo	dB	-13	
Propagation			
Condition	AVVGIN		
Note 1: The DPCH level is controlled by the power control loop			
Note 2 : The power of the OCNS channel that is added shall make			
the total power from the cell to be equal to I			

Table A.5.0E: Cell Specific Parameters for Handover UTRAN to GSM cell case (cell 1)

Table A.5.0F: Cell Specific Parameters for Handover UTRAN to GSM cell case (cell 2)

Baramatar	Unit	Cell 2 (GSM)	
Farameter	Unit	T1	T2, T3
Absolute RF Channel Number		AR	FCN 1
RXLEV	dBm	-85	-75

A.5.4.2 Test Requirements

The UE shall begin to send access bursts on the new DCCH of the target cell 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.8.4 GSM measurements

A.8.4.1 Correct reporting of GSM neighbours in AWGN propagation condition

A.8.4.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter-RAT GSM measurements. The test will partly verify the requirements in section 8.1.2.5. The requirements are also applicable for a UE not requiring compressed mode, in which case no compressed mode pattern should be sent for the parameters specified in table A8.15.

The test consists of three successive time periods, with a time duration T1, T2 and T3. The test parameters are given in tables A.8.15, A.8.16 and A.8.17 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 3B and 3C shall be used.

Table A.8.15: General test parameters for Correct reporting of GSM neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Compressed mode patterns			Only applicable only for UE requiring compressed mode patterns
- GSM carrier RSSI measurement		DL Compressed mode reference pattern 2 in Set 2	As specified in table A.22 TS 25.101 section A.5
- GSM Initial BSIC identification		Pattern 2	As specified in section 8.1.2.5.2.1 table 8.7.
- GSM BSIC re- confirmation		Pattern 2	As specified in section 8.1.2.5.2.2 table 8.8.
Active cell		Cell 1	
Inter-RAT measurement quantity		GSM Carrier RSSI	
BSIC verification required		required	
Threshold other system	dBm	-80	Absolute GSM carrier RSSI threshold for event 3B and 3C.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 FDD neighbours on Channel 1 6 GSM neighbours including ARFCN 1	Measurement control information is sent before the compressed mode patterns starts.
N Identify abort		65	Taken from table 8.7.
T Reconfirm abort		5.0	Taken from table 8.8.
T1	S	20	
T2	S	5	
T3	S	5	

Table A.8.16: Cell specific test parameters for Correct reporting of GSM neighbours in AWGN propagation condition (cell 1)

Parameter	Unit	Cell 1
		T1, T2, T3
UTRA RF Channel		Channel 1
Number		
CPICH_Ec/lor	dB	-10
PCCPCH_Ec/lor	dB	-12
SCH_Ec/lor	dB	-12
PICH_Ec/lor	dB	-15
DPCH_Ec/lor	dB	Note 1
OCNS		Note 2
\hat{I}_{or}/I_{oc}	dB	0
Inc	dBm/	-85
0C	3.84	
	MHz	
CPICH_Ec/lo	dB	-13
Propagation		AWGN
Condition		
Note 1: The DPCH	evel is co	ntrolled by the power control loop.
Note 2: The power of the OCNS channel that is added shall make the total		
power from the cell to be equal to I_{α} .		

Baramatar	Unit	Cell 2		
Farameter	Unit	T1	T2	Т3
Absolute RF Channel Number			ARFCN 1	I
RXLEV	dBm	-85	-75	-85

Table A.8.17: Cell specific test parameters for Correct reporting of GSM neighbours in AWGN propagation condition (cell 2)

A.8.4.1.2 Test Requirements

The UE shall send one Event 3C triggered measurement report for Cell2, with a measurement reporting delay less than 960 ms from the beginning of time period T2.

The UE shall send one Event 3B triggered measurement report for Cell2, with a measurement reporting delay less than 960 ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

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

3GPP TSG RAN WG4 Meeting #22

R4-020630

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST		
ж	25.133 CR 342 * ev 1 * Current version: 5.2.0 *	
For <u>HELP</u> on u	using this form, see bottom of this page or look at the pop-up text over the $#$ symbols.	
Proposed change	affects: ೫ (U)SIM ME/UE X Radio Access Network Core Network	
Title: ೫	GSM measurement test cases	
Source: #	RAN WG4	
Work item code: ℜ	TEI Date: 第 5/4/2002	
Category: ₩	ARelease: \$\$Rel-5Use one of the following categories:Use one of the following releases:F (correction)2(GSM Phase 2)A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature),R97(Release 1997)C (functional modification of feature)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories canREL-4(Release 4)be found in 3GPP TR 24.900.REL-5(Release 5)	
Reason for change	5: # To ensure the GSM measurement test requirements are also applicable for UE not requiring compressed mode	
Summary of chang	ge: # To indicate this test is also applicable for UE not requiring compressed mode and that no compressed mode patterns should be sent to ensure the performance requirements are still met.	
Consequences if not approved:	 The requirements are not complete and would not specify the behaviour of UE not requiring compressed mode for GSM RAT measurements. Isolation impact: This change should not have not impact on implementation since this is basic requirement 	
Clauses affected:	₩ <mark>A5.4, A8.4</mark>	
Other specs affected:	 Conter core specifications Test specifications O&M Specifications Test specifications Test specifications Test specifications Test specifications 	
Other comments:	# Equivalent CRs in other Releases: CR340r1 cat. F to 25.133 v3.9.0, CR341r1 cat. A to 25.133 v4.4.0	

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- 1) Fill out the above form. The symbols above marked **#** contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> 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.5.4 Inter-system Handover from UTRAN FDD to GSM

A.5.4.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell handover delay reported in section 5.4.2.1.

The test parameters are given in Table A.5.0D, A.5.0E and A.5.0F below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 3C shall be used.. 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 Handover from UTRAN command with activation time at beginning of T3 with a new active cell, cell 2. In GSM Handover command contained in that message, IE starting time shall not be included.

The requirements are also applicable for a UE not requiring compressed mode, in which case no compresed mode pattern should be sent for the parameters specifed in table A5.0D

Table A.5.0D: General test parameters for Correct reporting of GSM neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Compressed mode patterns - GSM carrier RSSI			Only applicable for UE requiring compressed mode patterns
measurement		DL Compressed mode reference pattern 2 in Set 2	As specified in table A.22 TS 25.101 section A.5
- GSM Initial BSIC		Pattern 2	As specified in section 8.1.2.5.2.1 table
dentineation			8.7.
- GSM BSIC re-			
confirmation		Pattern 2	As specified in section 8.1.2.5.2.2 table 8.8.
Active cell		Cell 1	
Inter-RAT measurement guantity		GSM Carrier RSSI	
BSIC verification required		Required	
Threshold other system	dBm	-80	Absolute GSM carrier RSSI threshold for event 3B and 3C.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list		24 FDD neighbours on Channel 1	Measurement control information is
size		6 GSM neighbours including ARFCN 1	sent before the compressed mode patterns starts.
N Identify abort		65	Taken from table 8.7.
T Reconfirm abort		5.0	Taken from table 8.8.
T1	S	20	
T2	S	5	
T3	S	5	

CR	page	4
••••	page	

Parameter	Unit	Cell 1 (UTRA)
		T1, T2, T3
CPICH_Ec/lor	dB	-10
PCCPCH_Ec/lor	dB	-12
SCH_Ec/lor	dB	-12
PICH_Ec/lor	dB	-15
DCH_Ec/lor	dB	Note 1
OCNS_Ec/lor	dB	Note 2
\hat{I}_{or}/I_{oc}	dB	0
I _{oc}	dBm/3. 84 MHz	-70
CPICH_Ec/lo	dB	-13
Propagation	AWGN	
Condition		AWGN
Note 1: The DPCH level is controlled by the power control loop		
Note 2 : The power of the OCNS channel that is added shall make		
the total power from the cell to be equal to I		

Table A.5.0E: Cell Specific Parameters for Handover UTRAN to GSM cell case (cell 1)

Table A.5.0F: Cell Specific Parameters for Handover UTRAN to GSM cell case (cell 2)

Baramatar	Unit	Cell 2 (GSM)	
Farameter	Unit	T1	T2, T3
Absolute RF Channel Number		AR	FCN 1
RXLEV	dBm	-85	-75

A.5.4.2 Test Requirements

The UE shall begin to send access bursts on the new DCCH of the target cell 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.8.4 GSM measurements

A.8.4.1 Correct reporting of GSM neighbours in AWGN propagation condition

A.8.4.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter-RAT GSM measurements. The test will partly verify the requirements in section 8.1.2.5. The requirements are also applicable for a UE not requiring compressed mode, in which case no compressed mode pattern should be sent for the parameters specified in table A8.15.

The test consists of three successive time periods, with a time duration T1, T2 and T3. The test parameters are given in tables A.8.15, A.8.16 and A.8.17 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 3B and 3C shall be used.

Table A.8.15: General test parameters for Correct reporting of GSM neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Compressed mode patterns			Only applicable for UE requiring compressed mode patterns
- GSM carrier RSSI measurement		DL Compressed mode reference pattern 2 in Set 2	As specified in table A.22 TS 25.101 section A.5
- GSM Initial BSIC identification		Pattern 2	As specified in section 8.1.2.5.2.1 table 8.7.
- GSM BSIC re- confirmation		Pattern 2	As specified in section 8.1.2.5.2.2 table 8.8.
Active cell		Cell 1	
Inter-RAT measurement quantity		GSM Carrier RSSI	
BSIC verification required		required	
Threshold other system	dBm	-80	Absolute GSM carrier RSSI threshold for event 3B and 3C.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 FDD neighbours on Channel 1 6 GSM neighbours including ARFCN 1	Measurement control information is sent before the compressed mode patterns starts.
N Identify abort		65	Taken from table 8.7.
T Reconfirm abort		5.0	Taken from table 8.8.
T1	S	20	
T2	S	5	
T3	S	5	

Table A.8.16: Cell specific test parameters for Correct reporting of GSM neighbours in AWGN propagation condition (cell 1)

Parameter	Unit	Cell 1
		T1, T2, T3
UTRA RF Channel		Channel 1
Number		
CPICH_Ec/lor	dB	-10
PCCPCH_Ec/lor	dB	-12
SCH_Ec/lor	dB	-12
PICH_Ec/lor	dB	-15
DPCH_Ec/lor	dB	Note 1
OCNS		Note 2
\hat{I}_{or}/I_{oc}	dB	0
Inc	dBm/	-85
00	3.84	
	MHz	
CPICH_Ec/lo	dB	-13
Propagation		AWGN
Condition		
Note 1: The DPCH	evel is co	ntrolled by the power control loop.
Note 2: The power of the OCNS channel that is added shall make the total		
power from the cell to be equal to I_{α} .		

Baramatar	Unit		Cell 2	
Farameter	Unit	T1	T2	Т3
Absolute RF Channel Number			ARFCN 1	I
RXLEV	dBm	-85	-75	-85

Table A.8.17: Cell specific test parameters for Correct reporting of GSM neighbours in AWGN propagation condition (cell 2)

A.8.4.1.2 Test Requirements

The UE shall send one Event 3C triggered measurement report for Cell2, with a measurement reporting delay less than 960 ms from the beginning of time period T2.

The UE shall send one Event 3B triggered measurement report for Cell2, with a measurement reporting delay less than 960 ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

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

3GPP TSG RAN WG4 Meeting #22

R4-020563

Sophia Antipolis, France 3rd - 5th April 2002

# 25.133 CR 346 # ev # Current version: 3.9.0 # For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbol Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Netwo Title: # Removal of test case "Correct reporting of neighbours in Fading propagation condition" Core Netwo Source: # RAN WG4 Date: # 5/4/2002 Category: # F Release: # R99 Use one of the following categories: F (correction) Use one of the following releases 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) Release 1996)	CHANGE REQUEST									CR-Form-v4			
For HELP on using this form, see bottom of this page or look at the pop-up text over the \$\$ symbol Proposed change affects: \$\$ (U)SIM ME/UE X Radio Access Network Core Network Title: \$\$ Removal of test case "Correct reporting of neighbours in Fading propagation condition" Source: \$\$ RAN WG4 Work item code: \$\$ TEI Date: \$\$ 5/4/2002 Category: \$\$ F\$ (correction) Use one of the following categories: Use one of the following releases: F (correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release: 1996)	ж		25.133	CR	346	ж	ev		ж	Current vers	sion:	3.9.0	ж
Proposed change affects: # (U)SIM ME/UE Radio Access Network Core Network Title: # Removal of test case "Correct reporting of neighbours in Fading propagation condition" Source: # RAN WG4 Work item code: # TEI Date: # 5/4/2002 Category: # F Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) R96 (Release 1996)	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.												
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B(addition of feature),R97(Release 1997)C(functional modification of feature)R98(Release 1998)D(editorial modification)R99(Release 1999)Detailed explanations of the above categories canREL-4(Release 4)be found in 3GPP TR 21.900.REL-5(Release 5)	Category: # F Release: # R99 Use one of the following categories: 2 (GSM H A (corresponds to a correction in an earlier release) R96 (Release: B (addition of feature), R97 (Release: B (addition of feature), C (functional modification) R98 (Release: D (editorial modification) R99 (Release: D (Release: D (El-4) (Release: D (Release: D REL-4 (Release: D REL-5 (Release: REL						9 ollowing rel A Phase 2) pase 1996) pase 1997) pase 1998) pase 1999) pase 4) pase 5)	eases:					

Reason for change.	The specification contains an incomplete test case.						
Summary of change: Ж	he test case "Correct reporting of neighbours in Fading propagation condition" is emoved.						
	Isolated Impact Analysis:						
	Since the test case is not finalized and test cases in general verify the core requirements of TS25.133, the CR does not have any impact on implementation or requirement.						
Consequences if भ not approved:	The specification contains an incomplete test case, which might confuse T1 RF and delay the work of T1 RF.						
Clauses affected: #	A.8.2.2, A.8.2.2.1 and A.8.2.2.2						
Other specs % affected:	Other core specifications # X Test specifications 34.121 O&M Specifications •						
Other comments: #							
	Equivalent CRs in other Releases: CR347 cat. A to 25.133 v4.4.0						

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> 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.8.2 FDD inter frequency measurements

A.8.2.1 Correct reporting of neighbours in AWGN propagation condition

A.8.2.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter frequency measurements. The test will partly verify the requirements in section 8.1.2.2 and section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2. The test parameters are given in tables A.8.9 and A.8.10 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A and 2C shall be used. The CPICH Ec/I0 of the best cell on the unused frequency shall be reported together with Event 2C reporting.

Table A.8.9: General test parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Compressed mode		A.22 set 1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Threshold non used	dB	-18	Absolute Ec/I0 threshold for event 2C
frequency			
Reporting range	dB	4	Applicable for event 1A
Hysteresis	dB	0	
W		1	Applicable for event 1A
W non-used frequency		1	Applicable for event 2C
Reporting deactivation threshold		0	Applicable for event 1A
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 on channel 1 16 on channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	S	10	
T2	S	5	

TableA.8.10: Cell Specific parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Cell 1		Ce	ll 2	Cell 3	
		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Cha	Channel 1		Channel 1		nnel 2
CPICH_Ec/lor	dB	-10		-10		-10	
PCCPCH_Ec/lor	dB	-12		-12		-12	
SCH_Ec/lor	dB	-12	-12		-12		
PICH_Ec/lor	dB	-15		-15		-15	
DPCH_Ec/lor	dB	-17		N/A		N/A	
OCNS		-1.049		-0.941		-0.941	
\hat{I}_{or}/I_{oc}	dB	0	4.39	- Infinity	2.39	-1.8	-1.8
I _{oc}	dBm/3.84 MHz	-70				-70	
CPICH_Ec/Io	dB	-13	-13	- Infinity	-15	-14	-14
Propagation Condition	AWGN						

A.8.2.1.2 Test Requirements

- a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than 9 seconds from the beginning of time period T1.
- b) The UE shall send one Event 1A triggered measurement report, with a measurement reporting delay less than 956.2ms from the beginning of time period T2.The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

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

A.8.2.2 Correct reporting of neighbours in Fading propagation condition

A.8.2.2.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter frequency measurements. The test will partly verify the requirements in section 8.1.2.2. The test parameters are given in Table A.8.11 and A.8.12. In the measurement control information it is indicated to the UE that event triggered reporting 2C shall be used.

Table A.8.11: General test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel	As specified in TS 25.101 section A.3.1
		12.2 kbps	
Power Control		On	
Compressed mode		Case 2.1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Absolute Threshold	dB	-18	
(Ec/N0) for Event 2c			
Hysteresis	dB	θ	
Time to Trigger	ms	θ	
Filter coefficient		θ	
Monitored cell list		Total 24	Measurement control information is
size		X on frequency Channel 2	sent before the compressed mode
			pattern starts.

Table A.8.12: Test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Cell 1	Cell 2			
UTRA RF Channel Number		Channel 1	Channel 2			
CPICH_Ec/lor	dB	-10	-10			
PCCPCH_Ec/lor	dB	-12	-12			
SCH_Ec/lor	dB	-12	-12			
PICH_Ec/lor	dB	-15	-15			
DPCH_Ec/lor	dB	TBD	TBD			
OCNS		[To Be Calculated]	[To Be Calculated]			
$\frac{\hat{H}_{or}}{H_{oc}}$	d₿	θ	-1.8			
-I _{oc}	dBm/3.84 MHz	-70	-70			
CPICH_Ec/lo	dB	-13	-14			
Propagation Condition	Case 5 as specified in Annex B of TS25.101					

A.8.2.2.2 Test Requirements

a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than 5 seconds from the start of the test.

b) The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

The rate of correct events observed during repeated tests shall be at least TBD%.

A.8.3 TDD measurements

A.8.3.1 Correct reporting of TDD neighbours in AWGN propagation condition

A.8.3.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when measuring on a TDD cell. The test will partly verify the requirements in section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2 respectively. The test parameters are given in Table A.8.13 and A.8.14. In the measurement control information it is indicated to the UE that event triggered reporting with Event 2C shall be used.

Table A.8.13: General test parameters for Correct reporting of TDD neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Compressed mode		Case 2.1	Gap length specified in section 8.1.2.3 and the other parameters as specified in TS 25.101 section A.5.
Active cell		Cell 1	
Reporting Threshold	dB		
Hysteresis	dB		
Time to Trigger	ms		
Filter coefficient			
Monitored cell list size		Total X Y on frequency Channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	S		
T2	S		

Table A.8.14: Cell specific test parameters for Correct reporting of TDD neighbours in AWGN propagation condition

Parameter	Unit	Cel	Cell 2				
Timeslot Number		n.a		0	8		
		T1	T2	T1	T2	T1	T2
UTRA RF Channel		Channel 1		Channel 2			
Number		Channel I		Chann			
CPICH_Ec/lor	dB	[]	[]	n.a.		n.a.	
PCCPCH_Ec/lor	dB	[]	[]	-3	-3		
SCH_Ec/lor	dB	[]	[]	-9	-9	-9	-9
SCH_t _{offset}		n.a.	n.a.	15	15	15	15
PICH_Ec/lor		[]	[]			-3	-3
DCH_Ec/lor	dB	[]	[]	-	-	-	-
OCNS	dB	[]	[]	-4.28	-4.28	-4.28	-4.28
\hat{I}_{or}/I_{oc}	dB	[]	[]	[]	[]	[]	[]
I _{oc}	dBm/3.84 MHz	-70		-70			
CPICH_Ec/lo		[]		n.a.			
PCCPCH_RSCP	dB	n.a.	n.a.	[]	[]	[]	[]
Propagation Condition		AWGN					

NOTE: The DPCH of the TDD cell is located in an other timeslot than 0 or 8.

A.8.3.1.2 Test Requirements

- a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than [5] seconds from the start of time period T2.
- b) The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

3GPP TSG RAN WG4 Meeting #22

R4-020564

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST									CR-Form-v4		
æ		<mark>25.133</mark>	CR	34	7 ^ж	ev		Ħ	Current vers	ion: 4.4.0	ж
For <u>HELP</u> or	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.									mbols.	
Proposed chang	je a	affects: ೫	(U)SIN	/	ME/UE	X	Radi	io Aco	cess Network	Core N	etwork
Title:	ж	Removal condition	of test ca "	se "Corre	ect rep	oorting	g of ne	eighbo	ours in Fadin	g propagation	l
Source:	ж	RAN WG	64								
Work item code:	ж	TEI							<i>Date:</i>	5/4/2002	
Category:	¥	A Use <u>one</u> of F (col A (co B (ad C (fur D (ed Detailed ex be found in	the followin rrection) rresponds t dition of fea nctional modi itorial modi planations 3GPP <u>TR</u>	ng catego to a correc ature), dification (fication) of the abc 21.900.	ries: ction in of feati ove cat	an ea ure) egorie	erlier re	lease	Release: ₩ Use <u>one</u> of 2 (R96) R97 R98 R99 REL-4 REL-5	Rel-4 the following re (GSM Phase 2 (Release 1996 (Release 1997 (Release 1998 (Release 1999 (Release 4) (Release 5)	leases:))))

Reason for change: ೫	The specification contains an incomplete test case.
Summary of change: #	The test case "Correct reporting of neighbours in Fading propagation condition" is removed.
	Isolated Impact Analysis:
	Since the test case is not finalized and test cases in general verify the core requirements of TS25.133, the CR does not have any impact on implementation or requirement.
Consequences if # not approved:	The specification contains an incomplete test case, which might confuse T1 RF and delay the work of T1 RF.
Clauses affected: #	A.8.2.2, A.8.2.2.1 and A.8.2.2.2
Other specs अ affected:	Other core specifications # Test specifications # O&M Specifications •
Other comments: #	
	Equivalent CRs in other Releases: CR346 cat. F to 25.133 v3.9.0

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> 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.8.2 FDD inter frequency measurements

A.8.2.1 Correct reporting of neighbours in AWGN propagation condition

A.8.2.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter frequency measurements. The test will partly verify the requirements in section 8.1.2.2 and section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2. The test parameters are given in tables A.8.9 and A.8.10 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1A and 2C shall be used. The CPICH Ec/I0 of the best cell on the unused frequency shall be reported together with Event 2C reporting.

Table A.8.9: General test parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel	As specified in TS 25.101 section A.3.1
		12.2 kbps	
Power Control		On	
Compressed mode		A.22 set 1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Threshold non used	dB	-18	Absolute Ec/I0 threshold for event 2C
frequency			
Reporting range	dB	4	Applicable for event 1A
Hysteresis	dB	0	
W		1	Applicable for event 1A
W non-used frequency		1	Applicable for event 2C
Reporting deactivation		0	Applicable for event 1A
threshold			
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		24 on channel 1	Measurement control information is
		16 on channel 2	sent before the compressed mode
			pattern starts.
T1	S	10	
T2	S	5	

TableA.8.10: Cell Specific parameters for Correct reporting of neighbours in AWGN propagation condition

Parameter	Unit	Cell 1		Ce	Cell 2		Cell 3	
		T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number		Cha	annel 1	Chan	nel 1	Char	nnel 2	
CPICH_Ec/lor	dB	-10		-10		-10		
PCCPCH_Ec/lor	dB	-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		
DPCH_Ec/lor	dB	-17		N/A	N/A		N/A	
OCNS		-1.049		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	0	4.39	-Infinity	2.39	-1.8	-1.8	
I _{oc}	dBm/3.84 MHz	-70				-70		
CPICH_Ec/lo	dB	-13	-13	-Infinity	-15	-14	-14	
Propagation Condition	AWGN							

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A.8.2.1.2 Test Requirements

- a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than 9 seconds from the beginning of time period T1.
- b) The UE shall send one Event 1A triggered measurement report, with a measurement reporting delay less than 956.2 ms from the beginning of time period T2. The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

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

A.8.2.2 Correct reporting of neighbours in Fading propagation condition

A.8.2.2.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when doing inter frequency measurements. The test will partly verify the requirements in section 8.1.2.2. The test parameters are given in Table A.8.11 and A.8.12. In the measurement control information it is indicated to the UE that event triggered reporting 2C shall be used.

Table A.8.11: General test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel	As specified in TS 25.101 section A.3.1
		12.2 kbps	
Power Control		On	
Compressed mode		Case 2.1	As specified in TS 25.101 section A.5.
Active cell		Cell 1	
Absolute Threshold	dB	-18	
(Ec/N0) for Event 2c			
Hysteresis	dB	θ	
Time to Trigger	ms	θ	
Filter coefficient		θ	
Monitored cell list		Total 24	Measurement control information is
size		X on frequency Channel 2	sent before the compressed mode
			pattern starts.

Table A.8.12: Test parameters for Correct reporting of neighbours in Fading propagation condition

Parameter	Unit	Cell 1	Cell 2	
UTRA RF Channel Number		Channel 1	Channel 2	
CPICH_Ec/lor	dB	-10	-10	
PCCPCH_Ec/lor	d₿	-12	-12	
SCH_Ec/lor	d₿	-12	-12	
PICH_Ec/lor	d₿	-15	-15	
DPCH_Ec/lor	dB	TBD	TBD	
OCNS		[To Be Calculated]	[To Be Calculated]	
$\frac{\hat{I}_{or}}{I_{oc}}$	d₿	θ	-1.8	
-I _{oc}	dBm/3.84 MHz	-70	-70	
CPICH_Ec/lo	dB	-13	-14	
Propagation Condition Case 5 as specified in Annex B of TS25.101				

A.8.2.2.2 Test Requirements

a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than 5 seconds from the start of the test.

b) The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

The rate of correct events observed during repeated tests shall be at least TBD%.

A.8.3 TDD measurements

A.8.3.1 Correct reporting of TDD neighbours in AWGN propagation condition

A.8.3.1.1 Test Purpose and Environment

The purpose of this test is to verify that the UE makes correct reporting of an event when measuring on a TDD cell. The test will partly verify the requirements in section 8.1.2.3.

The test consists of two successive time periods, with a time duration T1 and T2 respectively. The test parameters are given in Table A.8.13 and A.8.14. In the measurement control information it is indicated to the UE that event triggered reporting with Event 2C shall be used.

Table A.8.13: General test parameters for Correct reporting of TDD neighbours in AWGN propagation condition

Parameter	Unit	Value	Comment
DCH parameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.101 section A.3.1
Power Control		On	
Compressed mode		Case 2.1	Gap length specified in section 8.1.2.3 and the other parameters as specified in TS 25.101 section A.5.
Active cell		Cell 1	
Reporting Threshold	dB		
Hysteresis	dB		
Time to Trigger	ms		
Filter coefficient			
Monitored cell list size		Total X Y on frequency Channel 2	Measurement control information is sent before the compressed mode pattern starts.
T1	S		
T2	S		

Table A.8.14: Cell specific test parameters for Correct reporting of TDD neighbours in AWGN propagation condition

Parameter	Unit	Cell 1 Cell 2		ll 2			
Timeslot Number		n.a.		0		8	
		T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1 Channel 2					
CPICH_Ec/lor	dB	[]	[]	n.	.a.	n.	a.
PCCPCH_Ec/lor	dB	[]	[]	-3	-3		
SCH_Ec/lor	dB	[]	[]	-9	-9	-9	-9
SCH_t _{offset}		n.a.	n.a.	15	15	15	15
PICH_Ec/lor		[]	[]			-3	-3
DCH_Ec/lor	dB	[]	[]	-	-	-	-
OCNS	dB	[]	[]	-4.28	-4.28	-4.28	-4.28
\hat{I}_{or}/I_{oc}	dB	[]	[]	[]	[]	[]	[]
I _{oc}	dBm/3.84 MHz	-70 -70					
CPICH_Ec/lo		[]		n.a.			
PCCPCH_RSCP	dB	n.a.	n.a.	[]	[]	[]	[]
Propagation Condition		AWGN					

NOTE: The DPCH of the TDD cell is located in an other timeslot than 0 or 8.

A.8.3.1.2 Test Requirements

- a) The UE shall send one Event 2C triggered measurement report, with a measurement reporting delay less than [5] seconds from the start of time period T2.
- b) The UE shall not send any measurement reports, as long as the reporting criteria are not fulfilled.

3GPP TSG RAN WG4 Meeting #22

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST							
ж	.133 CR 358 # rev 1 [#] Current version:	3.9.0 [#]					
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.							
Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network							
Title: ೫	rrections to FDD-GSM cell re-selection test case						
Source: ೫	N WG4						
Work item code: ₩	l Date: 発 5/4/	/2002					
Category: ₩	Release: % R99one of the following categories:Use one of the following categories:F (correction)2A (corresponds to a correction in an earlier release)R96B (addition of feature),R97C (functional modification of feature)R98D (editorial modification)R99KeleD (editorial modification)R99KeleD (additions of the above categories canREL-4KeleC (relevalKeleC (relevalC (relevalC (relevalC (relevalC (relevalC (releval)C (releval) <th>9 Ilowing releases: 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4) ase 5)</th>	9 Ilowing releases: 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4) ase 5)					
Reason for change: * The current re-selection delay value of the test case is not inline with the minimum requirement that can be derived from the core requirements.							
Summary of change: * The DRX cycle length is included in the formulas and the re-selection delay is updated accordingly. The time T2 needs also to be updated from 10 to 12s.							
Consequences if not approved:	Test requirement not inline with the core requirement. <u>Isolated Impact Analysis:</u> This CR has no impact on current implement only corrects a test case.	entations because it					
Clauses affected: # A 4 3 2 2							
Other specs affected:	Other core specifications#XTest specifications34.121O&M Specifications						
Other comments: How to create CRs (Equivalent CRs in other Releases: CR359 cat. A to 25.133 v4.4. to 25.133 v5.2.0 g this form:	0, CR360 cat. A					

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.4.3.2 Scenario 2

A.4.3.2.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.7A, A.4.7B, A.4.7C. Cell 1 and cell 2 shall belong to different Location Areas.

Pa	arameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX cycle l	ength	S	1.28	
T1		S	45	
T2		S	1 <u>2</u> 0	

Table A.4.7A: General test parameters for UTRAN to GSM Cell Re-selection

Parameter	Unit	Cell 1 (UTRA)	
		T1	T2
UTRA RF Channel Number		Channel 1	
CPICH_Ec/Ior	dB	-10	
PCCPCH_Ec/Ior	dB	-12	
SCH_Ec/Ior	dB	-12	
PICH_Ec/Ior	dB	-15	
OCNS_Ec/Ior	dB	-0.941	
\hat{I}_{or}/I_{oc}	dB	20	-9
I _{oc}	dBm/3.84 MHz	-81	
CPICH_Ec/Io	dB	-10.0	-19.5
CPICH_RSCP	dBm	-70	-100
Propagation Condition		AWGN	
Cell_selection_and_ reselection_quality_measure		CPICH E _c /N ₀	
Qqualmin	dB	-20	
Qrxlevmin	dBm	-115	
UE_TXPWR_MAX_RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	S	C2: 0	
TEMPORARY_OFFSET1	dB	C2: 0	
Treselection	S	0	
Ssearch _{RAT}	dB	not sent	

 Table A.4.7B: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.4.7C:	Cell re-selection	UTRAN to	GSM	cell case	(cell 2)
1 abic A.4.7 C.	cen re-selection	UINANU	ODIT	cen case	$(\operatorname{ccn} \mathbf{Z})$

Parameter	Unit	Cell 2	(GSM)	
		T1	T2	
Absolute RF Channel Number		ARFCN 1		
RXLEV	dBm	-80	-80	
RXLEV_ACCESS_MIN	dBm	-104		
MS_TXPWR_MAX_CCH	dBm	33		

A.4.3.2.2 Test Requirements

BCCH data from GSM cell [21].

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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than 7.7 - 6.5 + T_{BCCH} , where T_{BCCH} is the maximum time allowed to read

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: $Max(3*T_{measureGSM}+DRX cycle length) + T_{BCCH}$, where:

TmeasureFDDSee Table 4.1 in section 4.2.2.TmeasureGSMSee Table 4.1 in section 4.2.2.DRX cycle
length
TBCCH1.28s see Table A.4.7.A
Maximum time allowed to read BCCH data from GSM cell [21].
According to [21], the maximum time allowed to read the BCCH data, when being
synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 7.686.4 s + T_{BCCH}, allow 7.76.5 s + T_{BCCH} in the test case.
3GPP TSG RAN WG4 Meeting #22

R4-020578

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST										
ж	25.133 CR 359 # rev - [#] Current version: 4.4.0 [#]									
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.										
Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network										
Title: ೫	Corrections to FDD-GSM cell re-selection test case									
Source: अ	RAN WG4									
Work item code: ℜ	TEI Date: 第 5/4/2002									
Category: ₩	ARelease: #Rel-4Use one of the following categories: F (correction)Use one of the following releases: 22A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature), C (functional modification of feature)R97(Release 1997)C (functional modification)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories can be found in 3GPP TR 21.900.REL-5(Release 5)									
Reason for change	: # The current re-selection delay value of the test case is not inline with the minimur requirement that can be derived from the core requirements.									
Summary of chang	The DRX cycle length is included in the formulas and the re-selection delay is updated accordingly. The time T2 needs also to be updated from 10 to 12s.									
Consequences if not approved:	 Test requirement not inline with the core requirement. <u>Isolated Impact Analysis:</u> This CR has no impact on current implementations because only corrects a test case. 									
Clauses affected:	ж A.4.3.2.2									
Other specs affected:	 Conter core specifications Test specifications O&M Specifications 									
Other comments:	# Equivalent CRs in other Releases: CR358r1 cat. F to 25.133 v3.9.0, CR360 cat. A to 25.133 v5.2.0 using this form:									

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.4.3.2 Scenario 2

A.4.3.2.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.7A, A.4.7B, A.4.7C. Cell 1 and cell 2 shall belong to different Location Areas.

Pa	arameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX cycle l	ength	S	1.28	
T1		S	45	
T2		S	1 <u>2</u> 0	

Table A.4.7A: General test parameters for UTRAN to GSM Cell Re-selection

Parameter	Unit	Cell 1 (UTRA)		
		T1	T2	
UTRA RF Channel Number		Channel 1		
CPICH_Ec/Ior	dB	-10		
PCCPCH_Ec/Ior	dB	-12		
SCH_Ec/Ior	dB	-12		
PICH_Ec/Ior	dB	-15		
OCNS_Ec/Ior	dB	-0.941		
\hat{I}_{or}/I_{oc}	dB	20	-9	
I _{oc}	dBm/3.84 MHz	-81		
CPICH_Ec/Io	dB	-10.0	-19.5	
CPICH_RSCP	dBm	-70	-100	
Propagation Condition		AWGN		
Cell_selection_and_ reselection_quality_measure		CPICH E _c /	N ₀	
Qqualmin	dB	-20		
Qrxlevmin	dBm	-115		
UE_TXPWR_MAX_RACH	dBm	21		
Qoffset1 _{s, n}	dB	C1, C2: 0		
Qhyst1	dB	0		
PENALTY_TIME	S	C2: 0		
TEMPORARY_OFFSET1	dB	C2: 0		
Treselection	S	0		
Ssearch _{RAT}	dB	not sent		

 Table A.4.7B: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.4.7C:	Cell re-selection	UTRAN to	GSM	cell case	(cell 2)
1 abic A.4.7 C.	cen re-selection	UINAN	ODM	cen case	$(\operatorname{ccn} \mathbf{Z})$

Parameter	Unit	Cell 2 (GSM)		
		T1	T2	
Absolute RF Channel Number		ARFCN 1		
RXLEV	dBm	-80	-80	
RXLEV_ACCESS_MIN	dBm	-104		
MS_TXPWR_MAX_CCH	dBm	33		

A.4.3.2.2 Test Requirements

BCCH data from GSM cell [21].

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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than 7.7 - 6.5 s + T_{BCCH} , where T_{BCCH} is the maximum time allowed to read

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: $Max(3*T_{measureGSM}+DRX cycle length) + T_{BCCH}$, where:

TmeasureFDDSee Table 4.1 in section 4.2.2.TmeasureGSMSee Table 4.1 in section 4.2.2.DRX cycle
length
TBCCH1.28s see Table A.4.7.A
Maximum time allowed to read BCCH data from GSM cell [21].
According to [21], the maximum time allowed to read the BCCH data, when being
synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 7.686.4 s + T_{BCCH}, allow 7.76.5 s + T_{BCCH} in the test case.

3GPP TSG RAN WG4 Meeting #22

R4-020579

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST										
ж	25.133 CR 360 # rev - [#] Current version: 5.2.0 [#]									
For HELP on using this form, see bottom of this page or look at the pop-up text over the $#$ symbols.										
Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network										
Title: ೫	Corrections to FDD-GSM cell re-selection test case									
Source: अ	RAN WG4									
Work item code: ℜ	TEI Date: 第 5/4/2002									
Category: ₩	ARelease: %Rel-5Use one of the following categories: F (correction)Use one of the following releases: 22A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature), C (functional modification of feature)R97(Release 1997)D (editorial modification)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories can be found in 3GPP TR 21.900.REL-5(Release 5)									
Reason for change	: X The current re-selection delay value of the test case is not inline with the minimum requirement that can be derived from the core requirements.									
Summary of chang	The DRX cycle length is included in the formulas and the re-selection delay is updated accordingly. The time T2 needs also to be updated from 10 to 12s.									
Consequences if not approved:	 Test requirement not inline with the core requirement. <u>Isolated Impact Analysis:</u> This CR has no impact on current implementations because is only corrects a test case. 									
Clauses affected:	¥ A.4.3.2.2									
Other specs affected:	 Conter core specifications Test specifications O&M Specifications 									
Other comments:	# Equivalent CRs in other Releases: CR358r1 cat. F to 25.133 v3.9.0, CR359 cat. A to 25.133 v4.4.0 using this form:									

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.4.3.2 Scenario 2

A.4.3.2.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.7A, A.4.7B, A.4.7C. Cell 1 and cell 2 shall belong to different Location Areas.

Pa	arameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX cycle l	ength	S	1.28	
T1		S	45	
T2		S	1 <u>2</u> 0	

Table A.4.7A: General test parameters for UTRAN to GSM Cell Re-selection

Parameter	Unit	Cell 1 ((UTRA)
		T1	T2
UTRA RF Channel Number		Channel 1	
CPICH_Ec/Ior	dB	-10	
PCCPCH_Ec/Ior	dB	-12	
SCH_Ec/Ior	dB	-12	
PICH_Ec/Ior	dB	-15	
OCNS_Ec/Ior	dB	-0.941	
\hat{I}_{or}/I_{oc}	dB	20	-9
I _{oc}	dBm/3.84 MHz	-81	
CPICH_Ec/Io	dB	-10.0	-19.5
CPICH_RSCP	dBm	-70	-100
Propagation Condition		AWGN	
Cell_selection_and_ reselection_quality_measure		CPICH E _c /	N ₀
Qqualmin	dB	-20	
Qrxlevmin	dBm	-115	
UE_TXPWR_MAX_RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	S	C2: 0	
TEMPORARY_OFFSET1	dB	C2: 0	
Treselection	8	0	
Ssearch _{RAT}	dB	not sent	

 Table A.4.7B: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.4.7C: Cell re-selection	n UTRAN to	GSM	cell case	(cell 2)
		ODIT	cen case	$(\operatorname{ccn} \mathbf{Z})$

Parameter	Unit	Cell 2 (GSM)		
		T1	T2	
Absolute RF Channel Number		ARFCN 1		
RXLEV	dBm	-80	-80	
RXLEV_ACCESS_MIN	dBm	-104		
MS_TXPWR_MAX_CCH	dBm	33		

A.4.3.2.2 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 RR Channel Request message for location update to Cell 2.

- The cell re-selection delay shall be less than $7.7_{6.5}$ s + T_{BCCH} , where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].
 - 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: $Max(3*T_{measureFDD}, T_{measureGSM}+DRX cycle length) + T_{BCCH}$, where:

$T_{\text{measureFDD}}$	See Table 4.1 in section 4.2.2.
T _{measureGSM}	See Table 4.1 in section 4.2.2.
DRX cycle length	<u>1.28s see Table A.4.7.A</u>
T _{BCCH}	Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 7.686.4 s + T_{BCCH}, allow 7.76.5 s + T_{BCCH} in the test case.

3GPP TSG RAN WG4 Meeting #22

R4-020580

Sophia Antipolis, France 3rd - 5th April 2002

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ж	25	<mark>.133</mark> (CR	361	жrev	- *	Current ver	sion:	3.9.0	ж
For <u>HELP</u> on	using	this form	, see bo	ttom of th	nis page or	look at	the pop-up tex	t over	the ¥ syr	nbols.
Proposed change	e affec	<i>ts:</i>	(U)SIM	M	E/UE X	Radio	Access Netwo	rk	Core Ne	etwork
Title:	₩ <mark>Co</mark>	rrections	to UTR	AN carrie	<mark>r RSSI me</mark>	asurem	ent accuracy r	equire	ment	
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Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.3 UTRA Carrier RSSI

NOTE: This measurement is for Inter-frequency handover evaluation.

The measurement period is equal to the measurement period for UE CPICH measurements. For CELL_DCH state the measurement period can be found in sub clause 8.1.2.2 for intra frequency measurements and in sub clause 8.1.2.3 for inter frequency measurements. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2 for intra frequency measurements and in sub clause 8.4.2.3 for inter frequency measurements.

9.1.3.1 Absolute accuracy requirement

Table 9.10: UTRA Carrier RSSI Inter frequency absolute accuracy

		Accur	Conditions	
Parameter	Unit	Normal condition	Extreme condition	lo [dBm/3.84 MHz]
LITDA Corrier DCCI	dBm	± 4	± 7	-9470
UTRA Camer RSSI	dBm	± 6	± 9	-7050

9.1.3.2 Relative accuracy requirement

The relative accuracy requirement is defined as the UTRA Carrier RSSI measured from one frequency compared to the UTRA Carrier RSSI measured from another frequency.

The accuracy requirements in table 9.11 are valid under the following condition:

 $| Channel 1_Io|_{dBm/3.84 MHz} - Channel 2_Io|_{dBm/3.84 MHz} | < 20 \ dB.$

Table 9.11: UTRA Carrier RSSI Inter frequency relative accuracy

		Accur	Conditions	
Parameter	Unit	Normal condition	Extreme condition	lo [dBm/3.84 MHz]
UTRA Carrier RSSI	dBm	± 7	± 11	-9450

9.1.3.3 UTRA Carrier RSSI measurement report mapping

The reporting range for UTRA carrier RSSI is from -100 ...-25 dBm.

In table 9.12 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Reported value	Measured quantity value	Unit
UTRA_carrier_RSSI_LEV _00	UTRA carrier RSSI < -100	dBm
UTRA_carrier_RSSI_LEV _01	$-100 \le \text{UTRA carrier RSSI} < -99$	dBm
UTRA_carrier_RSSI_LEV _02	-99 ≤ UTRA carrier RSSI < -98	dBm
UTRA_carrier_RSSI_LEV _74	$-27 \le \text{UTRA carrier RSSI} < -26$	dBm
UTRA_carrier_RSSI_LEV _75	$-26 \le \text{UTRA carrier RSSI} < -25$	dBm
UTRA_carrier_RSSI_LEV _76	-25 ≤ UTRA carrier RSSI	dBm

Table 9.12

3GPP TSG RAN WG4 Meeting #22

R4-020581

Sophia Antipolis, France 3rd - 5th April 2002

			С	HANG	E REQ	UES	т			CR-Form-v5
ж	25	<mark>.133</mark>	CR	362	ж rev	- ³	Current ve	rsion:	4.4.0	ж
For <u>HELP</u> on L	using	this for	m, see k	ottom of t	his page or	look at	the pop-up te	xt over	the ¥ syr	nbols.
Proposed change	affec	ts: #	(U)SI	M	1E/UE X	Radio	Access Netwo	ork	Core Ne	twork
Title: #	Co	rrectior	ns to UT	RAN carrie	er RSSI me	asurem	ent accuracy	<mark>require</mark>	ment	
Source: #	RA	<mark>N WG</mark> 4	1							
Work item code: भ	TE						Date:	₩ <mark>5/4</mark>	/2002	
Category: ₩	B A Use	one of t F (corr A (corr B (add C (fund D (edit iled exp ound in 3	the follow ection) responds lition of fe ctional mo orial moo lanations 3GPP <u>TR</u>	ing categor to a correc eature), odification c lification) s of the abo	ies: tion in an ea of feature) ve categorie	rlier rele s can	Release: Use <u>one</u> 2 ase) R96 R97 R98 R99 REL-4 REL-5	K Re of the fo (GSN (Rele (Rele (Rele (Rele (Rele	I-4 Illowing rele A Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5)	pases:
Reason for change Summary of chang	e: Ж ge:Ж	The U FACH FACH Remo	TRAN c state. A state. val of th ncy and	arrier RSS ccording T e reference inter-freq	SI accuracy s25.215 th es for the n uency in se	neasure iction 9.	ement is define surement itself ement periods 1.3.	ed for (is not	Cell-DCH applicable I-Fach sta	and Cell- for Cell- te intra-
Consequences if not approved:	ж	Defini where with T Isolate remove	tion of it is r S25.21 <u>d Impact</u> es a requi	accuracy ot applic 5. <u>Analysis:</u> rement fro	requirem able will This CR ha n a state wh	ents fo exist. U s no imp ere it is p	or UTRAN c Jnnecessary pact on current not applicable.	arrier requii implen	RSSI for rement n	a state ot inline because it
Clauses affected:	ж	9.1.3								
Other specs affected:	ж	Ot - Te - O	her core est speci &M Spec	specificat fications cifications	ions ¥	3				
Other comments: How to create CRs	¥ usin	Equiva to 25.1	alent CR 133 v5.2 form:	s in other .0	Releases:	CR361	cat. F to 25.13	33 v3.9	.0, CR363	r1 cat. A

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.3 UTRA Carrier RSSI

NOTE: This measurement is for Inter-frequency handover evaluation.

The measurement period is equal to the measurement period for UE CPICH measurements. For CELL_DCH state the measurement period can be found in sub clause 8.1.2.2 for intra frequency measurements and in sub clause 8.1.2.3 for inter frequency measurements. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2 for intra frequency measurements and in sub clause 8.4.2.3 for inter frequency measurements.

9.1.3.1 Absolute accuracy requirement

Table 9.10: UTRA Carrier RSSI Inter frequency absolute accuracy

		Accur	Conditions	
Parameter	Unit	Normal condition	Extreme condition	lo [dBm/3.84 MHz]
LITDA Corrier DCCI	dBm	± 4	± 7	-9470
UTRA Camer RSSI	dBm	± 6	± 9	-7050

9.1.3.2 Relative accuracy requirement

The relative accuracy requirement is defined as the UTRA Carrier RSSI measured from one frequency compared to the UTRA Carrier RSSI measured from another frequency.

The accuracy requirements in table 9.11 are valid under the following condition:

 $| Channel 1_Io|_{dBm/3.84 MHz} - Channel 2_Io|_{dBm/3.84 MHz} | < 20 \ dB.$

Table 9.11: UTRA Carrier RSSI Inter frequency relative accuracy

		Accur	Conditions	
Parameter	Unit	Normal condition	Extreme condition	lo [dBm/3.84 MHz]
UTRA Carrier RSSI	dBm	± 7	± 11	-9450

9.1.3.3 UTRA Carrier RSSI measurement report mapping

The reporting range for UTRA carrier RSSI is from -100 ...-25 dBm.

In table 9.12 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Reported value	Measured quantity value	Unit
UTRA_carrier_RSSI_LEV _00	UTRA carrier RSSI < -100	dBm
UTRA_carrier_RSSI_LEV _01	$-100 \le \text{UTRA carrier RSSI} < -99$	dBm
UTRA_carrier_RSSI_LEV _02	-99 ≤ UTRA carrier RSSI < -98	dBm
UTRA_carrier_RSSI_LEV _74	$-27 \le \text{UTRA carrier RSSI} < -26$	dBm
UTRA_carrier_RSSI_LEV _75	$-26 \le \text{UTRA carrier RSSI} < -25$	dBm
UTRA_carrier_RSSI_LEV _76	$-25 \le \text{UTRA carrier RSSI}$	dBm

Table 9.12

3GPP TSG RAN WG4 Meeting #22

R4-020624

Sophia Antipolis, France 3rd - 5th April 2002

			С	HANG	E REC	UES	т		CR-Form-v5
ж	25	<mark>.133</mark>	CR	363	ж rev	1 [#]	Current vers	ion: 5.2.0	ж
For <u>HELP</u> on	using	this for	m, see l	bottom of	this page o	r look at	the pop-up text	over the X syr	mbols.
Proposed change	e affec	ts: #	(U)SI	M	ME/UE X	Radio	Access Network	Core Ne	etwork
Title:	<mark>⊯ Co</mark>	rrectior	ns to UT	RAN carri	er RSSI m	asurem	ent accuracy re	quirement	
Source:	⊯ <mark>RA</mark>	<mark>N WG</mark> 4	1						
Work item code:	₩ TE						Date: ೫	5/4/2002	
Category:	₩ <mark>A</mark> Use Deta be fo	one of t F (corr A (corr B (add C (fund D (edit iled exp ound in 3	the follow ection) responds lition of fo ctional mo orial mo olanation 3GPP TF	ving catego to a correc eature), odification dification) s of the abo <u>21.900</u> .	ries: ction in an ea of feature) ove categoria	arlier relea es can	Release: % Use <u>one</u> of 2 R96 R97 R98 R99 REL-4 REL-5	Rel-5 the following rele (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	eases:
Reason for chang Summary of char	ye: Ж nge:Ж	The U FACH FACH Remo freque	TRAN of state. A state. val of th ncy and	e reference inter-frec	SI accurac Ts25.215 t ces for the quency in se	require his meas neasure ection 9.	ment is defined prement itself_is ment periods fo 1.3.	for Cell-DCH s not applicable r Cell-Fach sta	and Cell- e for Cell- te intra-
Consequences if not approved:	ж	Defini where with T	tion of ti is r S25.2 ⁻ d Impact	accurac not applie 15. t Analysis:	y requirer cable will _This CR ha	nents fo exist. U is no imp	or UTRAN car Innecessary re pact on current in	rier RSSI for equirement n	a state ot inline because it
		remove	es a requ	irement fro	om a state wi	ere it is r	ot applicable.		
Clauses affected:	r H	9.1.3							
Other specs affected:	X	Ot - Te - O8	her core st spec &M Spe	e specifica ifications cifications	itions 8	ß			
Other comments:	* ¥	Equiva	alent CF 133 v4.4	s in other I.0	Releases:	CR361 (cat. F to 25.133	v3.9.0, CR362	cat. A

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.3 UTRA Carrier RSSI

NOTE: This measurement is for Inter-frequency handover evaluation.

The measurement period is equal to the measurement period for UE CPICH measurements, For CELL_DCH state the measurement period can be found in sub clause 8.1.2.2 for intra frequency measurements and in sub clause 8.1.2.3 for inter frequency measurements. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2 for intra frequency measurements and in sub clause 8.4.2.3 for inter frequency measurements.

9.1.3.1 Absolute accuracy requirement

Table 9.10: UTRA Carrier RSSI Inter frequency absolute accuracy

	Unit	Accura	acy [dB]	Conditions			
Parameter				Band I	Band II	Band III	
		Normal condition	Extreme condition	lo [dBm/3.84 MHz]	lo [dBm/3.84 MHz]	lo [dBm/3.84 MHz]	
UTRA Carrier	dBm	± 4	± 7	-9470	-9270	-9170	
RSSI	dBm	± 6	± 9	-7050	-7050	-7050	

9.1.3.2 Relative accuracy requirement

The relative accuracy requirement is defined as the UTRA carrier RSSI measured from one frequency compared to the UTRA carrier RSSI measured from another frequency.

The accuracy requirements in table 9.11 are valid under the following condition:

| Channel 1_Io $|_{dBm}$ -Channel 2_Io $|_{dBm}$ | < 20 dB.

Table 9.11: UTRA Carrier RSSI Inter frequency relative accuracy

	Unit	Accura	acy [dB]	Conditions			
				Band I	Band II	Band III	
Parameter		Normal condition	Extreme condition	lo [dBm/3.84 MHz]	lo [dBm/3.84 MHz]	lo [dBm/3.84 MHz]	
UTRA Carrier RSSI	dBm	± 7	± 11	-9470	-9270	-9170	

9.1.3.3 UTRA Carrier RSSI measurement report mapping

The reporting range for UTRA carrier RSSI is from -100 ...-25 dBm.

In table 9.12 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9	9.12
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Reported value	Measured quantity value	Unit
UTRA_carrier_RSSI_LEV _00	UTRA carrier RSSI < -100	dBm
UTRA_carrier_RSSI_LEV _01	$-100 \le \text{UTRA carrier RSSI} < -99$	dBm
UTRA_carrier_RSSI_LEV _02	-99 ≤ UTRA carrier RSSI < -98	dBm
UTRA_carrier_RSSI_LEV _74	$-27 \le \text{UTRA carrier RSSI} < -26$	dBm
UTRA_carrier_RSSI_LEV _75	-26 ≤ UTRA carrier RSSI < -25	dBm
UTRA_carrier_RSSI_LEV _76	-25 ≤ UTRA carrier RSSI	dBm

3GPP TSG RAN WG4 Meeting #22

R4-020632

Sophia Antipolis, France 3rd - 5th April 2002

CHANGE REQUEST								
ж	25.133 CR 364 # rev 1 ^{# Current version: 3.9.0 [#]}							
For <u>HELP</u> on L	using this form, see bottom of this page or look at the pop-up text over the X symbols.							
Proposed change	Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network							
Title: #	Corrections to cell re-selection test cases							
Source: #	RAN WG4							
Work item code: भ	TEI Date: 第 5/4/2002							
Category: % F Release: % R99 Use one of the following categories: Use one of the following releases: 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) 896 (Release 1996) B (addition of feature), R97 (Release 1997) C (functional modification of feature) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can be found in 3GPP TR 21.900. REL-5 (Release 5)								
Reason for change Summary of change	 # The current re-selection test cases do not specify weather HCS is used or not. The measurements that needs to be performed by the UE depend on this selection. Parameters in side conditions are not inline with TS25.331. ge: # Indicate that HCS is not used in the general re-selection parameter tables. Deletion of Penalty_Time and Temporary_Offset from the RF parameter tables. 							
Consequences if not approved:	 Side conditions in test cases remain unclear, possible source of misinterpretation. <u>Isolated Impact Analysis:</u> This CR has no impact on current implementations because it only corrects side conditions in test cases. 							
Clauses affected:	ж А.4; А.5							
Other specs affected:	#Other core specifications#XTest specifications34.121-O&M Specifications							
Other comments:	# Equivalent CRs in other Releases: CR365 cat. A to 25.133 v4.4.0, CR366 cat. A to 25.133 v5.2.0							
How to create CRs using this form: Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u> . 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.4.2 Cell Re-Selection

Two scenarios are considered:

- Scenario 1: Single carrier case
- Scenario 2: Multi carrier case

For each of them a test is proposed.

NOTE: Existing scenarios cover only requirements in section 4.2.2.2. More scenarios, covering requirements in section 4.2.2.1, will be added later.

A.4.2.1 Scenario 1: Single carrier case

A.4.2.1.1 Test Purpose and Environment

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

This scenario implies the presence of 1 carrier and 6 cells as given in tables A.4.1 and A.4.2. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs 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.

Parameter		Unit	Value	Comment
Initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell1	
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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re-selection reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection reaction time is taken into account.

Table A.4.1: General test parameters for Cell Re-selection single carrier multi-cell case

Table A.4.2: Cell re-selection single carrier multi-cell case

Parameter	Unit	Ce	ll 1	Ce	12	Cell 3		Ce	Cell 4 Cell 5		ell 5	Ce	II 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2		
UTRA RF Channel		Channe	<u>ə</u> l 1	Channe	<u>ə</u> l 1	Channel 1		Channel 1		Channel 1		Channe	Channel 1		
Number		onani		onann			01 1					onann			
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10			
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12			
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12			
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15			
OCNS_Ec/lor	dB	-0.941	1	-0.941		-0.941		-0.941		-0.941		-0.941			
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.27		0.27	.27 0.27			0.27			
I _{oc}	dBm / 3.84 MHz	-70	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23			
Propagation Condition							AV	VGN							
Cell_selection_and_ reselection_quality_m easure		CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH	I E _c /N ₀	CPICH	E _c /N ₀		
Qqualmin	dB	-2	<u>20</u>	-20		-20		-2	20	-2	20	-;	20	-2	20
Qrxlevmin	dBm	-1	15	-11	15	-1	15	-1	15	-1	15	-1	15		
UE_TXPWR_MAX_ RACH	dB	2	1	2	1	2	21	2	1	2	21	2	.1		
		C1, 0	C2: 0	C2, C	21:0	C3,	C1: 0	C4, 0	C1: 0	C5,	C1: 0	C6, 0	C1: 0		
		C1, 0	C3: 0	C2, C	03: 0	C3,	C2: 0	C4, 0	C2: 0	C5,	C2: 0	C6, 0	C2: 0		
Qoffset2 _{s, n}	dB	C1, 0	C4: 0	C2, C	C4: 0	C3,	C4: 0	C4, 0	C3: 0	C5,	C3: 0	C6, 0	C3: 0		
		C1, 0	C5: 0	C2, C	25: 0	C3,	C5: 0	C4, 0	C5: 0	C5,	C4: 0	C6, 0	C4: 0		
		C1, 0	C6: 0	C2, C	C6: 0	C3,	C6: 0	C4, 0	C6: 0	C5,	C6: 0	C6, 0	25: 0		
Qhyst2	dB	(0	C)	1	0	()		0	()		
PENALTY_TIME	5	(9	e			0	()		0	(•		
TEMPORARY_OFFS ET2	d₿	4	Ð	ę	L.	1	0	¢)		0	ę	÷		
Treselection	S	(0	0)		0	()		0	()		
Sintrasearch	dB	not	sent	not s	sent	not	sent	not	sent	not	sent	not	sent		

A.4.2.1.2 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 1, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 1.

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} T_{SI} See Table 4.1 in section 4.2.2. Maximum repetition period 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 Scenario 2: 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.

This scenario implies the presence of 2 carriers and 6 cells as given in tables A.4.3 and A.4.4. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info

blocks that needs 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.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell1	
Access Service Class (ASC#0)				Selected so that no additional delay is caused by
- Persistence value		-	1	the random access procedure. The value shall be used for all cells in the test.
HCS				Not used
DRX cycle	RX cycle length s		1.28	The value shall be used for all cells in the test.
T1		S	30	T1 need to be defined so that cell re-selection
				reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection
				reaction time is taken into account.

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

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

Parameter	Unit	Ce	ll 1	C	ell 2	Cell 3		Cell 4		Cell 5		Cell 6	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel		Chan	nol 1	Cha	nnol 2	Char	nel 1	Channel 1		Channel 2		Channel 2	
Number		Chan		Cila		erz Chainlei I		Channel I		Channel 2		Ghai	
CPICH_Ec/lor	dB	-1	10		-10	-*	10	-*	10	-	10	-	10
PCCPCH_Ec/lor	dB	-1	12		-12	- '	12	- '	12	-	12	-	12
SCH_Ec/lor	dB	-1	12		-12	- '	12	- '	12	-	12	-12	
PICH_Ec/lor	dB	-1	15		-15	-*	15	- ^	15	-15		-	15
OCNS_Ec/lor	dB	-0.9	941	-0	.941	-0.9	941	-0.9	941	-0.	941	-0.	941
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4
I _{oc}	dBm / 3.84 MHz							70					
CPICH_Ec/lo	dB	-16	-13	-13	-16	-2	20	-2	20	-20		-	20
Propagation Condition							AW	/GN					
Cell_selection_and_ reselection_quality_m easure		CPICH	I E₀/N₀	CPICH E _c /N ₀		CPICH	IE₀/N₀	CPICH E _c /N ₀		CPICH E _c /N ₀		CPICI	Η E₀/N₀
Qqualmin	dB	-2	20	-	·20	-2	20	-20		-20		-:	20
Qrxlevmin	dBm	-1	15	- '	115	-1	15	-115		-115		-1	15
UE_TXPWR_MAX_ RACH	dB	2	1	:	21	2	1	21		2	21	2	21
Qoffset2 _{s, n}	dB	C1, 0 C1, 0 C1, 0 C1, 0 C1, 0 C1, 0	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2, C6: 0		C3, 0 C3, 0 C3, 0 C3, 0 C3, 0 C3, 0	C1: 0 C2: 0 C4: 0 C5: 0 C6: 0	C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4, C5: 0 C4, C6: 0		C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0		C6, C6, C6, C6, C6,	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0
Qhyst2	dB	()	0		()	()		0		0
PENALTY_TIME	\$	()	0 0		•	()	4	0		0	
TEMPORARY_OFFS	d₿	Ģ	•	θ		θ		θ		0			θ
Treselection	S	()		0	()	()	0			0
Sintrasearch	dB	not	sent	not	sent	not	sent	not	sent	t not sent		not	sent
Sintersearch	dB	not	sent	not	sent	not	sent	not	sent	not	sent	not	sent

A.4.2.2.2 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 1, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 1. 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.
Tsi	Maximum repetition period 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.4.3 UTRAN to GSM Cell Re-Selection

A.4.3.1 Scenario 1

A.4.3.1.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.5, A.4.6, A.4.7. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5: General test parameters for UTRAN to GSM Cell Re-selection

Parameter		Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final	Active cell		Cell2	
condition				
DRX cycle length		S	1.28	
HCS				Not used
T1		S		
T2		S		

Table A.4.6: Cell re-selection UTRAN to GSM cell case (cell 1)

Parameter	Unit	Cell 1 (l	JTRA)	
		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	0	-5	
I _{oc}	dBm/3.84 MHz	-70		
CPICH_Ec/lo	dB	-13	-16.2	
CPICH_RSCP	dBm	-80	-85	
Propagation Condition		AWGN		
Cell_selection_and_		CPICH E _c /N ₀		
reselection_quality_measure				
Qqualmin	dB	-20		
Qrxlevmin	dBm	-115		
UE_TXPWR_MAX_RACH	dBm	21		
Qoffset1 _{s, n}	dB	C1, C2: 0		
Qhyst1	dB	0		
PENALTY_TIME	S	C2: 0		
TEMPORARY_OFFSET1	dB	C2: 0		
Treselection	S	0		
Ssearch _{RAT}	dB	not sent		

Paramotor	Unit	Cell 2 (GSM)		
Farameter	Unit	T1	T2	
Absolute RF Channel Number		ARFCN 1	I	
RXLEV	dBm	-90	-75	
RXLEV_ACCESS_MIN	dBm	-1()4	
MS_TXPWR_MAX_CCH	dBm	33	3	

Table A.4.7: Cell re-selection UTRAN to GSM cell case (cell 2)

A.4.3.1.2 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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than $26 \text{ s} + T_{BCCH}$, where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].

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: $4*T_{measureGSM} + T_{BCCH}$, where:

$T_{\text{measureGSM}}$	See Table 4.1 in section 4.2.2.
T _{BCCH}	Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 25.6 s + $T_{BCCH},$ allow 26 s + T_{BCCH} in the test case.

A.4.3.2 Scenario 2

A.4.3.2.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.7A, A.4.7B, A.4.7C. Cell 1 and cell 2 shall belong to different Location Areas.

Pa	Parameter		Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX cycle	length	S	1.28	
HCS	HCS			Not used
T1		S	45	
T2		S	10	

Table A.4.7A: General test parameters for UTRAN to GSM Cell Re-selection

Parameter	Unit	Cell 1	(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	20	-9	
I _{oc}	dBm/3.84 MHz	-81		
CPICH_Ec/lo	dB	-10.0	-19.5	
CPICH_RSCP	dBm	-70	-100	
Propagation Condition		AWGN		
Cell_selection_and_ reselection_quality_measure		CPICH E _c /N ₀		
Qqualmin	dB	-20		
Qrxlevmin	dBm	-115		
UE_TXPWR_MAX_RACH	dBm	21		
Qoffset1 _{s, n}	dB	C1, C2: 0		
Qhyst1	dB	0		
PENALTY_TIME	\$	C2: 0		
TEMPORARY_OFFSET1	dB	C2: 0		
Treselection	S	0		
Ssearch _{RAT}	dB	not sent		

Table A.4.7B: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.4.7C: Cell re-selection UTRAN to GSM cell case (cell 2)

Parameter	Unit	Cell 2	(GSM)
		T1	T2
Absolute RF Channel Number		ARFCN 1	
RXLEV	dBm	-80	-80
RXLEV_ACCESS_MIN	dBm	-104	
MS_TXPWR_MAX_CCH	dBm	33	

A.4.3.2.2 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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than 6.5 s + T_{BCCH} , where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].

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: $Max(3*T_{measureFDD}, T_{measureGSM}) + T_{BCCH}$, where:

T _{measureFDD}	See Table 4.1 in section 4.2.2.
${\sf T}_{ m measureGSM}$ ${ m T}_{ m BCCH}$	See Table 4.1 in section 4.2.2. Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 6.4 s + T_{BCCH} , allow 6.5 s + T_{BCCH} in the test case.

A.4.4 FDD/TDD cell re-selection

A.4.4.1 Test Purpose and Environment

This test is to verify the requirement for the FDD/TDD cell re-selection delay reported in section 4.2.2. This scenario implies the presence of 1 FDD and 1 TDD cell as given in Table A.4.8 and A.4.9.

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.

	Parameter		Value	Comment
Initial	Active cell		Cell1	FDD cell
condition	Neighbour cells		Cell2	TDD cell
Final condition	Active cell		Cell2	
UE_	TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Access	Service Class (ASC#0) Persistence value		1	Selected so that no additional delay is caused by the random access procedure.
				The value shall be used for all cells in the test.
	HCS			Not used
	T _{SI}		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	15	
	T2	S	15	

Table A.4.8: General test parameters for the FDD/TDD cell re-selection

Table A.4.9: FDD/TDD cell re-selection

Parameter	Unit	Cel	1		Ce	ll 2	
Timeslot Number		n.a	n.a.	()	8	
		T 1	T 2	T1	T2	T 1	T 2
UTRA RF Channel Number		Chanr	nel 1		Char	inel 2	
CPICH_Ec/lor	dB	-10	-10	n.	a.	n.	a.
PCCPCH_Ec/lor	dB	-12	-12	-3	-3		
SCH_Ec/lor	dB	-12	-12	-9	-9	-9	-9
SCH_t _{offset}		n.a.	n.a.	0	0	0	0
PICH_Ec/lor		-15	-15			-3	-3
OCNS	dB	-0,941	-0,941	-4,28	-4,28	-4,28	-4,28
\hat{I}_{or}/I_{oc}	dB	3	-5	-2	6	-2	6
I _{oc}	dBm/3. 84 MHz		-70				
CPICH_RSCP	dBm	-77	-85	n.	a.	n.	a.
PCCPCH_RSCP	dBm	n.a.	n.a.	-75	-67		
Qrxlevmin	dBm	-11	5		-1	03	
Qoffset 1 _{s,n}	dB	C1,C2		C2,C	1:-12		
Qhyst 1 _s	dB	0		()		
Treselection	S	0		()		
Sintersearch	dB	0		()		
Propagation Condition		AWO	GN		AW	GN	

NOTE: The purpose of this test case is to evaluate the delay of the FDD/TDD re-selection process, it is not intended to give reasonable values for a FDD/TDD cell re-selection.

A.4.4.2 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 $T_{evaluateTDD}$ of 6.4s according to Table 4.1 in section 4.2.2.7.

 T_{SE} 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.

NEXT CHANGED SECTION

A.5.5 Cell Re-selection in CELL_FACH

A.5.5.1 One frequency present in neighbour list

A.5.5.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in the single carrier case reported in section 5.5.2.1.1.

The test parameters are given in Table A.5.1 and A.5.2. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms

Table A.5.1 General test	parameters for	Cell Re-selection in	CELL FACH
			• = = _ · / · • • · ·

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Sei – Persisten	rvice Class (ASC#0) ace 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.
HCS				Not used
T1		S	15	
T2		S	15	

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.1A and Table A.5.1B.

Table A.5.1A: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot	dB	0
fields relative to data field		

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Table A.5.1B: Transport channel parameters for S-CCPCH

Table A.5.2 Cell specific test parameters for Cell Re-selection in CELL_FACH

Parameter	Unit	Ce	ell 1	Ce	12	Cell 3		Cell 3 Cell 4		C	ell 5	Ce	ll 6
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel				01		0				01		01-01-01	
Number		Chai	nner	Chan	nel 1	Chan	ner 1	Channel I		Cna	Channel I		inel 1
CPICH_Ec/lor	dB	-	10	-1	0	-1	0	-10			-10	-'	10
PCCPCH_Ec/lor	dB	-	12	-1	2	-1	2		-12		-12	-'	12
SCH_Ec/lor	dB	-	12	-1	2	-1	2		-12		-12	-'	12
PICH_Ec/lor	dB	-	15	-1	5	-1	5		-15		-15	-'	15
S-CCPCH_Ec/lor	dB	-	12	-1	2	-1	2		-12	-	-12	-1	2
OCNS_Ec/lor	dB	-1.	295	-1.2	295	-1.2	95	-1	.295	-1	.295	-1.2	295
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.2	27	0).27	0).27	0.	27
I _{oc}	dBm/3.84 MHz			·			-7	0					
CPICH_Ec/lo	dB	-16	-13	-13	-16	-2	3		-23		-23	-2	23
Propagation Condition							AW	GN					
Cell_selection_and_ reselection_quality_ measure		CPICI	H E₀/N₀	CPICH	I E _c /N ₀	CPI E₀/I	CH N₀	CPIC	H E₀/N₀	CPIC	H Ec/N₀	CP E₀	ICH /N₀
Qqualmin	dB	-	20	-2	0	-2	0		-20	-	-20	-2	20
Qrxlevmin	dBm	-1	15	-1 ⁻	15	-11	5	-	115	-'	115	-1	15
UE_TXPWR_ MAX_RACH	dBm	2	21	2	1	2'	1		21		21	2	:1
Qoffset 2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, 0 C2, 0 C2, 0 C2, 0 C2, 0 C2, 0	C1: 0 C3: 0 C4: 0 C5: 0 C6: 0	C3, C C3, C C3, C C3, C C3, C	1: 0 2: 0 4: 0 5: 0 6: 0	C4, C4, C4, C4, C4, C4,	C1: 0 C2: 0 C3: 0 C5: 0 C6: 0	C5, C5, C5, C5, C5,	C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, 0 C6, 0 C6, 0 C6, 0 C6, 0	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0
Qhyst	dB		0	0)	0			0		0	(2
PENALTY_TIME	\$		0	Ę)	Ð			θ		θ	4	Ĵ
TEMPORARY_OFF	dB		0	e)	θ			θ		θ	(÷
Treselection	S		0	0		0			0		0	(5
Sintrasearch	dB	not	sent	not s	sent	not s	ent	no	t sent	not	t sent	not	sent
IE "FACH Measurement occasion info"		not	sent	not	sent	not s	ent	no	t sent	not	tsent	not	sent

A.5.5.1.2 **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 1, and starts to send preambles on the PRACH for sending the the CELL UPDATE message with cause value "cell reselection" in Cell 1.

The cell re-selection delay shall be less than 1.6 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%. NOTE: The cell re-selection delay in this case is expressed as:

 $T_{\text{reselection, intra}} = T_{\text{Measurement}_\text{Period Intra}} + T_{\text{IU}} + 20 + T_{\text{SI}} + T_{\text{RA}} \text{ ms,}$

 T_{Measurement_Period Intra}
 is specified in 8.4.2.2.2 as 200 ms in this case.

 T_{SI}:
 The 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.1280 ms is assumed in this test case.

 T_{RA}:
 T_{RA} is a delay is caused by the physical random access procedure described in TS 25.214 section 6.1. A persistence value is assumed to be 1 in this test case and therefore T_{RA} in this test case is 40 ms.

NOTE: Since 1280 ms is one of the typical values for repeating system information blocks, T_{SI} of 1280 ms could be increased by the RRC procedure delay in order to allow the SIB repetition period of 1280 ms.

This gives a total of 1.55 s, allow 1.6 s in the test case.

A.5.5.2 Two frequencies present in the neighbour list

A.5.5.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in section 5.5.2.1.2.

The test parameters are given in tables A5.3 and A5.4. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Parameter		Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Ser – Persisten	rvice Class (ASC#0) ce 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.
<u>HCS</u>				Not used
T1		S	15	
T2		S	15	

Table A.5.3: General test parameters for Cell Re-selection in CELL_FACH

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.3A and Table A.5.3B.

 Table A.5.3A: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot fields relative to data field	dB	0

where:

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Table A.5.3B: Transport channel parameters for S-CCPCH

Table A.5.4: Cell specific test parameters for Cell re-selection in CELL_FACH state

Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
		T1 T2	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2
UTRA RF Channel		Channel 1 Channel 2		Channel 1	Channel 1	Channel 2	Channel 2
Number		Channel 1 Channel 2		Onanner i	Onamici i		
CPICH_Ec/lor	dB	-10	-10	-10	-10	-10	-10
PCCPCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
SCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
PICH_EC/IOr	dB	-15	-15	-15	-15	-15	-15
S-CCPCH_EC/IOr	dB 0B	-12	-12	-12	-12	-12	-12
	aв	-1.295	-1.295	-1.295	-1.295	-1.295	-1.295
I_{or}/I_{oc}	dB	-3.4 2.2	2.2 -3.4	-7.4 -4.8	-7.4 -4.8	-4.8 -7.4	-4.8 -7.4
I _{oc}	dBm/3.8 4 MHz	-70			· · · · · · · ·		
CPICH_Ec/lo	dB	-16 -13	-13 -16	-20	-20	-20	-20
Propagation Condition		AWGN					
Cell_selection_ and_reselection_ quality_measure		CPICH E _c /N ₀	CPICH E _c /N ₀	CPICH E _c /N ₀	CPICH E _c /N ₀	CPICH E _c /N ₀	CPICH E _c /N ₀
Qqualmin	dB	-20	-20	-20	-20	-20	-20
Qrxlevmin	dBm	-115	-115	-115	-115	-115	-115
UE_TXPWR_ MAX_RACH	dBm	21	21	21	21	21	21
Qoffset2 _{s, n}	dB	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0	C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2 C6: 0	C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0	C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4, C6: 0	C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0	C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0
Qhvst2	dB	0	0 0		0	0	0
PENALTY_TIME	s	θ	φ	0	θ	Ð	θ
TEMP_OFFSET	dB	0	θ	θ	0	0	0
Treselection	S	0	0	0	0	0	0
Sintrasearch	dB	not sent	not sent	not sent	not sent	not sent	not sent
Sintersearch	dB	not sent	not sent	not sent	not sent	not sent	not sent
IE "FACH Measurement occasion info"		sent	sent	sent	sent	sent	sent
FACH Measurement occasion cycle length coefficient		3	3	3	3	3	3
Inter-frequency FDD measurement indicator		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Inter-frequency TDD measurement indicator		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

A.5.5.2.2 Test Requirements

The cell re-reselection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 1, and starts to send preambles on the PRACH for sending the the CELL UPDATE message with cause value "cell reselection" in Cell 1.

The cell re-selection delay shall be less than 1.9 s.

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

NOTE: The cell re-selection delay in this case is expressed as:

$$T_{\text{reselection, inter}} = T_{\text{Measurement inter}} + T_{\text{IU}} + 20 + T_{\text{SI}} + T_{\text{RA}} \text{ ms},$$

where:

T_{measurement inter} is specified in 8.4.2.3.2 as 480 ms in this case.

- T_{SI} : The 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.1280 ms is assumed in this test case.
- T_{RA} : T_{RA} is a delay is caused by the physical random access procedure described in TS 25.214 section 6.1. A persistence value is assumed to be 1 in this test case and therefore T_{RA} in this test case is 40 ms.
- NOTE: Since 1280 ms is one of the typical values for repeating system information blocks, T_{SI} of 1280 ms could be increased by the RRC procedure delay in order to allow the SIB repetition period of 1280 ms.

This gives a total of 1.83 s, allow 1.9 s in the test case.

A.5.5.3 Cell Reselection to GSM

A.5.5.3.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in section 5.5.2.1.4.

This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 6 GSM cells. Test parameters are given in Table, A.5.4A, A.5.4B, A.5.4C, A.5.4D, A.5.4E.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final	Active cell		Cell2	
condition				
DRX cycle	length	S	1.28	
HCS				Not used
Neighbour	cell list size		24 FDD neighbours on Channel 1 6 GSM neighbours including ARFCN 1	
T1		S	5	
T2		S	10	

Table A.5.4A: General test parameters for UTRAN to GSM Cell Re-selection

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.3A and Table A.5.3B.

Table A.5.4B: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot fields relative to data field	dB	0

Table A.5.4C: Transport channel parameters for S-CCPCH

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Baramatar	l Imit	Cell 1 (UTRA)
Parameter	Unit	T1 T2	
UTRA RF Channel		Channel 1	
Number		Channel I	
CPICH_Ec/lor	dB	-1	0
PCCPCH_Ec/lor	dB	-1	2
SCH_Ec/lor	dB	-1	2
PICH_Ec/lor	dB	-1	5
S-CCPCH_Ec/lor	dB	-1	2
OCNS_Ec/lor	dB	-1.2	295
\hat{I}_{or}/I_{oc}	dB	0	-5
I_{oc}	dBm/3. 84 MHz	-7	0
CPICH_Ec/lo	dB	-13	-16.2
CPICH_RSCP	dBm	-80	-85
Propagation Condition		AW	GN
Cell selection and			
reselection quality m		CPICH	Ec/lo
easure			
Qqualmin	dB	-2	0
Qrxlevmin	dBm	-115	
UE TXPWR MAX			
RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	S	C2: 0	
TEMPORARY_OFFS ET1	dB	C2: 0	
Treselection	S	C)
Ssearch _{RAT}	dB	Not	sent
IE "FACH			
Measurement		Se	ent
occasion info"			
FACH Measurement			
occasion cycle length		3	3
coefficient			
Inter-frequency FDD			
measurement		FAL	SE
indicator			
Inter-frequency TDD			
measurement	FALSE		.SE
indicator			
Inter-RAT			
measurement		Included	
indicators			
>RAT type		GS	SM

Table A.5.4D: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.5.4E: Cell re-selection	UTRAN to GSM co	ell case (cell 2)
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Parameter	Unit	Cell 2	(GSM)
		T1	T2
Absolute RF Channel Number		ARFCN	11
RXLEV	dBm	-90	-75
RXLEV_ACCESS_ MIN	dBm	-104	
MS_TXPWR_MAX_ CCH	dBm	33	

A.5.5.3.2 Test Requirements

The cell re-reselection delay is defined as the time from the beginning of time period T2, to the moment when the UE starts to transmit the random access in Cell 2 (the GSM cell).

The cell re-selection delay shall be less than $5.5 + T_{RA}$ s.

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

NOTE: The cell re-selection delay can be expressed

$$T_{\text{reselection, GSM}} = T_{\text{identify, GSM}} + T_{\text{measurement, GSM}} + 40 + T_{\text{BCCH}} + T_{\text{RA}} \text{ ms}$$

where:

$T_{identify,GSM}$	Specified in 8.4.2.5.2.1, here it is 2880 ms
T _{measurement, GSM}	Specified in 5.5.2.1.4, here it is 640 ms
T _{BCCH}	According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.
T _{RA}	The additional delay caused by the random access procedure in the GSM cell. Shall be defined by $T1/RF$ when the test case is further detailed in TS 34.121.

This gives a total of $5.46 + T_{RA}$ s, allow $5.5 + T_{RA}$ s.

A.5.6 Cell Re-selection in CELL_PCH

A.5.6.1 One frequency present in the neighbour list

A.5.6.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_PCH state in section 5.6.2.

The test parameters are given in Table A5.5 and A5.6. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4,	
	-		Cell5, Cell6	
final	Active cell		Cell1	
condition				
Access Se	rvice Class (ASC#0)			Selected so that no additional delay is caused by the
- Persisten	ce value	-	1	random access procedure. The value shall be used for
				all cells in the test.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re-selection reaction
				time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection reaction
				time is taken into account.

Table A.5.5: General test p	parameters for Cell Re-selection in CELL_PC	Э													
-----------------------------	---------------------------------------------	---													
Deremeter	Unit	Ce	ell 1	Ce	ll 2	Cell	3	Ce	ell 4	C	ell 5	Ce	II 6		
--------------------------------------------------------	-----------------	----------------------------------------	---------------------------------------------------------------	--------	---------------------------------------------------------------	--------	---------------------------------------------------------------	----------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------	-------------------------------------------	-------------------------------------------	-------------------------------------------	--	--
Parameter	Unit	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2		
UTRA RF Channel Number		Chann	el 1	Channe	el 1	Channe	el 1	Chanr	nel 1	Chanr	nel 1	Chanr	nel 1		
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10			
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12			
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12			
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15	-15		
OCNS_Ec/lor	dB	-0.941		-0.941	-0.941			-0.941		-0.941		-0.941	l .		
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	10.27 7.3			0.27	0.27			0.27			
I _{oc}	dBm/ 3.84MHz	-70													
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23			
Propagation Condition							AW	GN							
Cell_selection_and_ reselection_quality_ measure		CPICH	CPICH E _c /N ₀		CPICH E _c /N ₀			CPIC	H E₀/N₀	CPICH E _c /N ₀		CPICH E _c /N ₀			
Qqualmin	dB	-:	20	-2	20	-20)	-20		-20		-20			
Qrxlevmin	dBm	-1	15	-115		-11	-115 -115		-115		-115				
UE_TXPWR_ MAX_RACH	dBm	2	21	2	1	21		21		21		21			
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0		C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2, C6: 0		C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0		C4, C1: 0 C5, C1: 0 C4, C2: 0 C5, C2: 0 C4, C3: 0 C5, C3: 0 C4, C5: 0 C5, C4: 0 C4, C5: 0 C5, C4: 0		C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, 0 C6, 0 C6, 0 C6, 0 C6, 0	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0		
Qhyst2	dB		0	()	0			0		0	()		
PENALTY_TIME	8		θ	(•	θ			0		Ð)		
TEMPORARY_OFF	dB		θ	ę)	0		θ		θ		θ			
Treselection	S		0	()	0			0		0	0			
Sintrasearch	dB	not	sent	not	sent	not s	ent	not sent		not sent		not s	sent		

A.5.6.1.2 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 1, and starts to send preambles on the PRACH for sending the CELL UPDATE message with cause value "cell reselection" in Cell 1.

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 section 5.6.2.

 T_{SI} : Maximum repetition period 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.5.6.2 Two frequencies present in the neighbour list

A.5.6.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_PCH state in section 5.6.2. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms. The test parameters are given in Table A.5.7 and A.5.8

Table A.5.7: General test parameters for Cell Re-selection in CELL_PCH

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Se - Persisten	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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	30	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re- selection reaction time is taken into account.

Table A.5.8: Cell specific test parameters for Cell re-selection in CELL_PCH state

Parameter	Unit	Ce	ell 1	Ce	Cell 2		13	Cell 4		Cell 5		Cell 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Chan	nol 1	Chan	nol 2	Chapr		Chann		Channel	10	Chapr		
Number		Chan	neri	Chan	nei z	Chan		Chann		Channel	2	Chan		
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10	-10	
PCCPCH_Ec/lor	dB	-12		-12		-12		-12	-12		-12		-12	
SCH_Ec/lor	dB	-12		-12	-12			-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15	-15	
OCNS_Ec/lor	dB	-0.94	1	-0.94	1	-0.941	-	-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	2.2 -3.4 ·		-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm/3.8 4 MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-13 -16			-20		-20		-20		
Propagation														
Condition						-	,			1		-		
Cell_selection_		CPIC	срісн срісн с		CPICH	4								
and_reselection_				E _c /N ₀	••	E _c /N ₀		CPICH	Η E _c /N ₀	CPICH E	Ec∕N₀		Η E _c /N ₀	
quality_measure		_0.1.0		_0.10		_0.10		20			_			
Qqualmin	dB	-	20	-	20	-2	-20 -20		20	-20			20	
Qrxlevmin	dBm	-1	15	-1	-115		-115		-115		-115		-115	
UE_IXPWR_	dBm	2	21	2	21		21		21		21		21	
MAX_RACH		01	00.0	00	04.0	00.0	1.0							
			02:0	02,			21: U			C5, C	21:0	C6,		
Ooffoot2	aD			02,			2:0		02:0		2:0	C6,	02:0	
QUISELZ _{s, n}	uБ		C4. 0	C2,	C4. 0		24. U		CS. 0		2.0 2.0			
		C1	C6: 0	C2,	C6: 0		5.0 6.0		CG: 0			C0,	C5:0	
Obvet2	dB	01,	00.0	02,	00.0	00,0	0.0	04, 0	<u>00.0</u> 1	00,0	0.0	00,	00.0	
	4D		0 0		Δ			4	<u> </u>	0 0			<u>0</u>	
TEMPORARY_OF	dB		0	0		Ę	1	()	0		0		
Treselection	S		0		0	C		(0		0		0	
Sintrasearch	dB	not	sent	not	sent	not s	sent	not	sent	not sent		not sent		
Sintersearch	dB	not	sent	not	sent	not s	sent	not	sent	not sent		not	not sent	

A.5.6.2.2 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 1, and starts to send preambles on the PRACH for sending the CELL UPDATE message with cause value "cell reselection" in Cell 1.

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 section 5.6.2.

 T_{SI} : Maximum repetition period 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.5.7 Cell Re-selection in URA_PCH

A.5.7.1 One frequency present in the neighbour list

A.5.7.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in URA_PCH state in section 5.7.2.

The test parameters are given in Table A.5.9 and A.5.10. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Cells possible for re-selection shall belong to different UTRAN Registration Areas (URA).

Table A.5.9: General test parameters for Cell Re-selection in URA_PCH

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	condition Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final Active cell condition			Cell1	
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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re- selection reaction time is taken into account.

Table A.5.10: Cell specific test parameters for Cell re-selection in URA_PCH state

Parameter	Unit	Ce	ell 1	Ce	ll 2	Cell	3	C	ell 4	C	ell 5	Ce	II 6
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Chann	el 1	Channe	el 1	Channe	el 1	Chan	nel 1	Chanr	nel 1	Chan	nel 1
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10	
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12	
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12	
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15	
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.94	1	-0.941		-0.941	1
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27 7.3		0.27		0.27	0.27			0.27	
I _{oc}	dBm/3.84 MHz	-70	/0										
CPICH_Ec/lo	dB	-16	-13	-13	-13 -16			-23		-23		-23	
Propagation Condition							AW	GN					
Cell_selection_and_ reselection_quality_ measure		CPICH	CPICH E _c /N ₀		CPICH E _c /N ₀			CPIC	H E₀/N₀	CPICH E _c /N ₀		CPICH E _c /N ₀	
Qqualmin	dB	-	20	-2	20	-20		-20		-20		-20	
Qrxlevmin	dBm	-1	15	-1	15	-115	-115 -115		115	-115		-115	
UE_TXPWR_ MAX_RACH	dBm		21	2	1	21			21	:	21	21	
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, 0 C2, 0 C2, 0 C2, 0 C2, 0 C2, 0	C1: 0 C3: 0 C4: 0 C5: 0 C6: 0	C3, C1 C3, C2 C3, C4 C3, C5 C3, C5	1: 0 2: 0 4: 0 5: 0 5: 0	C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0		C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0		:1:0 C6, C :2:0 C6, C :3:0 C6, C :4:0 C6, C :6:0 C6, C	
Qhyst2	dB		0	()	0			0		0	()
PENALTY_TIME	S		θ	Ģ	•	θ			9		θ	()
TEMPORARY_OFF	dB		θ	e)	θ		θ		θ		θ	
Treselection	S		0	()	0			0	0		0	
Sintrasearch	dB	not	sent	not	sent	not se	ent	not	sent	not sent		not	sent

A.5.7.1.2 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 1, and starts to send preambles on the PRACH for sending the URA UPDATE message with cause value "URA reselection" in Cell 1.

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 section 5.7.2.

 T_{SI} : Maximum repetition period 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.5.7.2 Two frequencies present in the neighbour list

A.5.7.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in URA_PCH state in section 5.7.2.

The test parameters are given in Table A5.11 and A5.12. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Cells possible for re-selection shall belong to different UTRAN Registration Areas (URA).

Table A.5.11: General test parameters for Cell Re-selection in URA_PCH

	Parameter	Unit	Value	Comment		
initial	Active cell		Cell2			
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6			
final condition	Active cell		Cell1			
Access Se - Persisten	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.		
HCS				Not used		
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.		
T1	T1				30	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re- selection reaction time is taken into account.		

Table A.5.12: Cell specific test parameters for Cell re-selection in URA_PCH state

Parameter	Unit	Ce	ell 1	Ce	ell 2	Cel	13	Ce	II 4	Cell 5		Cell 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Chan	nol 1	Chan	nol 2	Chapr	ol 1	Chann	ol 1	Channel 2		Chapr	2 100	
Number		Chan		Chan			onumeri		Channel 1		Onanner 2			
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10		
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.94	1	-0.94	1	-0.941		-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	2.2 -3.4		-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm/3.8 4 MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-20		-20		-20		-20		
Propagation Condition							1	AWGN						
Cell_selection_ and_reselection_ quality measure		CPIC E _c /N ₀	PICH CPICH N ₀ E _c /N ₀		Н		ł	CPICH	I E _c /N ₀	CPICH E ₂ /N ₀		CPICH E _c /N ₀		
Qqualmin	dB	-:	20	-:	20	-2	0	-20		-20		-:	20	
Qrxlevmin	dBm	-1	15	-1	15	-11	15 -115		-115		-115			
UE_TXPWR_ MAX_RACH	dBm	2	21	2	21	2	1	21		21		21		
		C1,	C2: 0	C2,	C1: 0	C3, C	21:0	C4, 0	C1: 0	C5, C1: 0		C6, C1: 0		
		C1,	C3: 0	C2,	C3: 0	C3, C	2: 0	C4, 0	C2: 0	C5, C	2:0	C6,	C2: 0	
Qoffset2 _{s, n}	dB	C1,	C4: 0	C2,	C4: 0	C3, C	24: 0	C4, 0	C3: 0	C5, C	3: 0	C6,	C3: 0	
		C1,	C5: 0	C2,	C5: 0	C3, C	25: 0	C4, 0	C5: 0	C5, C	24: 0	C6,	C4: 0	
		C1,	C6: 0	C2,	C6: 0	C3, C	6: 0	C4, 0	C6: 0	C5, C	6: 0	C6,	C5: 0	
Qhyst2	dB		0		0	0		()	0			0	
PENALTY_TIME	S		0		0	e	•	(•	θ			0	
TEMPORARY_OF FSET	dB		0		0	Ģ	L	4	Ð	θ			θ	
Treselection	S		0		0	0		()	0			0	
Sintrasearch	dB	not	sent	not	sent	not s	sent	not	sent	not sent		not sent		
Sintersearch	dB	not	sent	not	sent	not s	sent	not	sent	not s	not sent		sent	

A.5.7.2.2 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 1, and starts to send preambles on the PRACH for sending URA UPDATE message with cause value "URA reselection" in Cell 1.

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 section 5.7.2.

 T_{SI} : Maximum repetition period 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.

3GPP TSG RAN WG4 Meeting #22

R4-020585

Sophia Antipolis, France 3rd - 5th April 2002

	CHANGE REQUEST											
ж	25.133 CR 365 # rev - # Current version: 4.4.0 #											
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.												
Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network												
Title: ೫	Corrections to cell re-selection test cases											
Source: ೫	RAN WG4											
Work item code: \$	B TEI Date: # 5/4/2002											
Category: ३	Release: % Rel-4 Use one of the following categories: Use one of the following releases: F (correction) 2 A (corresponds to a correction in an earlier release) R96 B (addition of feature), R97 C (functional modification of feature) R98 D (editorial modification) R99 D tetailed explanations of the above categories can REL-4 be found in 3GPP TR 21.900. REL-5											
Reason for chang Summary of chan	 e: # The current re-selection test cases do not specify weather HCS is used or not. The measurements that needs to be performed by the UE depend on this selection. Parameters in side conditions are not inline with TS25.331. ge: # Indicate that HCS is not used in the general re-selection parameter tables. Deletion of Penalty_Time and Temporary_Offset from the RF parameter tables. 											
Consequences if not approved:	 Side conditions in test cases remain unclear, possible source of misinterpretation. <u>Isolated Impact Analysis:</u> This CR has no impact on current implementations because it only corrects side conditions in test cases. 											
Clauses affected:	ж А.4; А.5											
Other specs affected:	 % Other core specifications % Test specifications O&M Specifications 											
Other comments:	# Equivalent CRs in other Releases: CR364r1 cat. F to 25.133 v3.9.0, CR366 cat. A to 25.133 v5.2.0											
How to create CRs Comprehensive inform Below is a brief summ	using this form: nation and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u> . ary:											

- 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.4.2 Cell Re-Selection

Two scenarios are considered:

- Scenario 1: Single carrier case
- Scenario 2: Multi carrier case

For each of them a test is proposed.

NOTE: Existing scenarios cover only requirements in section 4.2.2.2. More scenarios, covering requirements in section 4.2.2.1, will be added later.

A.4.2.1 Scenario 1: Single carrier case

A.4.2.1.1 Test Purpose and Environment

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

This scenario implies the presence of 1 carrier and 6 cells as given in tables A.4.1 and A.4.2. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs 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.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell2	
condition	condition Neighbour cells Cell1, Cell3, Cell4 Cell5, Cell6		Cell1, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell1	
Access Se - Persister	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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re-selection reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection reaction time is taken into account.

Table A.4.1: General test parameters for Cell Re-selection single carrier multi-cell case

Table A.4.2: Cell re-selection single carrier multi-cell case

Parameter	Unit	Ce	II 1	Ce	12	Ce	II 3	Ce	4	Ce	ell 5	Ce	II 6	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number		Channe	el 1	Channe	el 1	Chann	el 1	Channe	el 1	Chann	el 1	Channe	el 1	
CPICH_Ec/lor	dB	-10		-10	-10		-10		-10		-10			
PCCPCH_Ec/lor	dB	-12	-12			-12	-12		-12		-12		-12	
SCH_Ec/lor	dB	-12		-12		-12	-12			-12	-12			
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	10.27 7.3			0.27		0.27		0.27		
I _{oc}	dBm / 3.84 MHz	-70	0											
CPICH_Ec/lo	dB	-16	-13	-13	-13 -16			-23		-23		-23		
Propagation Condition							AV	/GN						
Cell_selection_and_ reselection_quality_m easure		CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH E _c /N ₀		CPICH	CPICH E _c /N ₀		CPICH E _c /N ₀		E _c /N ₀	
Qqualmin	dB	-2	<u>20</u>	-2	0	-2	<u>20</u>	-2	20	-:	20	-2	20	
Qrxlevmin	dBm	-1	15	-1	15	-1	15	-1	15	-1	15	-115		
UE_TXPWR_MAX_ RACH	dB	2	1	2	1	2	1	2	21		21	21		
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0		C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2, C6: 0		C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0		C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4, C5: 0		C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0		
Qhyst2	dB	(C	0)	(C	0)		0	()	
PENALTY_TIME	S	4	Ð	e)	4	Ð	e)		0	(•	
TEMPORARY_OFFS ET2	dB	4	Ð	ę)	4	Ð	ę	θ		θ		÷	
Treselection	S		0	()		0	()	0		0		
Sintrasearch	dB	not	sent	not	sent	not	sent	not	sent	not sent		not	sent	

A.4.2.1.2 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 1, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 1.

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} T_{SI} See Table 4.1 in section 4.2.2. Maximum repetition period 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 Scenario 2: 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.

This scenario implies the presence of 2 carriers and 6 cells as given in tables A.4.3 and A.4.4. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info

blocks that needs 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.

Parameter		Unit	Value	Comment	
Initial	Active cell		Cell2		
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6		
Final condition	Active cell		Cell1		
Access Service Class (ASC#0)				Selected so that no additional delay is caused by	
- Persisten	ce value	-	1	the random access procedure. The value shall be used for all cells in the test.	
HCS				Not used	
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.	
T1		S	30	T1 need to be defined so that cell re-selection	
				reaction time is taken into account.	
	T2	S	15	T2 need to be defined so that cell re-selection	
				reaction time is taken into account.	

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

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

Parameter	Unit	Ce	ll 1	Cell 2		Ce	Cell 3		Cell 4		Cell 5		Cell 6	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Channel 1 Channel 2		Char	nel 1	Channel 1		Channel 2		Chai	nnel 2			
Number		Chan		Cila		Char		Channel I		Channel 2		Ghai		
CPICH_Ec/lor	dB	-1	10		-10	-*	10	-*	10	-	10	-	10	
PCCPCH_Ec/lor	dB	-1	12		-12	- '	12	- '	12	-	12	-	12	
SCH_Ec/lor	dB	-1	12		-12	- '	12	- '	12	-	12	-	12	
PICH_Ec/lor	dB	-1	15		-15	-*	15	- ^	15	-	15	-	15	
OCNS_Ec/lor	dB	-0.9	941	-0	.941	-0.9	941	-0.9	941	-0.	941	-0.	941	
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm / 3.84 MHz					-70								
CPICH_Ec/lo	dB	-16	-13	-13	-16	-20 -20		20	-	20	-	20		
Propagation Condition			AWGN											
Cell_selection_and_ reselection_quality_m easure		CPICH			CPICH	IE₀/N₀	CPICH E _c /N ₀		CPICH	H E₀/N₀	CPICI	Η E₀/N₀		
Qqualmin	dB	-2	20	-	·20	-2	-20 -20		-2	20	-:	20		
Qrxlevmin	dBm	-1	15	- '	115	-1	15	-115		-1	15	-1	15	
UE_TXPWR_MAX_ RACH	dB	2	1	:	21	2	1	21		2	21	2	21	
Qoffset2 _{s, n}	dB	C1, 0 C1, 0 C1, 0 C1, 0 C1, 0 C1, 0	C1, C2: 0 C2, C1: 0 C1, C3: 0 C2, C3: 0 C1, C4: 0 C2, C4: 0 C1, C5: 0 C2, C5: 0 C1, C6: 0 C2, C6: 0		C3, 0 C3, 0 C3, 0 C3, 0 C3, 0 C3, 0	C1: 0 C2: 0 C4: 0 C5: 0 C6: 0	0 C4, C1: 0 0 C4, C2: 0 0 C4, C3: 0 0 C4, C5: 0 0 C4, C6: 0		C5, C5, C5, C5, C5,	C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, C6, C6, C6, C6,	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0		
Qhyst2	dB	(0 0		0 0			0		0				
PENALTY_TIME	\$	()	Q		(•	()	4	0		0	
TEMPORARY_OFFS	d₿	Ģ	•		θ	θ θ			θ		θ			
Treselection	S	()		0	()	()		0		0	
Sintrasearch	dB	not	sent	not	sent	not	sent	not	sent	not sent		not	sent	
Sintersearch	dB	not	sent	not	sent	not	sent	not	sent	not	sent	not	sent	

A.4.2.2.2 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 1, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 1. 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 period 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.4.3 UTRAN to GSM Cell Re-Selection

A.4.3.1 Scenario 1

A.4.3.1.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.5, A.4.6, A.4.7. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5: General test parameters for UTRAN to GSM Cell Re-selection

Parameter		Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final	Active cell		Cell2	
condition				
DRX cycle length		S	1.28	
HCS				Not used
T1		S		
T2		S		

Table A.4.6: Cell re-selection UTRAN to GSM cell case (cell 1)

Parameter	Unit	Cell 1 (l	JTRA)
		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	0	-5
I _{oc}	dBm/3.84 MHz	-70	
CPICH_Ec/lo	dB	-13	-16.2
CPICH_RSCP	dBm	-80	-85
Propagation Condition		AWGN	
Cell_selection_and_			
reselection_quality_measure		OF IOF LØI	NU
Qqualmin	dB	-20	
Qrxlevmin	dBm	-115	
UE_TXPWR_MAX_RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	S	C2: 0	
TEMPORARY_OFFSET1	dB	C2: 0	
Treselection	S	0	
Ssearch _{RAT}	dB	not sent	

Paramotor	Unit	Cell 2 (GSM)		
Farameter	Unit	T1	T2	
Absolute RF Channel Number		ARFCN 1	I	
RXLEV	dBm	-90	-75	
RXLEV_ACCESS_MIN	dBm	-1()4	
MS_TXPWR_MAX_CCH	dBm	33	3	

Table A.4.7: Cell re-selection UTRAN to GSM cell case (cell 2)

A.4.3.1.2 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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than $26 \text{ s} + T_{BCCH}$, where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].

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: $4*T_{measureGSM} + T_{BCCH}$, where:

$T_{\text{measureGSM}}$	See Table 4.1 in section 4.2.2.
T _{BCCH}	Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 25.6 s + T_{BCCH} , allow 26 s + T_{BCCH} in the test case.

A.4.3.2 Scenario 2

A.4.3.2.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.7A, A.4.7B, A.4.7C. Cell 1 and cell 2 shall belong to different Location Areas.

Pa	arameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX cycle	length	S	1.28	
HCS	HCS			Not used
T1		S	45	
T2		S	10	

Table A.4.7A: General test parameters for UTRAN to GSM Cell Re-selection

Parameter	Unit	Cell 1	(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	20	-9
I _{oc}	dBm/3.84 MHz	-81	
CPICH_Ec/lo	dB	-10.0	-19.5
CPICH_RSCP	dBm	-70	-100
Propagation Condition		AWGN	
Cell_selection_and_ reselection_quality_measure			/N ₀
Qqualmin	dB	-20	
Qrxlevmin	dBm	-115	
UE_TXPWR_MAX_RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	\$	C2: 0	
TEMPORARY_OFFSET1	dB	C2: 0	
Treselection	S	0	
Ssearch _{RAT}	dB	not sent	

Table A.4.7B: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.4.7C: Cell re-selection UTRAN to GSM cell case (cell 2)

Parameter	Unit	Cell 2	(GSM)
		T1	T2
Absolute RF Channel Number		ARFCN 1	
RXLEV	dBm	-80	-80
RXLEV_ACCESS_MIN	dBm	-104	
MS_TXPWR_MAX_CCH	dBm	33	

A.4.3.2.2 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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than 6.5 s + T_{BCCH} , where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].

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: $Max(3*T_{measureFDD}, T_{measureGSM}) + T_{BCCH}$, where:

T _{measureFDD}	See Table 4.1 in section 4.2.2.
${\sf T}_{ m measureGSM}$ ${ m T}_{ m BCCH}$	See Table 4.1 in section 4.2.2. Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 6.4 s + T_{BCCH} , allow 6.5 s + T_{BCCH} in the test case.

A.4.4 FDD/TDD cell re-selection

A.4.4.1 Test Purpose and Environment

This test is to verify the requirement for the FDD/TDD cell re-selection delay reported in section 4.2.2. This scenario implies the presence of 1 FDD and 1 TDD cell as given in Table A.4.8 and A.4.9.

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.

	Parameter		Value	Comment
Initial	Active cell		Cell1	FDD cell
condition	Neighbour cells		Cell2	TDD cell
Final condition	Active cell		Cell2	
UE_	UE_TXPWR_MAX_RACH		21	The value shall be used for all cells in the test.
Access	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.
	HCS			Not used
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	15	
	T2	S	15	

Table A.4.8: General test parameters for the FDD/TDD cell re-selection

Table A.4.9: FDD/TDD cell re-selection

Parameter	Unit	Cel		Ce	ll 2		
Timeslot Number		n.a	n.a.	()	8	
		T 1	T 2	T1	T2	T 1	T 2
UTRA RF Channel Number		Chanr		Char	inel 2		
CPICH_Ec/lor	dB	-10	-10 -10			n.	a.
PCCPCH_Ec/lor	dB	-12	-12	-3	-3		
SCH_Ec/lor	dB	-12	-12	-9	-9	-9	-9
SCH_t _{offset}		n.a.	n.a.	0	0	0	0
PICH_Ec/lor		-15	-15			-3	-3
OCNS	dB	-0,941	-0,941	-4,28	-4,28	-4,28	-4,28
\hat{I}_{or}/I_{oc}	dB	3	-5	-2	6	-2	6
I _{oc}	dBm/3. 84 MHz		-70				
CPICH_RSCP	dBm	-77	-85	n.	a.	n.	a.
PCCPCH_RSCP	dBm	n.a.	n.a.	-75	-67		
Qrxlevmin	dBm	-11	5		-1	03	
Qoffset 1 _{s,n}	dB	C1,C2		C2,C	1:-12		
Qhyst 1 _s	dB	0		()		
Treselection	S	0		()		
Sintersearch	dB	0		()		
Propagation Condition		AWO	AWGN			GN	

NOTE: The purpose of this test case is to evaluate the delay of the FDD/TDD re-selection process, it is not intended to give reasonable values for a FDD/TDD cell re-selection.

A.4.4.2 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 $T_{evaluateTDD}$ of 6.4s according to Table 4.1 in section 4.2.2.7.

 T_{SE} 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.

NEXT CHANGED SECTION

A.5.5 Cell Re-selection in CELL_FACH

A.5.5.1 One frequency present in neighbour list

A.5.5.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in the single carrier case reported in section 5.5.2.1.1.

The test parameters are given in Table A.5.1 and A.5.2. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms

Table A.5.1 General test	parameters for	Cell Re-selection in	CELL FACH
			• = = _ · / · • • · ·

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Sei – Persisten	rvice Class (ASC#0) ace 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.
HCS				Not used
T1		S	15	
T2		S	15	

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.1A and Table A.5.1B.

Table A.5.1A: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot	dB	0
fields relative to data field		

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Table A.5.1B: Transport channel parameters for S-CCPCH

Table A.5.2 Cell specific test parameters for Cell Re-selection in CELL_FACH

Parameter	Unit	Ce	ell 1	Ce	12	Cell 3		С	ell 4	C	ell 5	Ce	ll 6
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel				01		0				01		01-01-01	
Number		Chai	nner	Chan	nel 1	Chan	ner 1	Cha	annel 1	Cna	innel 1	Char	inel 1
CPICH_Ec/lor	dB	-	10	-1	0	-1	0		-10		-10	-'	10
PCCPCH_Ec/lor	dB	-	12	-1	2	-1	2		-12		-12	-'	12
SCH_Ec/lor	dB	-	12	-1	2	-1	2		-12		-12	-'	12
PICH_Ec/lor	dB	-	15	-1	5	-1	5		-15		-15	-'	15
S-CCPCH_Ec/lor	dB	-	12	-1	2	-1	2		-12	-	-12	-1	2
OCNS_Ec/lor	dB	-1.	295	-1.2	295	-1.2	95	-1	.295	-1	.295	-1.2	295
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.2	27	0).27	0).27	0.	27
I _{oc}	dBm/3.84 MHz			·			-7	0					
CPICH_Ec/lo	dB	-16	-13	-13	-16	-2	3		-23		-23	-2	23
Propagation Condition							AW	GN					
Cell_selection_and_ reselection_quality_ measure		CPICI	H E₀/N₀	CPICH	I E _c /N ₀	CPI E₀/I	CH N₀	CPIC	H E₀/N₀	CPIC	H Ec/N₀	CP E₀	ICH /N₀
Qqualmin	dB	-	20	-2	0	-2	0		-20	-	-20	-2	20
Qrxlevmin	dBm	-1	15	-1 ⁻	15	-11	5	-	115	-'	115	-1	15
UE_TXPWR_ MAX_RACH	dBm	2	21	2	1	2'	1		21		21	2	:1
Qoffset 2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, 0 C2, 0 C2, 0 C2, 0 C2, 0 C2, 0	C1: 0 C3: 0 C4: 0 C5: 0 C6: 0	C3, C C3, C C3, C C3, C C3, C	1: 0 2: 0 4: 0 5: 0 6: 0	C4, C4, C4, C4, C4, C4,	C1: 0 C2: 0 C3: 0 C5: 0 C6: 0	C5, C5, C5, C5, C5,	C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, 0 C6, 0 C6, 0 C6, 0 C6, 0	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0
Qhyst	dB		0	0		0			0		0	(2
PENALTY_TIME	\$		0	Ę)	Ð			θ		θ	4	Ĵ
TEMPORARY_OFF	dB		0	e)	θ			θ		θ	(÷
Treselection	S		0	0)	0			0		0	(5
Sintrasearch	dB	not	sent	not s	sent	not s	ent	no	t sent	not	t sent	not	sent
IE "FACH Measurement occasion info"		not	sent	not	sent	not s	ent	no	t sent	not	tsent	not	sent

A.5.5.1.2 **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 1, and starts to send preambles on the PRACH for sending the the CELL UPDATE message with cause value "cell reselection" in Cell 1.

The cell re-selection delay shall be less than 1.6 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%. NOTE: The cell re-selection delay in this case is expressed as:

 $T_{\text{reselection, intra}} = T_{\text{Measurement}_\text{Period Intra}} + T_{\text{IU}} + 20 + T_{\text{SI}} + T_{\text{RA}} \text{ ms,}$

T_Measurement_Period Intrais specified in 8.4.2.2.2 as 200 ms in this case.T_SI:The 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.1280 ms is assumed in this test case.T_RA:T_RA is a delay is caused by the physical random access procedure described in TS 25.214
section 6.1. A persistence value is assumed to be 1 in this test case and therefore T_RA in
this test case is 40 ms.

NOTE: Since 1280 ms is one of the typical values for repeating system information blocks, T_{SI} of 1280 ms could be increased by the RRC procedure delay in order to allow the SIB repetition period of 1280 ms.

This gives a total of 1.55 s, allow 1.6 s in the test case.

where:

A.5.5.2 Two frequencies present in the neighbour list

A.5.5.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in section 5.5.2.1.2.

The test parameters are given in tables A5.3 and A5.4. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Ser – Persisten	rvice Class (ASC#0) ce 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.
<u>HCS</u>				Not used
T1		S	15	
T2		S	15	

Table A.5.3: General test parameters for Cell Re-selection in CELL_FACH

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.3A and Table A.5.3B.

 Table A.5.3A: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot fields relative to data field	dB	0

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Table A.5.3B: Transport channel parameters for S-CCPCH

Table A.5.4: Cell specific test parameters for Cell re-selection in CELL_FACH state

Parameter	Unit	Cell 1 Cell 2		Cell 3	Cell 4	Cell 5	Cell 6
		T1 T2	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2
UTRA RF Channel		Channel 1	Channel 2	Channel 1	Channel 1	Channel 2	Channel 2
Number		Onanner i			Onamici i		
CPICH_Ec/lor	dB	-10	-10	-10	-10	-10	-10
PCCPCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
SCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
PICH_EC/IOr	dB	-15	-15	-15	-15	-15	-15
S-CCPCH_EC/lor	dB	-12	-12	-12	-12	-12	-12
	aв	-1.295	-1.295	-1.295	-1.295	-1.295	-1.295
I_{or}/I_{oc}	dB	-3.4 2.2	2.2 -3.4	-7.4 -4.8	-7.4 -4.8	-4.8 -7.4	-4.8 -7.4
I _{oc}	dBm/3.8 4 MHz	-70					
CPICH_Ec/lo	dB	-16 -13	-13 -16	-20	-20	-20	-20
Propagation Condition		AWGN					
Cell_selection_ and_reselection_ quality_measure		CPICH E _c /N ₀	CPICH E _c /N ₀	CPICH E _o /N ₀	CPICH E _c /N ₀	CPICH E ₂ /N ₀	CPICH E _c /N₀
Qqualmin	dB	-20	-20	-20	-20	-20	-20
Qrxlevmin	dBm	-115	-115	-115	-115	-115	-115
UE_TXPWR_ MAX_RACH	dBm	21	21	21	21	21	21
Qoffset2 _{s, n}	dB	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0	C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2 C6: 0	C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0	C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4, C6: 0	C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0	C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0
Qhyst2	dB	0	0	0	0	0	0
PENALTY_TIME	s	θ	φ	θ	θ	Ð	θ
TEMP_OFFSET	dB	0	θ	θ	0	0	θ
Treselection	S	0	0	0	0	0	0
Sintrasearch	dB	not sent	not sent	not sent	not sent	not sent	not sent
Sintersearch	dB	not sent	not sent	not sent	not sent	not sent	not sent
IE "FACH Measurement occasion info"		sent	sent	sent	sent	sent	sent
FACH Measurement occasion cycle length coefficient		3	3	3	3	3	3
Inter-frequency FDD measurement indicator		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Inter-frequency TDD measurement indicator		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

A.5.5.2.2 Test Requirements

The cell re-reselection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 1, and starts to send preambles on the PRACH for sending the the CELL UPDATE message with cause value "cell reselection" in Cell 1.

The cell re-selection delay shall be less than 1.9 s.

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

NOTE: The cell re-selection delay in this case is expressed as:

$$T_{\text{reselection, inter}} = T_{\text{Measurement inter}} + T_{\text{IU}} + 20 + T_{\text{SI}} + T_{\text{RA}} \text{ ms},$$

where:

T_{measurement inter} is specified in 8.4.2.3.2 as 480 ms in this case.

- T_{SI} : The 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.1280 ms is assumed in this test case.
- T_{RA} : T_{RA} is a delay is caused by the physical random access procedure described in TS 25.214 section 6.1. A persistence value is assumed to be 1 in this test case and therefore T_{RA} in this test case is 40 ms.
- NOTE: Since 1280 ms is one of the typical values for repeating system information blocks, T_{SI} of 1280 ms could be increased by the RRC procedure delay in order to allow the SIB repetition period of 1280 ms.

This gives a total of 1.83 s, allow 1.9 s in the test case.

A.5.5.3 Cell Reselection to GSM

A.5.5.3.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in section 5.5.2.1.4.

This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 6 GSM cells. Test parameters are given in Table, A.5.4A, A.5.4B, A.5.4C, A.5.4D, A.5.4E.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final	Active cell		Cell2	
condition				
DRX cycle	length	S	1.28	
HCS				Not used
Neighbour	cell list size		24 FDD neighbours on Channel 1 6 GSM neighbours including ARFCN 1	
T1		S	5	
T2		S	10	

Table A.5.4A: General test parameters for UTRAN to GSM Cell Re-selection

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.3A and Table A.5.3B.

Table A.5.4B: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot fields relative to data field	dB	0

Table A.5.4C: Transport channel parameters for S-CCPCH

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Baramatar	l Imit	Cell 1 (UTRA)			
Parameter	Unit	T1 T2			
UTRA RF Channel		Chan	nol 1		
Number		Chan			
CPICH_Ec/lor	dB	-1	0		
PCCPCH_Ec/lor	dB	-1	2		
SCH_Ec/lor	dB	-1	2		
PICH_Ec/lor	dB	-1	5		
S-CCPCH_Ec/lor	dB	-1	2		
OCNS_Ec/lor	dB	-1.2	295		
\hat{I}_{or}/I_{oc}	dB	0	-5		
I_{oc}	dBm/3. 84 MHz	-7	0		
CPICH_Ec/lo	dB	-13	-16.2		
CPICH_RSCP	dBm	-80	-85		
Propagation Condition		AW	GN		
Cell selection and					
reselection quality m		CPICH	Ec/lo		
easure					
Qqualmin	dB	-2	0		
Qrxlevmin	dBm	-1	15		
UE TXPWR MAX					
RACH	dBm	2	1		
Qoffset1 _{s, n}	dB	C1, C	C2: 0		
Qhyst1	dB	0)		
PENALTY_TIME	S	C2	: 0		
TEMPORARY_OFFS ET1	dB	62	:0		
Treselection	S	C)		
Ssearch _{RAT}	dB	Not	sent		
IE "FACH					
Measurement		Se	ent		
occasion info"					
FACH Measurement					
occasion cycle length		3	3		
coefficient					
Inter-frequency FDD					
measurement		FAL	SE		
indicator					
Inter-frequency TDD					
measurement		FAL	.SE		
indicator					
Inter-RAT					
measurement		Inclu	ided		
indicators					
>RAT type		GS	SM		

Table A.5.4D: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.5.4E: Cell re-selection UTRA	AN to GSM cell case (cell 2)
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Parameter	Unit	Cell 2	(GSM)
		T1	T2
Absolute RF Channel Number		ARFCN	11
RXLEV	dBm	-90	-75
RXLEV_ACCESS_ MIN	dBm	-104	
MS_TXPWR_MAX_ CCH	dBm	33	

A.5.5.3.2 Test Requirements

The cell re-reselection delay is defined as the time from the beginning of time period T2, to the moment when the UE starts to transmit the random access in Cell 2 (the GSM cell).

The cell re-selection delay shall be less than $5.5 + T_{RA}$ s.

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

NOTE: The cell re-selection delay can be expressed

$$T_{\text{reselection, GSM}} = T_{\text{identify, GSM}} + T_{\text{measurement, GSM}} + 40 + T_{\text{BCCH}} + T_{\text{RA}} \text{ ms}$$

where:

$T_{identify,GSM}$	Specified in 8.4.2.5.2.1, here it is 2880 ms
T _{measurement, GSM}	Specified in 5.5.2.1.4, here it is 640 ms
T _{BCCH}	According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.
T _{RA}	The additional delay caused by the random access procedure in the GSM cell. Shall be defined by $T1/RF$ when the test case is further detailed in TS 34.121.

This gives a total of $5.46 + T_{RA}$ s, allow $5.5 + T_{RA}$ s.

A.5.6 Cell Re-selection in CELL_PCH

A.5.6.1 One frequency present in the neighbour list

A.5.6.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_PCH state in section 5.6.2.

The test parameters are given in Table A5.5 and A5.6. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Parameter		Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4,	
	-		Cell5, Cell6	
final	Active cell		Cell1	
condition				
Access Se	Access Service Class (ASC#0)			Selected so that no additional delay is caused by the
 Persistence value 		-	1	random access procedure. The value shall be used for
				all cells in the test.
HCS	HCS			Not used
DRX cycle	DRX cycle length		1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re-selection reaction
				time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection reaction
				time is taken into account.

Table A.5.5: General test p	parameters for Cell Re-selection in CELL_PC	Э
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Deremeter	Unit	Cell 1		Cell 2		Cell 3		Cell 4		Cell 5		Cell 6		
Parameter	Unit	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number		Chann	el 1	Channe	el 1	Channe	el 1	Chanr	Channel 1		nel 1	Chanr	Channel 1	
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10		
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.941		-0.941		-0.941	l .	
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.27		0.27		0.27		0.27		
I _{oc}	dBm/ 3.84MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23		
Propagation Condition							AW	GN						
Cell_selection_and_ reselection_quality_ measure		CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH E₀/N₀		CPIC	H E₀/N₀	CPICH	H E₀/N₀	CPICH E _c /N ₀	4	
Qqualmin	dB	-:	20	-2	20	-20 -20		-	20	-2	20			
Qrxlevmin	dBm	-1	15	-1	15	-11	5	-115		-*	115	-1	15	
UE_TXPWR_ MAX_RACH	dBm	2	21	2	1	21		2	21	:	21	2	1	
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2, C6: 0		C3, C C3, C C3, C C3, C C3, C	1: 0 2: 0 4: 0 5: 0 6: 0	C4, C4, C4, C4, C4, C4,	C1: 0 C2: 0 C3: 0 C5: 0 C6: 0	C5, C5, C5, C5, C5,	C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, 0 C6, 0 C6, 0 C6, 0 C6, 0	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0	
Qhyst2	dB		0	0		0			0		0	()	
PENALTY_TIME	8		θ	(•	θ			0		θ	()	
TEMPORARY_OFF	dB		θ	θ		θ		θ		θ		ę	÷	
Treselection	S		0	()	0			0	0		()	
Sintrasearch	dB	not	sent	not	sent	not s	ent	not sent		not sent		not s	sent	

A.5.6.1.2 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 1, and starts to send preambles on the PRACH for sending the CELL UPDATE message with cause value "cell reselection" in Cell 1.

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 section 5.6.2.

 T_{SI} : Maximum repetition period 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.5.6.2 Two frequencies present in the neighbour list

A.5.6.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_PCH state in section 5.6.2. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms. The test parameters are given in Table A.5.7 and A.5.8

Table A.5.7: General test parameters for Cell Re-selection in CELL_PCH

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Se - Persisten	rvice Class (ASC#0) ice 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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	30	T1 need to be defined so that cell re- selection reaction time is taken into account.
Τ2		S	15	T2 need to be defined so that cell re- selection reaction time is taken into account.

Table A.5.8: Cell specific test parameters for Cell re-selection in CELL_PCH state

Parameter	Unit	Ce	ell 1	Ce	ell 2	Cell 3		Cell 3 Cell 4		Cell 5		Cell 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Chan	Channel 1 Channel			Channel 1		Chann		Channel	1.2	Chapr	Observal 0	
Number		Chan	neri	Chan	nei z	Chan		Chann		Channel	2	Chan	Channel 2	
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10		
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.94	1	-0.94	1	-0.941	-	-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm/3.8 4 MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-20		-20		-20		-20		
Propagation														
Condition						-	,			1		-		
Cell_selection_		CPIC	н	CPIC	н	CPICH	4							
and_reselection_				E _c /N ₀	••	E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		
quality_measure		_0.1.0		_0.10		_0.10								
Qqualmin	dB	-	20	-	20	-20		-2	20	-2	0		20	
Qrxlevmin	dBm	-1	15	-1	15	-11	15	-115		-11	5	-1	15	
UE_IXPWR_	dBm	2	21	2	21	2	1	21 2		2	1	2	21	
MAX_RACH		01	00.0	00	04.0			05.01.0		C6 C1+0				
			02:0	02,					C5, C1: 0		C6, C1: 0			
Ooffoot2	aD			02,			2:0	C4, C2: 0		C5, C2: 0		C6, C2: 0		
QUISELZ _{s, n}	uБ		C4. 0	C2,	C4. 0		24. U	C4, C3: 0			2.0 2.0	C6, C3; 0		
		C1	C6: 0	C2,	C6: 0		5.0 6.0		CG: 0			C0,	C5:0	
Obvet2	dB	01,	00.0			00,0	0.0	04,0	<u>00.0</u> 1	00,0	0.0	00,	00.0	
	4D		0 0		<u>0</u>			4	<u> </u>	0 0			<u>0</u>	
TEMPORARY_OF	dB		0	0		0		()	0 0	l		0 0	
Treselection	S		0		0	C		0		0		0		
Sintrasearch	dB	not	sent	not	sent	not s	sent	not	sent	not sent		not	sent	
Sintersearch	dB	not	sent	not	sent	not s	sent	not sent not sent		sent	not	not sent		

A.5.6.2.2 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 1, and starts to send preambles on the PRACH for sending the CELL UPDATE message with cause value "cell reselection" in Cell 1.

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 section 5.6.2.

 T_{SI} : Maximum repetition period 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.5.7 Cell Re-selection in URA_PCH

A.5.7.1 One frequency present in the neighbour list

A.5.7.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in URA_PCH state in section 5.7.2.

The test parameters are given in Table A.5.9 and A.5.10. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Cells possible for re-selection shall belong to different UTRAN Registration Areas (URA).

Table A.5.9: General test parameters for Cell Re-selection in URA_PCH

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Ser - Persisten	rvice Class (ASC#0) ce 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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re- selection reaction time is taken into account.

Table A.5.10: Cell specific test parameters for Cell re-selection in URA_PCH state

Parameter	Unit	Ce	ell 1	Ce	ll 2	Cell	3	Ce	ell 4	C	Cell 5		Cell 6	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number		Chann	el 1	Channe	el 1	Chann	el 1	Chan	nel 1	Chanr	nel 1	Chan	Channel 1	
CPICH_Ec/lor	dB	-10		-10		-10		-10	-10		-10			
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.941	1	-0.941		-0.941	1	
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.27		0.27		0.27		0.27		
I _{oc}	dBm/3.84 MHz	-70	-70											
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23	-23	
Propagation Condition							AW	GN						
Cell_selection_and_ reselection_quality_ measure		CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH E₀/N₀		CPICI	H E₀/N₀	CPICH	H E₀/N₀	CPICI E₀/N₀	4	
Qqualmin	dB	-:	20	-2	20	-20)	-	20	-	20	-2	20	
Qrxlevmin	dBm	-1	15	-1	15	-11	5	-1	15	-*	115	-1	15	
UE_TXPWR_ MAX_RACH	dBm	2	21	2	1	21			21	:	21	2	.1	
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, C1: 0 C3, C1: 0 C4, C1: 0 C5, C1 C2, C3: 0 C3, C2: 0 C4, C2: 0 C5, C2 C2, C4: 0 C3, C4: 0 C4, C3: 0 C5, C3 C2, C5: 0 C3, C5: 0 C4, C3: 0 C5, C4 C2, C5: 0 C3, C5: 0 C4, C5: 0 C5, C4 C2, C6: 0 C3, C6: 0 C4, C6: 0 C5, C4		C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0							
Qhyst2	dB		0	()	0			0		0	()	
PENALTY_TIME	8		0	(•	0			0		θ	(•	
TEMPORARY_OFF	dB		0	θ		θ		θ		θ		θ		
Treselection	S		0	()	0			0		0	()	
Sintrasearch	dB	not	sent	not	sent	not s	ent	not	sent	not	sent	not	sent	

A.5.7.1.2 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 1, and starts to send preambles on the PRACH for sending the URA UPDATE message with cause value "URA reselection" in Cell 1.

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 section 5.7.2.

 T_{SI} : Maximum repetition period 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.5.7.2 Two frequencies present in the neighbour list

A.5.7.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in URA_PCH state in section 5.7.2.

The test parameters are given in Table A5.11 and A5.12. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Cells possible for re-selection shall belong to different UTRAN Registration Areas (URA).

Table A.5.11: General test parameters for Cell Re-selection in URA_PCH

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Se - Persisten	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.
HCS				Not used
DRX cycle	cycle length		1.28	The value shall be used for all cells in the test.
T1		S	30	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2	Τ2		15	T2 need to be defined so that cell re- selection reaction time is taken into account.

Table A.5.12: Cell specific test parameters for Cell re-selection in URA_PCH state

Parameter	Unit	Ce	ell 1	Ce	Cell 2		Cell 3		II 4	Cell 5		Cell 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Chan	nol 1	Chan	nol 2	Chapr	ol 1	Chann	ol 1	Channe	12	Chapr	2 100	
Number		Chan	onanner i		Channel 2			Chan		Channe		Chan		
CPICH_Ec/lor	dB	-10		-10	-10			-10		-10		-10	-10	
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12	-12	
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.94	1	-0.94	1	-0.941		-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm/3.8 4 MHz	-70	-70											
CPICH_Ec/lo	dB	-16	-13	-13	-13 -16 -20 -20					-20		-20		
Propagation Condition			AWGN											
Cell_selection_ and_reselection_ quality measure		CPIC E _c /N ₀	Η	CPICH E _c /N ₀			ł	CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		
Qqualmin	dB	-:	20	-:	20	-2	0	-20		-20		-20		
Qrxlevmin	dBm	-1	15	-1	15	-11	15	-115		-115		-115		
UE_TXPWR_ MAX_RACH	dBm	2	21	2	21	2	1	2	1	2'	1	21		
		C1,	C2: 0	C2,	C1: 0	C3, C	21:0	C4, 0	C1: 0	C5, C	21:0	C6,	C1: 0	
		C1,	C3: 0	C2,	C3: 0	C3, C	2: 0	C4, 0	C2: 0	C5, C	2:0	C6,	C2: 0	
Qoffset2 _{s, n}	dB	C1,	C4: 0	C2,	C4: 0	C3, C	24: 0	C4, 0	C3: 0	C5, C	3: 0	C6,	C3: 0	
		C1,	C5: 0	C2,	C5: 0	C3, C	25: 0	C4, 0	C5: 0	C5, C	24: 0	C6,	C4: 0	
		C1,	C6: 0	C2,	C6: 0	C3, C	6: 0	C4, 0	C6: 0	C5, C	6: 0	C6,	C5: 0	
Qhyst2	dB		0		0	0		()	0			0	
PENALTY_TIME	S		0		0	e	•	(•	θ			0	
TEMPORARY_OF FSET	d₿		0	θ		Ģ	L	θ		θ		Ð		
Treselection	S		0		0	0		()	0		0		
Sintrasearch	dB	not	sent	not	sent	not s	sent	not	not sent		not sent		not sent	
Sintersearch	dB	not	sent	not	sent	not s	sent	not	sent	not s	sent	not	sent	

A.5.7.2.2 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 1, and starts to send preambles on the PRACH for sending URA UPDATE message with cause value "URA reselection" in Cell 1.

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 section 5.7.2.

 T_{SI} : Maximum repetition period 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.

3GPP TSG RAN WG4 Meeting #22

R4-020586

Sophia Antipolis, France 3rd - 5th April 2002

ж	25.133 CR 366 # rev - # Current version: 5.2.0 #									
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the \Re symbols.									
Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network										
Title: ೫	Corrections to cell re-selection test cases									
Source: %	RAN WG4									
Work item code: ℜ	TEI Date: ₩ 5/4/2002									
Category: ⊮	ARelease: %Rel-5Use one of the following categories: F (correction)Use one of the following releases: 2(GSM Phase 2)A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature)R96(Release 1996)B (addition of feature), D (editorial modification)R97(Release 1997)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories can be found in 3GPP TR 21.900.REL-5(Release 5)									
Reason for change Summary of chang	 # The current re-selection test cases do not specify weather HCS is used or not. The measurements that needs to be performed by the UE depend on this selection. Parameters in side conditions are not inline with TS25.331. e: # Indicate that HCS is not used in the general re-selection parameter tables. Deletion of Penalty_Time and Temporary_Offset from the RF parameter tables. 									
Consequences if not approved:	 Side conditions in test cases remain unclear, possible source of misinterpretation. <u>Isolated Impact Analysis:</u> This CR has no impact on current implementations because it only corrects side conditions in test cases. 									
Clauses affected:	ቖ A.4; A.5									
Other specs affected:	 Cher core specifications # Test specifications O&M Specifications 									
Other comments:	# Equivalent CRs in other Releases: CR364r1 cat. F to 25.133 v3.9.0, CR365 cat. A to 25.133 v4.4.0									
Comprehensive inform Below is a brief summa	using this form: ation and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u> . iry:									

- 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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.4.2 Cell Re-Selection

Two scenarios are considered:

- Scenario 1: Single carrier case
- Scenario 2: Multi carrier case

For each of them a test is proposed.

NOTE: Existing scenarios cover only requirements in section 4.2.2.2. More scenarios, covering requirements in section 4.2.2.1, will be added later.

A.4.2.1 Scenario 1: Single carrier case

A.4.2.1.1 Test Purpose and Environment

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

This scenario implies the presence of 1 carrier and 6 cells as given in tables A.4.1 and A.4.2. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs 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.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell1	
Access Se - Persister	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.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re-selection reaction time is taken into account.
T2	T2		15	T2 need to be defined so that cell re-selection reaction time is taken into account.

Table A.4.1: General test parameters for Cell Re-selection single carrier multi-cell case

Table A.4.2: Cell re-selection single carrier multi-cell case

Parameter	Unit	Ce	II 1	Ce	12	Ce	II 3	Ce	4	Ce	ell 5	Ce	II 6	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number		Channe	el 1	Channe	el 1	Chann	el 1	Channe	el 1	Chann	el 1	Channe	Channel 1	
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10	-10		-10	
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12	-12	
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.27		0.27		0.27		0.27		
I _{oc}	dBm / 3.84 MHz	-70	-70											
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23		
Propagation Condition							AV	/GN						
Cell_selection_and_ reselection_quality_m easure		CPICH	E _c /N ₀	CPICH	E _c /N ₀	CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH	E _c /N ₀	
Qqualmin	dB	-2	<u>20</u>	-2	0	-2	<u>20</u>	-20		-20		-20		
Qrxlevmin	dBm	-1	15	-1	15	-1	15	-1	15	-1	15	-1	15	
UE_TXPWR_MAX_ RACH	dB	2	1	2	1	2	1	2	1	2	21	2	1	
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, 0 C2, 0 C2, 0 C2, 0 C2, 0 C2, 0	C1: 0 C3: 0 C4: 0 C5: 0 C6: 0	C3, C3, C3, C3, C3, C3,	C1: 0 C2: 0 C4: 0 C5: 0 C6: 0	C4, 0 C4, 0 C4, 0 C4, 0 C4, 0 C4, 0	C1: 0 C2: 0 C3: 0 C5: 0 C6: 0	C5, C5, C5, C5, C5, C5,	C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, 0 C6, 0 C6, 0 C6, 0 C6, 0	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0	
Qhyst2	dB	(C	0)	(C	0)		0	()	
PENALTY_TIME	S	4	Ð	e)	4	Ð	e)		0	(•	
TEMPORARY_OFFS ET2	dB	4	Ð	ę)	4	Ð	ę)		0	(÷	
Treselection	S		0	()		0	()		0	()	
Sintrasearch	dB	not	sent	not	sent	not	sent	not	sent	not	sent	not	sent	

A.4.2.1.2 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 1, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 1.

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} T_{SI} See Table 4.1 in section 4.2.2. Maximum repetition period 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 Scenario 2: 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.

This scenario implies the presence of 2 carriers and 6 cells as given in tables A.4.3 and A.4.4. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info

blocks that needs 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.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell1	
Access Service Class (ASC#0)				Selected so that no additional delay is caused by
- Persistence value		-	1	the random access procedure. The value shall be used for all cells in the test.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
	T1	S	30	T1 need to be defined so that cell re-selection
				reaction time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection
				reaction time is taken into account.

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

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

Parameter	Unit	Ce	ll 1	C	ell 2	Cell 3 Cell 4		Cell 5		Cell 6			
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel		Chan	nol 1	Cha	nnol 2	Char	nel 1	Char	nol 1	Char	nal 2	Cha	nnel 2
Number		Chan		Cila		Charmer 1 Charmer 1		onanner 2		Ghai			
CPICH_Ec/lor	dB	-1	10		-10	-*	10	-*	10	-	10	-10	
PCCPCH_Ec/lor	dB	-1	12		-12	- '	12	- '	12	-12		-12	
SCH_Ec/lor	dB	-1	12		-12	- '	12	- '	12	-12		-12	
PICH_Ec/lor	dB	-1	15		-15	-*	15	-15		-15		-15	
OCNS_Ec/lor	dB	-0.9	941	-0	.941	-0.9	941	-0.9	941	-0.	941	-0.	941
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4
I _{oc}	dBm / 3.84 MHz		-70										
CPICH_Ec/lo	dB	-16 -13 -13 -16 -20 -20 -20				-20							
Propagation Condition							AW	/GN					
Cell_selection_and_ reselection_quality_m easure		CPICH E _d /N ₀ CPICH E _d /N ₀		CPICH	IE₀/N₀	CPICH E _c /N ₀		CPICH E₀/N₀		CPICI	Η E₀/N₀		
Qqualmin	dB	-2	20	-	·20	-2	20	-20		-20		-:	20
Qrxlevmin	dBm	-1	15	- '	115	-1	15	-1	15	-1	15	-115	
UE_TXPWR_MAX_ RACH	dB	2	1	:	21	2	1	2	1	2	21	2	21
Qoffset2 _{s, n}	dB	C1, 0 C1, 0 C1, 0 C1, 0 C1, 0 C1, 0	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, C1: 0 0 C2, C3: 0 0 C2, C4: 0 0 C2, C5: 0 0 C2, C5: 0		C3, 0 C3, 0 C3, 0 C3, 0 C3, 0 C3, 0	C1: 0 C2: 0 C4: 0 C5: 0 C6: 0	C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4, C5: 0		C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0		C6, C6, C6, C6, C6,	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0
Qhyst2	dB	()		0	()	()		0		0
PENALTY_TIME	\$	()		Ð	(•	()	4	θ		0
TEMPORARY_OFFS	d₿	Ģ	•	θ		(÷	(θ		θ		θ
Treselection	S	()		0	()	()		0		0
Sintrasearch	dB	not	sent	not	sent	not	sent	not	sent	not	sent	not	sent
Sintersearch	dB	not	sent	not	sent	not	sent	not	sent	not	sent	not	sent

A.4.2.2.2 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 1, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 1. 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.
Tsi	Maximum repetition period 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.4.3 UTRAN to GSM Cell Re-Selection

A.4.3.1 Scenario 1

A.4.3.1.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.5, A.4.6, A.4.7. Cell 1 and cell 2 shall belong to different Location Areas.

Table A.4.5: General test parameters for UTRAN to GSM Cell Re-selection

Parameter		Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final	Active cell		Cell2	
condition				
DRX cycle	length	S	1.28	
HCS				Not used
T1		S		
T2		S		

Table A.4.6: Cell re-selection UTRAN to GSM cell case (cell 1)

Parameter	Unit	Cell 1 (l	JTRA)
		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	0	-5
I _{oc}	dBm/3.84 MHz	-70	
CPICH_Ec/lo	dB	-13	-16.2
CPICH_RSCP	dBm	-80	-85
Propagation Condition		AWGN	
Cell_selection_and_			
reselection_quality_measure		OF IOF LØI	NU
Qqualmin	dB	-20	
Qrxlevmin	dBm	-115	
UE_TXPWR_MAX_RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	S	C2: 0	
TEMPORARY_OFFSET1	dB	C2: 0	
Treselection	S	0	
Ssearch _{RAT}	dB	not sent	

Paramotor	Unit	Cell 2 (GSM)	
Farameter		T1	T2
Absolute RF Channel Number		ARFCN 1	I
RXLEV	dBm	-90	-75
RXLEV_ACCESS_MIN	dBm	-104	
MS_TXPWR_MAX_CCH	dBm	33	3

Table A.4.7: Cell re-selection UTRAN to GSM cell case (cell 2)

A.4.3.1.2 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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than $26 \text{ s} + T_{BCCH}$, where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].

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: $4*T_{measureGSM} + T_{BCCH}$, where:

$T_{\text{measureGSM}}$	See Table 4.1 in section 4.2.2.
T _{BCCH}	Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 25.6 s + T_{BCCH} , allow 26 s + T_{BCCH} in the test case.

A.4.3.2 Scenario 2

A.4.3.2.1 Test Purpose and Environment

This test is to verify the requirement for the UTRAN to GSM cell re-selection delay reported in section 4.2. This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 12 GSM cells. Test parameters are given in Table, A.4.7A, A.4.7B, A.4.7C. Cell 1 and cell 2 shall belong to different Location Areas.

Parameter		Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX cycle length		S	1.28	
HCS				Not used
T1		S	45	
T2		S	10	

Table A.4.7A: General test parameters for UTRAN to GSM Cell Re-selection
Parameter	Unit	Cell 1	(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	20	-9	
I _{oc}	dBm/3.84 MHz	-81		
CPICH_Ec/lo	dB	-10.0	-19.5	
CPICH_RSCP	dBm	-70	-100	
Propagation Condition		AWGN		
Cell_selection_and_ reselection_quality_measure		CPICH E _c /N ₀		
Qqualmin	dB	-20		
Qrxlevmin	dBm	-115		
UE_TXPWR_MAX_RACH	dBm	21		
Qoffset1 _{s, n}	dB	C1, C2: 0		
Qhyst1	dB	0		
PENALTY_TIME	\$	C2: 0		
TEMPORARY_OFFSET1	dB	C2: 0		
Treselection	S	0		
Ssearch _{RAT}	dB	not sent		

Table A.4.7B: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.4.7C: Cell re-selection UTRAN to GSM cell case (cell 2)

Parameter	Unit	Cell 2	(GSM)
		T1	T2
Absolute RF Channel Number		ARFCN 1	
RXLEV	dBm	-80	-80
RXLEV_ACCESS_MIN	dBm	-104	
MS_TXPWR_MAX_CCH	dBm	33	

A.4.3.2.2 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 RR Channel Request message for location update to Cell 2. The cell re-selection delay shall be less than 6.5 s + T_{BCCH} , where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell [21].

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: $Max(3*T_{measureFDD}, T_{measureGSM}) + T_{BCCH}$, where:

T _{measureFDD}	See Table 4.1 in section 4.2.2.
${\sf T}_{ m measureGSM}$ ${ m T}_{ m BCCH}$	See Table 4.1 in section 4.2.2. Maximum time allowed to read BCCH data from GSM cell [21]. According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.

This gives a total of 6.4 s + T_{BCCH} , allow 6.5 s + T_{BCCH} in the test case.

A.4.4 FDD/TDD cell re-selection

A.4.4.1 Test Purpose and Environment

This test is to verify the requirement for the FDD/TDD cell re-selection delay reported in section 4.2.2. This scenario implies the presence of 1 FDD and 1 TDD cell as given in Table A.4.8 and A.4.9.

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.

	Parameter		Value	Comment
Initial	Active cell		Cell1	FDD cell
condition	Neighbour cells		Cell2	TDD cell
Final condition	Active cell		Cell2	
UE_	TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Access	Service Class (ASC#0) Persistence value		1	Selected so that no additional delay is caused by the random access procedure.
				The value shall be used for all cells in the test.
	HCS			Not used
	T _{SI}		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	15	
	T2	S	15	

Table A.4.8: General test parameters for the FDD/TDD cell re-selection

Table A.4.9: FDD/TDD cell re-selection

Parameter	Unit	Cel	1		Cell 2			
Timeslot Number		n.a	n.a.	()	8		
		T 1	T 2	T1	T2	T 1	T 2	
UTRA RF Channel Number		Chanr	nel 1		Char	inel 2		
CPICH_Ec/lor	dB	-10	-10	n.	a.	n.	a.	
PCCPCH_Ec/lor	dB	-12	-12	-3	-3			
SCH_Ec/lor	dB	-12	-12	-9	-9	-9	-9	
SCH_t _{offset}		n.a.	n.a.	0	0	0	0	
PICH_Ec/lor		-15	-15			-3	-3	
OCNS	dB	-0,941	-0,941	-4,28	-4,28	-4,28	-4,28	
\hat{I}_{or}/I_{oc}	dB	3	-5	-2	6	-2	6	
I _{oc}	dBm/3. 84 MHz		-70					
CPICH_RSCP	dBm	-77	-85	n.	a.	n.	a.	
PCCPCH_RSCP	dBm	n.a.	n.a.	-75	-67			
Qrxlevmin	dBm	-11	5		-1	03		
Qoffset 1 _{s,n}	dB	C1,C2		C2,C	1:-12			
Qhyst 1 _s	dB	0		()			
Treselection	S	0		()			
Sintersearch	dB	0		()			
Propagation Condition		AWO	GN		AW	GN		

NOTE: The purpose of this test case is to evaluate the delay of the FDD/TDD re-selection process, it is not intended to give reasonable values for a FDD/TDD cell re-selection.

A.4.4.2 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 $T_{evaluateTDD}$ of 6.4s according to Table 4.1 in section 4.2.2.7.

 T_{SE} 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.

NEXT CHANGED SECTION

A.5.5 Cell Re-selection in CELL_FACH

A.5.5.1 One frequency present in neighbour list

A.5.5.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in the single carrier case reported in section 5.5.2.1.1.

The test parameters are given in Table A.5.1 and A.5.2. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms

Table A.5.1 General test	parameters for	Cell Re-selection in	CELL FACH
			• = = _ · / · • • · ·

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Sei – Persisten	rvice Class (ASC#0) ace 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.
HCS				Not used
T1		S	15	
T2		S	15	

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.1A and Table A.5.1B.

Table A.5.1A: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot	dB	0
fields relative to data field		

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Table A.5.1B: Transport channel parameters for S-CCPCH

Table A.5.2 Cell specific test parameters for Cell Re-selection in CELL_FACH

Parameter	Unit	Ce	ell 1	Ce	12	Cell 3		Cell 3 Cell 4		C	ell 5	Ce	ll 6
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel				01		0				01		01-01-01	
Number		Chai	nner	Chan	nel 1	Chan	ner 1	Channel I		Cna	Channel I		inel 1
CPICH_Ec/lor	dB	-	10	-1	0	-1	0	-10			-10	-'	10
PCCPCH_Ec/lor	dB	-	12	-1	2	-1	2		-12		-12	-'	12
SCH_Ec/lor	dB	-	12	-1	2	-1	2		-12		-12	-'	12
PICH_Ec/lor	dB	-	15	-1	5	-1	5		-15		-15	-'	15
S-CCPCH_Ec/lor	dB	-	12	-1	2	-1	2		-12	-	-12	-1	2
OCNS_Ec/lor	dB	-1.	295	-1.2	295	-1.2	95	-1	.295	-1	.295	-1.2	295
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.2	27	0).27	0).27	0.	27
I _{oc}	dBm/3.84 MHz			·			-7	0					
CPICH_Ec/lo	dB	-16	-13	-13	-16	-2	3		-23		-23	-2	23
Propagation Condition							AW	GN					
Cell_selection_and_ reselection_quality_ measure		CPICI	H E₀/N₀	CPICH	I E _c /N ₀	CPI E₀/I	CH N₀	CPIC	H E₀/N₀	CPIC	H Ec/N₀	CP E₀	ICH /N₀
Qqualmin	dB	-	20	-2	0	-2	0		-20	-	-20	-2	20
Qrxlevmin	dBm	-1	15	-1 ⁻	15	-11	5	-	115	-'	115	-1	15
UE_TXPWR_ MAX_RACH	dBm	2	21	2	1	2'	1		21		21	2	:1
Qoffset 2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C2: 0 C3: 0 C4: 0 C5: 0 C6: 0	C2, 0 C2, 0 C2, 0 C2, 0 C2, 0 C2, 0	C1: 0 C3: 0 C4: 0 C5: 0 C6: 0	C3, C C3, C C3, C C3, C C3, C	1: 0 2: 0 4: 0 5: 0 6: 0	C4, C4, C4, C4, C4, C4,	C1: 0 C2: 0 C3: 0 C5: 0 C6: 0	C5, C5, C5, C5, C5,	C1: 0 C2: 0 C3: 0 C4: 0 C6: 0	C6, 0 C6, 0 C6, 0 C6, 0 C6, 0	C1: 0 C2: 0 C3: 0 C4: 0 C5: 0
Qhyst	dB		0	0)	0			0		0	(2
PENALTY_TIME	\$		0	Ę)	Ð			θ		θ	4	Ĵ
TEMPORARY_OFF	dB		0	e)	θ			θ		θ	(÷
Treselection	S		0	0		0			0		0	(5
Sintrasearch	dB	not	sent	not s	sent	not s	ent	no	t sent	not	t sent	not	sent
IE "FACH Measurement occasion info"		not	sent	not	sent	not s	ent	no	t sent	not	tsent	not	sent

A.5.5.1.2 **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 1, and starts to send preambles on the PRACH for sending the the CELL UPDATE message with cause value "cell reselection" in Cell 1.

The cell re-selection delay shall be less than 1.6 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%. NOTE: The cell re-selection delay in this case is expressed as:

 $T_{\text{reselection, intra}} = T_{\text{Measurement}_\text{Period Intra}} + T_{\text{IU}} + 20 + T_{\text{SI}} + T_{\text{RA}} \text{ ms,}$

T_Measurement_Period Intrais specified in 8.4.2.2.2 as 200 ms in this case.T_SI:The 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.1280 ms is assumed in this test case.T_RA:T_RA is a delay is caused by the physical random access procedure described in TS 25.214
section 6.1. A persistence value is assumed to be 1 in this test case and therefore T_RA in
this test case is 40 ms.

NOTE: Since 1280 ms is one of the typical values for repeating system information blocks, T_{SI} of 1280 ms could be increased by the RRC procedure delay in order to allow the SIB repetition period of 1280 ms.

This gives a total of 1.55 s, allow 1.6 s in the test case.

where:

A.5.5.2 Two frequencies present in the neighbour list

A.5.5.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in section 5.5.2.1.2.

The test parameters are given in tables A5.3 and A5.4. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Parameter		Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6	
final condition	Active cell		Cell1	
Access Ser – Persisten	rvice Class (ASC#0) ce 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.
HCS				Not used
T1		S	15	
T2		S	15	

Table A.5.3: General test parameters for Cell Re-selection in CELL_FACH

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.3A and Table A.5.3B.

 Table A.5.3A: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot fields relative to data field	dB	0

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Table A.5.3B: Transport channel parameters for S-CCPCH

Table A.5.4: Cell specific test parameters for Cell re-selection in CELL_FACH state

Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
		T1 T2	T1 T2	T1 T2	T1 T2	T1 T2	T1 T2
UTRA RF Channel		Channel 1 Channel 2		Channel 1	Channel 1	Channel 2	Channel 2
Number				Onanner i	Onamici i		
CPICH_Ec/lor	dB	-10	-10	-10	-10	-10	-10
PCCPCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
SCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
PICH_EC/IOr	dB	-15	-15	-15	-15	-15	-15
S-CCPCH_EC/lor	dB	-12	-12	-12	-12	-12	-12
	aв	-1.295	-1.295	-1.295	-1.295	-1.295	-1.295
I_{or}/I_{oc}	dB	-3.4 2.2	2.2 -3.4	-7.4 -4.8	-7.4 -4.8	-4.8 -7.4	-4.8 -7.4
I _{oc}	dBm/3.8 4 MHz	-70					
CPICH_Ec/lo	dB	-16 -13	-13 -16	-20	-20	-20	-20
Propagation Condition		AWGN					
Cell_selection_ and_reselection_ quality_measure		CPICH E _c /N ₀	CPICH E _c /N ₀	CPICH E _o /N ₀	CPICH E _c /N ₀	CPICH E ₂ /N ₀	CPICH E _c /N₀
Qqualmin	dB	-20	-20	-20	-20	-20	-20
Qrxlevmin	dBm	-115	-115	-115	-115	-115	-115
UE_TXPWR_ MAX_RACH	dBm	21	21	21	21	21	21
Qoffset2 _{s, n}	dB	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0	C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2 C6: 0	C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0	C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4, C6: 0	C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0	C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0
Qhyst2	dB	0 0		0	0	0	0
PENALTY_TIME	s	θ	φ	0	θ	Ð	θ
TEMP_OFFSET	dB	0	θ	θ	0	0	θ
Treselection	S	0	0	0	0	0	0
Sintrasearch	dB	not sent	not sent	not sent	not sent	not sent	not sent
Sintersearch	dB	not sent	not sent	not sent	not sent	not sent	not sent
IE "FACH Measurement occasion info"		sent	sent	sent	sent	sent	sent
FACH Measurement occasion cycle length coefficient		3	3	3	3	3	3
Inter-frequency FDD measurement indicator		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Inter-frequency TDD measurement indicator		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE

A.5.5.2.2 Test Requirements

The cell re-reselection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 1, and starts to send preambles on the PRACH for sending the the CELL UPDATE message with cause value "cell reselection" in Cell 1.

The cell re-selection delay shall be less than 1.9 s.

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

NOTE: The cell re-selection delay in this case is expressed as:

$$T_{\text{reselection, inter}} = T_{\text{Measurement inter}} + T_{\text{IU}} + 20 + T_{\text{SI}} + T_{\text{RA}} \text{ ms},$$

where:

T_{measurement inter} is specified in 8.4.2.3.2 as 480 ms in this case.

- T_{SI} : The 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.1280 ms is assumed in this test case.
- T_{RA} : T_{RA} is a delay is caused by the physical random access procedure described in TS 25.214 section 6.1. A persistence value is assumed to be 1 in this test case and therefore T_{RA} in this test case is 40 ms.
- NOTE: Since 1280 ms is one of the typical values for repeating system information blocks, T_{SI} of 1280 ms could be increased by the RRC procedure delay in order to allow the SIB repetition period of 1280 ms.

This gives a total of 1.83 s, allow 1.9 s in the test case.

A.5.5.3 Cell Reselection to GSM

A.5.5.3.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_FACH state in section 5.5.2.1.4.

This scenario implies the presence of 1 UTRAN serving cell, and 1 GSM cell to be re-selected. The UE is requested to monitor neighbouring cells on 1 UMTS carrier and 6 GSM cells. Test parameters are given in Table, A.5.4A, A.5.4B, A.5.4C, A.5.4D, A.5.4E.

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cell		Cell2	
Final	Active cell		Cell2	
condition				
DRX cycle	length	S	1.28	
HCS				Not used
Neighbour	cell list size		24 FDD neighbours on Channel 1 6 GSM neighbours including ARFCN 1	
T1		S	5	
T2		S	10	

Table A.5.4A: General test parameters for UTRAN to GSM Cell Re-selection

The transport and physical parameters of the S-CCPCH carrying the FACH are defined in Table A.5.3A and Table A.5.3B.

Table A.5.4B: Physical channel parameters for S-CCPCH.

Parameter	Unit	Level
Channel bit rate	kbps	60
Channel symbol rate	ksps	30
Slot Format #I	-	4
TFCI	-	OFF
Power offsets of TFCI and Pilot fields relative to data field	dB	0

Table A.5.4C: Transport channel parameters for S-CCPCH

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	10 ms
Type of Error Protection	Convolution Coding
Coding Rate	1/2
Rate Matching attribute	256
Size of CRC	16
Position of TrCH in radio frame	Fixed

Baramatar	l Imit	Cell 1 (UTRA)
Parameter	Unit	T1 T2	
UTRA RF Channel		Channel 1	
Number		Channel I	
CPICH_Ec/lor	dB	-1	0
PCCPCH_Ec/lor	dB	-1	2
SCH_Ec/lor	dB	-1	2
PICH_Ec/lor	dB	-1	5
S-CCPCH_Ec/lor	dB	-1	2
OCNS_Ec/lor	dB	-1.2	295
\hat{I}_{or}/I_{oc}	dB	0	-5
I_{oc}	dBm/3. 84 MHz	-7	0
CPICH_Ec/lo	dB	-13	-16.2
CPICH_RSCP	dBm	-80	-85
Propagation Condition		AW	GN
Cell selection and			
reselection quality m		CPICH	Ec/lo
easure			
Qqualmin	dB	-2	0
Qrxlevmin	dBm	-115	
UE TXPWR MAX		110	
RACH	dBm	21	
Qoffset1 _{s, n}	dB	C1, C2: 0	
Qhyst1	dB	0	
PENALTY_TIME	S	C2: 0	
TEMPORARY_OFFS ET1	dB	C2: 0	
Treselection	S	0	
Ssearch _{RAT}	dB	Not	sent
IE "FACH			
Measurement		Sent	
occasion info"			
FACH Measurement			
occasion cycle length		3	3
coefficient			
Inter-frequency FDD			
measurement		FAL	SE
indicator			
Inter-frequency TDD			
measurement		FALSE	
indicator			
Inter-RAT			
measurement		Inclu	ided
indicators			
>RAT type		GS	SM

Table A.5.4D: Cell re-selection UTRAN to GSM cell case (cell 1)

Table A.5.4E: Cell re-selection UTRA	AN to GSM cell case (cell 2)
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Parameter	Unit	Cell 2	(GSM)
		T1	T2
Absolute RF Channel Number		ARFCN	11
RXLEV	dBm	-90	-75
RXLEV_ACCESS_ MIN	dBm	-104	
MS_TXPWR_MAX_ CCH	dBm	33	

A.5.5.3.2 Test Requirements

The cell re-reselection delay is defined as the time from the beginning of time period T2, to the moment when the UE starts to transmit the random access in Cell 2 (the GSM cell).

The cell re-selection delay shall be less than $5.5 + T_{RA}$ s.

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

NOTE: The cell re-selection delay can be expressed

$$T_{\text{reselection, GSM}} = T_{\text{identify, GSM}} + T_{\text{measurement, GSM}} + 40 + T_{\text{BCCH}} + T_{\text{RA}} \text{ ms}$$

where:

$T_{identify,GSM}$	Specified in 8.4.2.5.2.1, here it is 2880 ms
T _{measurement, GSM}	Specified in 5.5.2.1.4, here it is 640 ms
T _{BCCH}	According to [21], the maximum time allowed to read the BCCH data, when being synchronized to a BCCH carrier, is 1.9 s.
T _{RA}	The additional delay caused by the random access procedure in the GSM cell. Shall be defined by $T1/RF$ when the test case is further detailed in TS 34.121.

This gives a total of $5.46 + T_{RA}$ s, allow $5.5 + T_{RA}$ s.

A.5.6 Cell Re-selection in CELL_PCH

A.5.6.1 One frequency present in the neighbour list

A.5.6.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_PCH state in section 5.6.2.

The test parameters are given in Table A5.5 and A5.6. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

	Parameter	Unit	Value	Comment
initial	Active cell		Cell2	
condition	Neighbour cells		Cell1, Cell3,Cell4,	
	-		Cell5, Cell6	
final	Active cell		Cell1	
condition				
Access Se	rvice Class (ASC#0)			Selected so that no additional delay is caused by the
- Persisten	ce value	-	1	random access procedure. The value shall be used for
				all cells in the test.
HCS				Not used
DRX cycle	length	S	1.28	The value shall be used for all cells in the test.
T1		S	15	T1 need to be defined so that cell re-selection reaction
				time is taken into account.
T2		S	15	T2 need to be defined so that cell re-selection reaction
				time is taken into account.

Table A.5.5: General test p	parameters for Cell Re-selection in CELL_PC	Э
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Deremeter	Unit	Cell 1		Cell 2		Cell 3		Cell 4		Cell 5		Cell 6		
Parameter	Unit	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number		Chann	el 1	Channel 1		Channe	Channel 1 Channel 1		nel 1	Channel 1		Channel 1		
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10		
PCCPCH_Ec/lor	dB	-12		-12		-12	-12			-12	-12			
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.941		-0.941		-0.941	l .	
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.27		0.27		0.27		0.27		
I _{oc}	dBm/ 3.84MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23		
Propagation Condition							AW	GN						
Cell_selection_and_ reselection_quality_ measure		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E₀/N₀		CPIC	CPICH E _c /N ₀		CPICH E _c /N ₀		4	
Qqualmin	dB	-:	20	-20		-20)	-20		-20		-20		
Qrxlevmin	dBm	-1	15	-115		-11	5	-115		-115		-115		
UE_TXPWR_ MAX_RACH	dBm	2	21	21		21	21 21		21		21			
Qoffset2 _{s, n}	dB	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0		C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2 C6: 0		C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0		C4, C1: 0 C4, C2: 0 C4, C3: 0 C4, C5: 0 C4 C6: 0		C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0		C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0		
Qhyst2	dB		0	()	0			0		0	0)	
PENALTY_TIME	8		θ	(•	θ			0		θ	()	
TEMPORARY_OFF	dB		θ	ę	θ		θ		θ		θ		θ	
Treselection	S		0	()	0			0 0		0	0		
Sintrasearch	dB	not	sent	not sent not sen			ent	not sent not sent			sent	not sent		

A.5.6.1.2 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 1, and starts to send preambles on the PRACH for sending the CELL UPDATE message with cause value "cell reselection" in Cell 1.

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 section 5.6.2.

 T_{SI} : Maximum repetition period 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.5.6.2 Two frequencies present in the neighbour list

A.5.6.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in CELL_PCH state in section 5.6.2. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms. The test parameters are given in Table A.5.7 and A.5.8

Table A.5.7: General test parameters for Cell Re-selection in CELL_PCH

	Parameter	Unit	Value	Comment				
initial	Active cell		Cell2					
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6					
final condition	Active cell		Cell1					
Access Se - Persisten	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.				
HCS				Not used				
DRX cycle	DRX cycle length		1.28	The value shall be used for all cells in the test.				
T1	T1				S		30	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2	Τ2		15	T2 need to be defined so that cell re- selection reaction time is taken into account.				

Table A.5.8: Cell specific test parameters for Cell re-selection in CELL_PCH state

Parameter	Unit	Ce	ell 1	Cell 2		Cell 3		Cell 4		Cell 5		Cell 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Chan	nol 1	Channel 2		Chapr		Chapr	Channel 1		10	Chapr	od 2	
Number		Chan	Channel		Channel Z		Channel 1		Channel 1		2	Channel 2		
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10	-10	
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15	-15	
OCNS_Ec/lor	dB	-0.94	1	-0.94	1	-0.941	-	-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm/3.8 4 MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-20		-20		-20		-20		
Propagation														
Condition							,							
Cell_selection_					CPICH		CPICH							
and_reselection_				E_c/N_0		E _c /N ₀	E _c /N ₀		Η E _c /N ₀	CPICH E _c /N ₀		CPICH	Η E₀/N₀	
quality_measure		20110												
Qqualmin	dB	-	20	-20		-20		-20		-20		-20		
Qrxlevmin	dBm	-1	15	-115		-115		-115		-115		-1	15	
UE_IXPWR_	dBm	2	21	21		21		21		21		21		
MAX_RACH	-	01	00.0					04.04.0		05.01.0		00.01.0		
			02:0	C2,			C3, C1: 0 C4, C1: 0		C5, C1: 0		C6, C1: 0			
0.0440.042	-10			C2,			C3, C2: 0		C4, C2: 0		C5, C2: 0		C6, C2: 0	
QOIISetZ _{s, n}	aв		C4: 0	C2,	C4: 0		24: U	C4, C3: 0		C5, C3: 0		C6, C3: 0		
				C2,			5.0 6.0		CO. 0					
Obvet2	dB	01,	0.0	02,	0.0	03,0	0.0	04,	<u>00.0</u>	05,0	0.0	00,	0.0	
			0		0				<u>,</u>	0			0	
TEMPORARY_OF	dB	0		0		Ę	0 0		Ф Ф			0		
Treselection	S		0		0	C)	(0			0		
Sintrasearch	dB	not	sent	not	sent	not s	sent	not	sent	not sent		not	sent	
Sintersearch	dB	not	sent	not sent		not sent		not sent		not sent		not sent		

A.5.6.2.2 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 1, and starts to send preambles on the PRACH for sending the CELL UPDATE message with cause value "cell reselection" in Cell 1.

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 section 5.6.2.

 T_{SI} : Maximum repetition period 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.5.7 Cell Re-selection in URA_PCH

A.5.7.1 One frequency present in the neighbour list

A.5.7.1.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in URA_PCH state in section 5.7.2.

The test parameters are given in Table A.5.9 and A.5.10. The UE is requested to monitor neighbouring cells on 1 carrier. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Cells possible for re-selection shall belong to different UTRAN Registration Areas (URA).

Table A.5.9: General test parameters for Cell Re-selection in URA_PCH

	Parameter	Unit	Value	Comment					
initial	Active cell		Cell2						
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6						
final condition	Active cell		Cell1						
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.					
HCS				Not used					
DRX cycle length		S	1.28	The value shall be used for all cells in the test.					
T1		S	15	T1 need to be defined so that cell re- selection reaction time is taken into account.					
T2		S	15	T2 need to be defined so that cell re- selection reaction time is taken into account.					

Table A.5.10: Cell specific test parameters for Cell re-selection in URA_PCH state

Parameter	Unit	Ce	ell 1	Ce	ll 2	Cell 3		Cell 4		Cell 5		Cell 6	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1		Channel 1		Channe	el 1	Channel 1		Channel 1		Channel 1	
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10	
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12	
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12	
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15	
OCNS_Ec/lor	dB	-0.941		-0.941		-0.941		-0.941		-0.941		-0.941	
\hat{I}_{or}/I_{oc}	dB	7.3	10.27	10.27	7.3	0.27		0.27		0.27		0.27	
I _{oc}	dBm/3.84 MHz	-70											
CPICH_Ec/lo	dB	-16	-13	-13	-16	-23		-23		-23		-23	
Propagation Condition							AW	GN					
Cell_selection_and_ reselection_quality_ measure		CPICH E ₀ /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀	ł
Qqualmin	dB	-:	20	-20		-20		-2	-20		20	-20	
Qrxlevmin	dBm	-1	15	-115		-115	5	-115		-115		-115	
UE_TXPWR_ MAX_RACH	dBm	2	21	21		21	21 21		21	21		21	
Qoffset2 _{s, n}	dB	C1, C1, C1, C1, C1, C1,	C1, C2: 0 C1, C3: 0 C1, C4: 0 C1, C5: 0 C1, C6: 0		C2, C1: 0 C2, C3: 0 C2, C4: 0 C2, C5: 0 C2 C6: 0		C3, C1: 0 C3, C2: 0 C3, C4: 0 C3, C5: 0 C3, C6: 0		C1: 0 C2: 0 C3: 0 C5: 0 C6: 0	C5, C1: 0 C5, C2: 0 C5, C3: 0 C5, C4: 0 C5, C6: 0		C6, C1: 0 C6, C2: 0 C6, C3: 0 C6, C4: 0 C6, C5: 0	
Qhyst2	dB		0	()	0		-	0		0	0	i
PENALTY_TIME	8		0	(•	θ			Ð		θ	Ð	ł
TEMPORARY_OFF	dB		0	θ		θ		θ		θ		θ	
Treselection	S		0	()	0			0		0	0	
Sintrasearch	dB	not	sent	not	sent	not se	ot sent not sent			not	sent	not sent	

A.5.7.1.2 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 1, and starts to send preambles on the PRACH for sending the URA UPDATE message with cause value "URA reselection" in Cell 1.

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 section 5.7.2.

 T_{SI} : Maximum repetition period 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.5.7.2 Two frequencies present in the neighbour list

A.5.7.2.1 Test Purpose and Environment

The purpose of this test is to verify the requirement for the cell re-selection delay in URA_PCH state in section 5.7.2.

The test parameters are given in Table A5.11 and A5.12. The UE is requested to monitor neighbouring cells on 2 carriers. The maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell shall be 1280 ms.

Cells possible for re-selection shall belong to different UTRAN Registration Areas (URA).

Table A.5.11: General test parameters for Cell Re-selection in URA_PCH

	Parameter	Unit	Value	Comment				
initial	Active cell		Cell2					
condition	Neighbour cells		Cell1, Cell3,Cell4, Cell5, Cell6					
final condition	Active cell		Cell1					
Access Se - Persisten	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.				
HCS				Not used				
DRX cycle	DRX cycle length		1.28	The value shall be used for all cells in the test.				
T1	T1		s		S		30	T1 need to be defined so that cell re- selection reaction time is taken into account.
T2	Τ2		15	T2 need to be defined so that cell re- selection reaction time is taken into account.				

Table A.5.12: Cell specific test parameters for Cell re-selection in URA_PCH state

Parameter	Unit	Ce	ell 1	Cell 2		Cell 3		Cell 4		Cell 5		Cell 6		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel		Chan	nol 1	Channel 2		Chapr	Channel 1		Channel 1		Channel 2		Channel 2	
Number		Chan		Channel Z				Channel 1		Channel 2				
CPICH_Ec/lor	dB	-10		-10		-10		-10		-10		-10		
PCCPCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
SCH_Ec/lor	dB	-12		-12		-12		-12		-12		-12		
PICH_Ec/lor	dB	-15		-15		-15		-15		-15		-15		
OCNS_Ec/lor	dB	-0.94	1	-0.94	1	-0.941		-0.941		-0.941		-0.941		
\hat{I}_{or}/I_{oc}	dB	-3.4	2.2	2.2	-3.4	-7.4	-4.8	-7.4	-4.8	-4.8	-7.4	-4.8	-7.4	
I _{oc}	dBm/3.8 4 MHz	-70												
CPICH_Ec/lo	dB	-16	-13	-13	-16	-20		-20		-20		-20		
Propagation Condition							1	AWGN						
Cell_selection_ and_reselection_ quality measure		CPICH CI E _c /N ₀ E _c		CPIC E _c /N ₀	CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀		CPICH E _c /N ₀	
Qqualmin	dB	-:	20	-20		-20		-20		-20		-20		
Qrxlevmin	dBm	-1	15	-115		-115		-115		-11	5	-115		
UE_TXPWR_ MAX_RACH	dBm	2	21	21		21		21		21		21		
		C1,	C2: 0	C2,	C1: 0	C3, C	C3, C1: 0 C4, C1: 0		C5, C1: 0		C6, C1: 0			
		C1,	C3: 0	C2,	C3: 0	C3, C	2: 0	C4, C2: 0		C5, C2: 0		C6, C2: 0		
Qoffset2 _{s, n}	dB	C1,	C4: 0	C2,	C4: 0	C3, C	24: 0	C4, C3: 0		C5, C3: 0		C6, C3: 0		
		C1,	C5: 0	C2,	C5: 0	C3, C	25: 0	C4, 0	C4, C5: 0		C5, C4: 0		C6, C4: 0	
		C1,	C6: 0	C2,	C6: 0	C3, C	6: 0	C4, 0	C6: 0	C5, C	6: 0	C6,	C5: 0	
Qhyst2	dB		0		0	0		()	0			0	
PENALTY_TIME	S		0		0	e	•	(•	θ	l		0	
TEMPORARY_OF FSET	d₿	θ			0	Ģ	L	4	θ		L	Φ		
Treselection	S		0		0	0		()	0			0	
Sintrasearch	dB	not	sent	not	sent	not s	sent	not	sent	not s	sent	not	sent	
Sintersearch	dB	not	sent	not sent		not sent		not sent		not sent		not sent		

A.5.7.2.2 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 1, and starts to send preambles on the PRACH for sending URA UPDATE message with cause value "URA reselection" in Cell 1.

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 section 5.7.2.

 T_{SI} : Maximum repetition period 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.