RP-030210

Title CRs (R'99 and Rel-4/Rel-5/Rel-6 Category A) to TS 25.133 (2/2)

Source TSG RAN WG4

Agenda Item 7.4.3

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020524	25.133	585		F	R99	3.13.0	Correction to RRC Re-establishment delay test case in Section A.6.1	TEI
R4-020525	25.133	586		Α	Rel-4	4.8.0	Correction to RRC Re-establishment delay test case in Section A.6.1	TEI
R4-020526	25.133	587		Α	Rel-5	5.6.0	Correction to RRC Re-establishment delay test case in Section A.6.1	TEI
R4-020527	25.133	588		Α	Rel-6	6.1.0	Correction to RRC Re-establishment delay test case in Section A.6.1	TEI
R4-020567	25.133	589	1	F	R99	3.13.0	TGPL limitations for inter-frequency measurements	TEI
R4-020568	25.133	590	1	Α	Rel-4	4.8.0	TGPL limitations for inter-frequency measurements	TEI
R4-020569	25.133	591	1	Α	Rel-5	5.6.0	TGPL limitations for inter-frequency measurements	TEI
R4-020570	25.133	592	1	Α	Rel-6	6.1.0	TGPL limitations for inter-frequency measurements	TEI
R4-020614	25.133	599		F	R99	3.13.0	Correction to SFN-CFN observed time difference	TEI
R4-020615	25.133	600		Α	Rel-4	4.8.0	Correction to SFN-CFN observed time difference	TEI
R4-020616	25.133	601		Α	Rel-5	5.6.0	Correction to SFN-CFN observed time difference	TEI
R4-020617	25.133	602		Α	Rel-6	6.1.0	Correction to SFN-CFN observed time difference	TEI

R4-030524

Paris, France 19 - 23 May, 2003

				DEO	HE6.	 Т			CR-Form-v7
		C	HANGE	KEW	UES	I			
*	25.1	33 CR	585	жrev	*	Curre	nt versio	on: 3.1	3.0 [#]
For <u>HELP</u> on	using thi	is form, see l	oottom of this	page or i	look at t	the pop-u	up text o	over the S	₩ symbols.
				<i>p</i> - <i>g</i>			.,		
Proposed change	offooto	. IIICC on	~~ ~	MEV	Dodio	A 00000 I	Notwork		ro Notwork
Proposed change	anecis.	. ОСС ар	ps #	IVIE	Radio	Access I	Network	(<u> </u>	re Network
Title:	€ Corre	ection to RRC	Re-establis	hment de	elay test	case in	Section	A.6.1	
Source:	RAN	WG4							
Work item code:	# TEI					Di	ate: ೫	27/05/20	003
Category:	ε <mark>F</mark>					Relea	ase: #	R99	
		<u>ne</u> of the follow (correction)	ing categories	S:		Use 2		he followin GSM Pha	ng releases: se 2)
	Α	(corresponds (addition of fe		n in an ear	rlier relea	ise) R	R96 (Release 1 Release 1	(996)
	С	(functional m	odification of f	eature)		R	R98 (Release 1	1998)
		<i>(editorial mode</i> ed explanations		categories	s can			Release 1 Release 4	
		nd in 3GPP TE		J			Rel-5 (Release 5 Release 6	5)
									,
Reason for chang		The lor/loc is RRC Re-esta				ure that T	Γ1 can c	correctly i	mplement the
Summary of char	nae· ¥ T	he Îor/loc va	ue is correct	ed for T2	Now th	e Îor/loc	remain	e constai	nt for Cell2
Gammary or onar		Ithough Cell1				101/100	, remain	is constan	TICTOT OCITE
	<u>Is</u>	solated Impac	ct Analysis:						
		he CR does est case not t				olementa	itions, si	ince it on	ly corrects a
				·					
Consequences if not approved:		T1 may not b tolerances ca							test thernore, this
		may cause a							
Clauses affected:	* # /	A.6.1.1.1							
	Ī	′ N							
Other specs	*		ore specifica	ations	ж				
affected:	X		ecifications		TS	34.121			
		X O&M S	pecifications						
Other comments:		Fauivalent C	Rs in other P	Palaasas:	CR586	cat A to	25 122	v480 (CR587 cat. A
		to 25.133 v5.						v 4 .0.0, (JNOOT Cal. A

How to create CRs using this form:

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

A.6 RRC Connection Control

A.6.1 RRC Re-establishment delay

A.6.1.1 Test Purpose and Environment

The purpose is to verify that the RRC re-establishment delay is within the specified limits. These tests will verify the requirements in section 6.1.2.

A.6.1.1.1 TEST 1

The test parameters are given in table A.6.1 and table A.6.2 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consist of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.1 General test parameters for RRC re-establishment delay, Test 1

Parameter	Unit	Value	Comment
DCH Parameters		DL Reference	As specified in TS 25.101, section A.3.1
		measurement channel	
		12.2 kbps	
Power Control		On	
Active cell, Initial		Cell 1	
condition			
Active cell, Final		Cell 2	
condition			
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms) 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
Monitored cell list size		24	Monitored set shall only include intra frequency neighbours.
Cell 2			Included in the monitored set
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.2 Cell specific parameters for RRC re-establishment delay test, Test 1

Parameter	Unit	Cell 1		Ce	II 2	
		T1	T2	T1	T2	
Cell Frequency	ChNr	•	1	1		
CPICH_Ec/lor	dB	^	10	-1	0	
PCCPCH_Ec/lor	dB	^	12	-1	2	
SCH_Ec/lor	dB	^	12	-12		
PICH_Ec/lor	dB		15	-15		
DCH_Ec/lor	dB	-17	-Infinity	Not applicable		
OCNS_Ec/lor	dB	-1.049	-0.941	-0.941		
\hat{I}_{or}/I_{oc}	dB	2,39	-Infinity	4,39	0,02	
I_{oc}	dBm/ 3.84 MHz		-7	70		
CPICH_Ec/lo	dB	-15	-Infinity	-13		
Propagation Condition		AWGN				

A.6.1.1.2 TEST 2

The test parameters are given in table A.6.3 and table A.6.4 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consists of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.3 General test parameters for RRC re-establishment delay, Test 2

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	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms) 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
Monitored cell list size		24	Monitored set shall include 2 additional frequencies.
Cell 2			Cell 2 is not included in the monitored set. Cell 2 is located on one of the 2 additional frequencies of the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.4 Cell specific parameters for RRC re-establishment delay test, Test 2

Parameter	Unit	Cell 1		Cel	I 2
		T1	T2	T1	T2
Cell Frequency	ChNr		1	2	
CPICH_Ec/lor	dB	-	10	-1	0
PCCPCH_Ec/lor	dB	-	12	-12	
SCH_Ec/lor	dB	-	12	-12	
PICH_Ec/lor	dB	-15		-15	
DCH_Ec/lor	dB	-17	-Infinity	Not applicable	
OCNS_Ec/lor	dB	-1.049	-0.941	-0.941	
\hat{I}_{or}/I_{oc}	dB	-3,35	-Infinity	-Infinity	0,02
I_{oc}	dBm/ 3.84 MHz	<u>,</u>		-70	
CPICH_Ec/lo	dB	-15 -Infinity		-Infinity	-13
Propagation Condition		AWGN			

A.6.1.2 Test Requirements

A.6.1.2.1 Test 1

The Re-establishment delay $T_{\text{RE-ESTABLISH}}$ to a known cell shall be less than 1.9 s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

T_{RE-ESTABLISH}= T_{RRC-RE-ESTABLISH}+ T_{UE-RE-ESTABLISH-REQ-KNOWN}.

where

 $T_{RRC-RE-ESTABLISH} = 160ms + (N_{313}-1)*10ms + T_{313}$

 $T_{\text{UE-RE-ESTABLISH_REQ-KNOWN}} = 50 ms + T_{\text{search}} + T_{\text{SI}} + T_{\text{RA}},$

 $N_{313} = 20$

 $T_{313} = 0s$

 $T_{search} = 100 ms$

 T_{RA} = The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

T_{SI} is 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 (ms). 1280 ms is assumed in this test case.

This gives a total of 1820ms, allow 1.9s in the test case.

A.6.1.2.2 Test 2

The Re-establishment delay to an unknown cell shall be less than 4.2 s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

 $T_{RE-ESTABLISH} = T_{RRC-RE-ESTABLISH} + T_{UE-RE-ESTABLISH-REQ-UNKNOWN}$

where

 $T_{RRC-RE-ESTABLISH} = 160ms + (N_{313}-1)*10ms + T_{313}$

 $T_{\text{UE-RE-ESTABLISH-REQ-UNKNOWN}}\!\!=\!\!50ms\!\!+\!T_{\text{search}}*NF+T_{SI}+T_{RA},$

 $N_{313} =$ 20 0s $T_{313} =$ $T_{search} =$ 800ms

NF is the number of different frequencies in the monitored set. 3 frequencies are assumed in this test

case.

 $T_{RA} =$ The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

is 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 T_{SI}

for a UTRAN cell (ms).1280 ms is assumed in this test case.

This gives a total of 4120ms, allow 4.2s in the test case.

R4-030525

Paris, France 19 - 23 May, 2003

														CR-Form-v7
	CHANGE REQUEST													
*		25	.133	CR	58	6	rev		æ	Curre	nt vers	sion:	4.8.0	æ
For HELF	on us	sina i	this for	m. see b	ottom of t	his pa	age or	look	at the	e pop-ı	ın texi	t over	the % sv	mbols.
1 01 11221	_ 0// uc	on ig		,,, 000 B		no po	igo o	10011	at tin	o pop c	ap toxt	. 0101	1170 00 0y	mooro.
Proposed ch	ange a	affec	<i>ts:</i> (JICC app	s#	ı	ME X	Rad	A oib	.ccess l	Netwo	rk	Core N	etwork
								'					-	
Title:	Ж	Co	rrectio	n to RRC	Re-estab	lishm	ent de	elay to	est c	ase in	Sectio	n A.6	.1	
Source:	ж	RA	N WG	4										
Work item co	ode: #	TE								D	ate: #	27/	05/2003	
Category:	æ	Α									ase: #	_		
				the followi rection)	ng categoi	ies:				Use 2			nllowing rel If Phase 2)	
					to a correc	tion in	an ea	rlier re	elease		R96		ase 1996)	
				dition of fe	ature), dification d	of foat	uro)				R97 R98		ase 1997) ase 1998)	
				torial mod		птеан	ur e)				R99		ase 1990) ase 1999)	
				olanations 3GPP <u>TR</u>	of the abo	ve cat	egorie	s can			Rel-4 Rel-5		ease 4)	
		De IC	una m	JGFF IK	<u>21.900</u> .						Rel-6		ease 5) ease 6)	
December 6	.	. 00	Th	î/l : -			-l 4 -			- 414 7	F4			
Reason for c	nange	: њ			olishment					e that i	i i can	COTTE	еспу ітріє	ement the
						-				î //				0.110
Summary of	cnang	'e: ж			ue is corre disappea				v the	lor/loc	rema	ins co	onstant fo	r Cell2
			annoc	igir Ocii i	шзаррса	i S ddi	11119 12							
			Isolate	ed Impac	t Analysis									
				•										
					ot affect line actual of					ementa	itions,	since	it only co	rrects a
			1001 00	200 1101 11	io aotaar i	00101	oquire	,,,,,	••					
Consequenc		Ж			e able to i									oro thio
not approved	1.				used by te terminal f									iore, triis
Clauses affe	cted:	Ж	A.6.1	1.1.1										
			YN											
Other specs		Ж	X		ore specif		ns	æ						
affected:			X		ecification pecification				TS3	4.121				
			^	J Calvi 3	o c omoano	113								
Other commo	ents:	Ж						05.5						
					Rs in othe 3.0, CR58						25.13	33 v3.	13.0, CR	587 cat. A
l			.5 20		, 5.100	J Jul.	, , , , ,	_00	J 10					

How to create CRs using this form:

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

A.6 RRC Connection Control

A.6.1 RRC Re-establishment delay

A.6.1.1 Test Purpose and Environment

The purpose is to verify that the RRC re-establishment delay is within the specified limits. These tests will verify the requirements in section 6.1.2.

A.6.1.1.1 TEST 1

The test parameters are given in table A.6.1 and table A.6.2 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consist of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.1 General test parameters for RRC re-establishment delay, Test 1

Parameter	Unit	Value	Comment
DCH Parameters		DL Reference	As specified in TS 25.101, section A.3.1
		measurement	·
		channel 12.2 kbps	
Power Control		On	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 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.
Monitored cell list size		24	Monitored set shall only include intra frequency neighbours.
Cell 2			Included in the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.2 Cell specific parameters for RRC re-establishment delay test, Test 1

Parameter	Unit	Cell 1		Ce	II 2	
		T1	T2	T1	T2	
Cell Frequency	ChNr	•	1	1		
CPICH_Ec/lor	dB	^	10	^	10	
PCCPCH_Ec/lor	dB	^	12	^	12	
SCH_Ec/lor	dB	^	12	-12		
PICH_Ec/lor	dB		15	-15		
DCH_Ec/lor	dB	-17	-Infinity	Not applicable		
OCNS_Ec/lor	dB	-1.049	-0.941	-0.941		
\hat{I}_{or}/I_{oc}	dB	2,39	-Infinity	4,39	0,02	
I_{oc}	dBm/ 3.84 MHz	-		0		
CPICH_Ec/lo	dB	-15	-Infinity	-13		
Propagation Condition		AWGN				

A.6.1.1.2 TEST 2

The test parameters are given in table A.6.3 and table A.6.4 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consists of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.3: General test parameters for RRC re-establishment delay, Test 2

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	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 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.
Monitored cell list size		24	Monitored set shall include 2 additional frequencies.
Cell 2			Cell 2 is not included in the monitored set. Cell 2 is located on one of the 2 additional frequencies of the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.4 Cell specific parameters for RRC re-establishment delay test, Test 2

Parameter	Unit	Cell 1		Ce	II 2
		T1	T2	T1	T2
Cell Frequency	ChNr		1		2
CPICH_Ec/lor	dB	-	10	-1	10
PCCPCH_Ec/lor	dB	-	12	-1	12
SCH_Ec/lor	dB	-	12	-12	
PICH_Ec/lor	dB	-	15	-15	
DCH_Ec/lor	dB	-17	-Infinity	Not applicable	
OCNS_Ec/lor	dB	-1.049	-0.941	-0.941	
\hat{I}_{or}/I_{oc}	dB	-3,35	-Infinity	-Infinity	0,02
I_{oc}	dBm/ 3.84 MHz			-70	
CPICH_Ec/lo	dB	-15 -Infinity		-Infinity	-13
Propagation Condition		AWGN			

A.6.1.2 Test Requirements

A.6.1.2.1 Test 1

The Re-establishment delay T_{RE-ESTABLISH} to a known cell shall be less than 1.9s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

T_{RE-ESTABLISH}= T_{RRC-RE-ESTABLISH}+ T_{UE-RE-ESTABLISH-REQ-KNOWN}.

where

 $T_{RRC-RE-ESTABLISH} = 160ms + (N_{313}-1)*10ms + T_{313}$

 $T_{\text{UE-RE-ESTABLISH_REQ-KNOWN}} = 50 \text{ms+} T_{\text{search}} + T_{\text{SI}} + T_{\text{RA}},$

 $N_{313} = 20$

 $T_{313} = 0s$

 $T_{search} = 100 ms$

 T_{RA} = The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

T_{SI} is 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 (ms). 1280 ms is assumed in this test case.

This gives a total of 1820ms, allow 1.9s in the test case.

A.6.1.2.2 Test 2

The Re-establishment delay to an unknown cell shall be less than 4.2s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

 $T_{RE-ESTABLISH} = T_{RRC-RE-ESTABLISH} + T_{UE-RE-ESTABLISH-REQ-UNKNOWN}$.

where

 $T_{RRC-RE-ESTABLISH} = 160ms + (N_{313}-1)*10ms + T_{313}$

 $T_{\text{UE-RE-ESTABLISH-REQ-UNKNOWN}} = 50 \text{ms} + T_{\text{search}} * \text{NF} + T_{\text{SI}} + T_{\text{RA}},$

 N_{313} =20

 T_{313} =0s

 T_{search} =800 ms

is the number of different frequencies in the monitored set. 3 frequencies are assumed in this test NF

case.

= The additional delay caused by the random access procedure. 40 ms is assumed in this test case. T_{RA}

is 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 T_{SI}

for a UTRAN cell (ms).1280 ms is assumed in this test case.

This gives a total of 4120ms, allow 4.2s in the test case.

R4-030526

Paris, France 19 - 23 May, 2003

	CHANGE REQUEST	CR-Form-v7
*	25.133 CR 587 ** rev **	Current version: 5.6.0 **
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the	e pop-up text over the % symbols.
Proposed change	nffects: UICC apps第 <mark> ME X</mark> Radio A	ccess Network Core Network
Title: %	Correction to RRC Re-establishment delay test ca	ase in Section A.6.1
Source: #	RAN WG4	
Work item code: ₩	TEI	<i>Date:</i>
Category: #	A	Release: % Rel-5
outogory.	Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Use <u>one</u> of the following releases: 2 (GSM Phase 2)
Reason for change	The Îor/loc is corrected in order to make sure RRC Re-establishment delay test case.	e that T1 can correctly implement the
Summary of chang	e: # The Îor/loc value is corrected for T2. Now the although Cell1 disappears during T2.	Îor/loc remains constant for Cell2
Consequences if not approved:	# T1 may not be able to implement the test car tolerances caused by test equipment uncerta may cause a terminal fulfilling the core requi	ainties are applied. Furthernore, this
Clauses affected:	器 A.6.1.1.1	
Other specs	Y N X Other core specifications %	
affected:	X O&M Specifications	4.121
Other comments:	# Equivalent CRs in other Releases: CR585 cato 25,133 v4.8.0, CR588 cat. A to 25,133 v6	

How to create CRs using this form:

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

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

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

A.6 RRC Connection Control

A.6.1 RRC Re-establishment delay

A.6.1.1 Test Purpose and Environment

The purpose is to verify that the RRC re-establishment delay is within the specified limits. These tests will verify the requirements in section 6.1.2.

A.6.1.1.1 TEST 1

The test parameters are given in table A.6.1 and table A.6.2 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consist of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.1 General test parameters for RRC re-establishment delay, Test 1

Parameter	Unit	Value	Comment
DCH Parameters		DL Reference	As specified in TS 25.101, section A.3.1
		measurement	
		channel 12.2 kbps	
Power Control		On	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 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.
Monitored cell list size		24	Monitored set shall only include intra frequency neighbours.
Cell 2			Included in the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.2 Cell specific parameters for RRC re-establishment delay test, Test 1

Parameter	Unit	Cell 1		Се	II 2	
		T1	T2	T1	T2	
Cell Frequency	ChNr		1	,		
CPICH_Ec/lor	dB	-	10	-1	0	
PCCPCH_Ec/lor	dB	-	12	-1	2	
SCH_Ec/lor	dB		12	-12		
PICH_Ec/lor	dB		15	-15		
DCH_Ec/Ior	dB	-17	-Infinity	Not applicable		
OCNS_Ec/lor	dB	-1.049	-0.941	-0.9	941	
\hat{I}_{or}/I_{oc}	dB	2,39	-Infinity	4,39	<u>0,02</u>	
I_{oc}	dBm/ 3.84 MHz		-7	0		
CPICH_Ec/Io	dB	-15	-Infinity	-1	3	
Propagation Condition		AWGN				

A.6.1.1.2 TEST 2

The test parameters are given in table A.6.3 and table A.6.4 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consists of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.3 General test parameters for RRC re-establishment delay, Test 2

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	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 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.
Monitored cell list size		24	Monitored set shall include 2 additional frequencies.
Cell 2			Cell 2 is not included in the monitored set. Cell 2 is located on one of the 2 additional frequencies of the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.4 Cell specific parameters for RRC re-establishment delay test, Test 2

Parameter	Unit	Cell 1		Ce	II 2			
		T1	T2	T1	T2			
Cell Frequency	ChNr		1	2	2			
CPICH_Ec/lor	dB	-	10	-1	0			
PCCPCH_Ec/lor	dB	-	12	-1	2			
SCH_Ec/lor	dB	-	12	-12				
PICH_Ec/lor	dB	-15		-15				
DCH_Ec/lor	dB	-17	-Infinity	Not applicable				
OCNS_Ec/lor	dB	-1.049	-0.941	-0.9	941			
\hat{I}_{or}/I_{oc}	dB	-3,35	-Infinity	-Infinity	0,02			
I_{oc}	dBm/ 3.84 MHz	-70						
CPICH_Ec/lo	dB	-15	-Infinity	-Infinity	-13			
Propagation Condition			AWGN					

A.6.1.2 Test Requirements

A.6.1.2.1 Test 1

The Re-establishment delay T_{RE-ESTABLISH} to a known cell shall be less than 1.9s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

T_{RE-ESTABLISH}= T_{RRC-RE-ESTABLISH}+ T_{UE-RE-ESTABLISH-REO-KNOWN}.

where

 $T_{RRC-RE-ESTABLISH} = 160 \text{ms} + (N_{313}-1)*10 \text{ms} + T_{313}$

 $T_{UE-RE-ESTABLISH\ REQ-KNOWN} = 50ms + T_{search} + T_{SI} + T_{RA}$

 $N_{313}=20$

 $T_{313} = 0s$

 $T_{search}=100ms$

 T_{RA} = The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

 T_{SI} is 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 (ms). 1280 ms is assumed in this test case.

This gives a total of 1820ms, allow 1.9s in the test case.

A.6.1.2.2 Test 2

The Re-establishment delay to an unknown cell shall be less than 4.2s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

T_{RE-ESTABLISH}= T_{RRC-RE-ESTABLISH}+ T_{UE-RE-ESTABLISH-REQ-UNKNOWN}.

where

 $T_{RRC-RE-ESTABLISH} = 160ms + (N_{313}-1)*10ms + T_{313}$

 $T_{\text{UE-RE-ESTABLISH-REQ-UNKNOWN}}\!\!=\!\!50ms\!+\!T_{\text{search}}*NF+T_{SI}+T_{RA},$

 $N_{313}=20$

 $T_{313} = 0s$

 $T_{search} = 800 ms$

NF is the number of different frequencies in the monitored set. 3 frequencies are assumed in this test case.

 T_{RA} = The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

 T_{SI} is 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 (ms).1280 ms is assumed in this test case.

This gives a total of 4120ms, allow 4.2s in the test case.

R4-030527

Paris, France 19 - 23 May, 2003

				CH	IANGE	REQ	UE	ST				CR-Form-v7
*		25	.133	CR	588	жrev		% (Current vers	sion:	6.1.0	¥
For <u>H</u>	ELP on ເ	using	this for	m, see bo	ottom of this	s page or	look a	at the	pop-up text	over t	the % syr	nbols.
Proposed				ЛСС арр			<u>-</u>		cess Netwo			etwork
Title:	₩	Co	rrection	n to RRC	Re-establis	shment de	elay te	est ca	se in Sectio	n A.6.	1	
Source:	æ	RA	N WG	4								
Work iter	n code: #	ТЕ	l						Date: #	27/0	05/2003	
	or chang	Deta be fo e: 器	F (com A (com B (add C (funn D (edit illed expound in The RRC	rection) responds to dition of fea ctional moditorial m	dification of the fication of the above 21.900. corrected in the blishment decided as the corrected in the	feature) categorie corder to elay test	make case.	sure	Release: # Use one of 2 R96 R97 R98 R99 Rel-4 Rel-5 Rel-6 that T1 can	the foli (GSM (Relea (Relea (Relea (Relea (Relea (Relea (Relea	lowing related to the control of the	ement the
Consequ not appro		*	tolera	ances cau	used by test	t equipme	ent un	certai	e correctly v nties are ap ement to fail	plied.	Furthern	ore, this
Clauses a	affected:	*	A.6.1	1.1.1								
Other speaffected:		*	Y N X X	Other co	ore specifica ecifications pecifications		Ж	TS34	.121			
Other co	mments:	¥			s in other F 3.0, CR587				t. F to 25.13 3.0	3 v3.1	3.0, CR5	86 cat. A

How to create CRs using this form:

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

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

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

A.6 RRC Connection Control

A.6.1 RRC Re-establishment delay

A.6.1.1 Test Purpose and Environment

The purpose is to verify that the RRC re-establishment delay is within the specified limits. These tests will verify the requirements in section 6.1.2.

A.6.1.1.1 TEST 1

The test parameters are given in table A.6.1 and table A.6.2 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consist of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.1 General test parameters for RRC re-establishment delay, Test 1

Parameter	Unit	Value	Comment
DCH Parameters		DL Reference	As specified in TS 25.101, section A.3.1
		measurement	
		channel 12.2 kbps	
Power Control		On	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 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.
Monitored cell list size		24	Monitored set shall only include intra frequency neighbours.
Cell 2			Included in the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.2 Cell specific parameters for RRC re-establishment delay test, Test 1

Parameter	Unit	Cell 1		Се	II 2	
		T1	T2	T1	T2	
Cell Frequency	ChNr		1	,		
CPICH_Ec/lor	dB	-	10	-1	0	
PCCPCH_Ec/lor	dB	-	12	-1	2	
SCH_Ec/lor	dB		12	-12		
PICH_Ec/lor	dB		15	-15		
DCH_Ec/Ior	dB	-17	-Infinity	Not applicable		
OCNS_Ec/lor	dB	-1.049	-0.941	-0.9	941	
\hat{I}_{or}/I_{oc}	dB	2,39	-Infinity	4,39	<u>0,02</u>	
I_{oc}	dBm/ 3.84 MHz		-7	0		
CPICH_Ec/lo	dB	-15	-Infinity	-1	3	
Propagation Condition		AWGN				

A.6.1.1.2 TEST 2

The test parameters are given in table A.6.3 and table A.6.4 below. In the measurement control information it is indicated to the UE that periodic reporting shall be used. The test consists of 2 successive time periods, with a time duration of T1 and T2 respectively. At the start of time period T2, the dedicated channel is removed.

Table A.6.3 General test parameters for RRC re-establishment delay, Test 2

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	
Active cell, initial condition		Cell 1	
Active cell, final condition		Cell 2	
N313		20	
N315		1	
T313	Seconds	0	
T _{SI}	ms	1280	Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 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.
Monitored cell list size		24	Monitored set shall include 2 additional frequencies.
Cell 2			Cell 2 is not included in the monitored set. Cell 2 is located on one of the 2 additional frequencies of the monitored set.
Reporting frequency	Seconds	4	
T1	S	10	
T2	S	6	

Table A.6.4 Cell specific parameters for RRC re-establishment delay test, Test 2

Parameter	Unit	Cell 1		Ce	II 2			
		T1	T2	T1	T2			
Cell Frequency	ChNr		1	2	2			
CPICH_Ec/lor	dB	-	10	-1	0			
PCCPCH_Ec/lor	dB	-	12	-1	2			
SCH_Ec/lor	dB	-	12	-12				
PICH_Ec/lor	dB	-15		-15				
DCH_Ec/lor	dB	-17	-Infinity	Not applicable				
OCNS_Ec/lor	dB	-1.049	-0.941	-0.9	941			
\hat{I}_{or}/I_{oc}	dB	-3,35	-Infinity	-Infinity	0,02			
I_{oc}	dBm/ 3.84 MHz	-70						
CPICH_Ec/lo	dB	-15	-Infinity	-Infinity	-13			
Propagation Condition			AWGN					

A.6.1.2 Test Requirements

A.6.1.2.1 Test 1

The Re-establishment delay T_{RE-ESTABLISH} to a known cell shall be less than 1.9s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

T_{RE-ESTABLISH}= T_{RRC-RE-ESTABLISH}+ T_{UE-RE-ESTABLISH-REO-KNOWN}.

where

 $T_{RRC-RE-ESTABLISH} = 160 \text{ms} + (N_{313}-1)*10 \text{ms} + T_{313}$

 $T_{UE-RE-ESTABLISH\ REQ-KNOWN} = 50ms + T_{search} + T_{SI} + T_{RA}$

 $N_{313}=20$

 $T_{313} = 0s$

 $T_{search}=100ms$

 T_{RA} = The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

 T_{SI} is 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 (ms). 1280 ms is assumed in this test case.

This gives a total of 1820ms, allow 1.9s in the test case.

A.6.1.2.2 Test 2

The Re-establishment delay to an unknown cell shall be less than 4.2s.

The rate of correct RRC re-establishments observed during repeated tests shall be at least 90%.

NOTE: The Re-establishment delay in this case can be expressed as

T_{RE-ESTABLISH}= T_{RRC-RE-ESTABLISH}+ T_{UE-RE-ESTABLISH-REQ-UNKNOWN}.

where

 $T_{RRC-RE-ESTABLISH} = 160ms + (N_{313}-1)*10ms + T_{313}$

 $T_{\text{UE-RE-ESTABLISH-REQ-UNKNOWN}}\!\!=\!\!50ms\!+\!T_{\text{search}}*NF+T_{SI}+T_{RA},$

 $N_{313}=20$

 $T_{313} = 0s$

 $T_{search} = 800 ms$

NF is the number of different frequencies in the monitored set. 3 frequencies are assumed in this test case.

 T_{RA} = The additional delay caused by the random access procedure. 40 ms is assumed in this test case.

 T_{SI} is 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 (ms).1280 ms is assumed in this test case.

This gives a total of 4120ms, allow 4.2s in the test case.

R4-030567

Paris, France 19 - 23 May, 2003 CR-Form-v7 CHANGE REQUEST æ Current version: 3.13.0 % 25.133 CR 589 **#rev** For HELP on using this form, see bottom of this page or look at the pop-up text over the % symbols. ME X Radio Access Network X Core Network Proposed change affects: UICC apps# Title: TGPL limitations for inter-frequency measurements Source: **# RAN WG4** Date: # 27/05/2003 Category: Release: # R99 Use one of the following categories: Use one of the following releases: F (correction) (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) **B** (addition of feature). R97 (Release 1997) **C** (functional modification of feature) R98 (Release 1998) **D** (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can Rel-4 (Release 4) be found in 3GPP TR 21.900. Rel-5 (Release 5) Rel-6 (Release 6) Reason for change: # Currently TS25.331 defines a large value range for the compressed mode parameter TGPL. Some of the highest values are not realistic in any environments and thereby they only cause unnecessary UE complexity and delay in UE testing. Summary of change: % A new column in Table 8.1 has been added with the parameter 'Max TGPL' in order to limit the maximum TGPL values for which the performance requirements are applicable. Isolated Impact Analysis: No changes are required in the UE. In order that the UE performance requirements apply the UTRAN must provide compressed mode patterns with TGPL value within the defined limit Max TGPL. Consequences if **%** Current specification will contain Compressed Mode pattern configurations that not approved: would never be used in any deployment scenario. This can cause unnecessary UE complexity and delay in UE testing. Clauses affected: 第 8.1.2.3 Other core specifications Other specs Test specifications affected: TS34.121

O&M Specifications

Other comments:

ж

Equivalent CRs in other Releases: CR590r1 cat. A to 25.133 v4.8.0, CR591r1 cat. A to 25.133 v5.6.0, CR592r1 cat. A to 25.133 v6.1.0

How to create CRs using this form:

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

8.1.2.3 FDD inter frequency measurements

In the CELL_DCH state when a transmission gap pattern sequence with the "FDD measurements" purpose is provided by the network the UE shall continuously measure identified inter frequency cells and search for new inter frequency cells indicated in the measurement control information.

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose FDD measurement using the following combinations for TGL1, TGL2, and TGD_ and Max TGPL:

Table 8.1

TGL1 [slots]	TGL2 [slots]	TGD [slots]	Max TGPL [frames]
7	-	undefined	<u>18</u>
14	-	undefined	<u>36</u>
10	-	Undefined	<u>24</u>
7	7	15269	18 + ceil(TGD/15)
14	14	<u>4</u> 45269	36 + ceil(TGD/15)
10	5	15269	

R4-030568

	ris, France 19 - 23 May, 2003								-030300		
			(CHANGE	REQ	UE	ST	•			CR-Form-v7
æ	25	.133	CR	590	≋rev	1	æ	Current ver	sion:	4.8.0	¥
For <mark>HELP</mark> on t	using	this for	m, see	e bottom of this	s page or	look	at th	e pop-up tex	t ove	r the % syr	mbols.
Proposed change	affec	ets: (JICC a	apps#	ME X	Ra	dio A	Access Netwo	ork X	Core Ne	etwork
Title:	TG	PL lim	itation	s for inter-frequ	lency me	asur	emer	nts			
Source: #	RA	N WG	4								
Work item code: ೫	в те	l						Date: 8	€ 27	7/05/2003	
Category: अ	Deta	F (cor. A (cor. B (add C (fun D (edi iiled exp	rection) respon dition of ctional torial m olanatio	owing categories ds to a correctio f feature), modification of toodification) ons of the above TR 21.900.	n in an eal eature)			2	f the f (GS (Rel (Rel (Rel (Rel (Rel	el-4 following rele M Phase 2) fease 1996) fease 1997) fease 1998) fease 1999) fease 4) fease 5)	eases:
Reason for chang	e: Ж	para envii	meter ronme	S25.331 defining TGPL. Some on the sand thereby testing.	of the high	nest '	value	es are not rea	alistic	in any	
Summary of chang	ge: Ж	order are applications are applications. Isolate No character In order	to limitoplicable description to limit the limit to limit the limit the limit to limit the limit to limit the limit the limit the limit to limit the limit the limit to limit the limit to limit the limit the limit to limit the limit to limit the limit t	nn in Table 8.1 t the maximum ple. pact Analysis: are required in the UE perform	TGPL vante the UE.	alues	for ver	which the per	form:	ance requii	rements
Consequences if not approved:	ж	woul	d neve	ecification will or be used in a exity and delay	ny deploy	men					
Clauses affected:	ж	8.1.2	2.3								
Other specs affected:	ж	Y N X Y N	Test	r core specifica specifications		æ	TS3	34.121			

Other comments:

ж

Equivalent CRs in other Releases: CR589r1 cat. F to 25.133 v3.13.0, CR591r1 cat. A to 25.133 v5.6.0, CR592r1 cat. A to 25.133 v6.1.0

How to create CRs using this form:

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

8.1.2.3 FDD inter frequency measurements

In the CELL_DCH state when a transmission gap pattern sequence with the "FDD measurements" purpose is provided by the network the UE shall continuously measure identified inter frequency cells and search for new inter frequency cells indicated in the measurement control information.

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose FDD measurement using the following combinations for TGL1, TGL2, and TGD_ and Max TGPL:

Table 8.1

TGL1 [slots]	TGL2 [slots]	TGD [slots]	Max TGPL [frames]
7	-	undefined	<u>18</u>
14	-	undefined	<u>36</u>
10	-	Undefined	<u>24</u>
7	7	15269	18 + ceil(TGD/15)
14	14	<u>4</u> 45269	36 + ceil(TGD/15)
10	5	15269	

R4-030569

Paris, France			•	,						-030303	
				CHANGE	REQ	UE	ST	•			CR-Form-
¥	25	.133	CR	591	≋rev	1	æ	Current ver	sion:	5.6.0	*
For <u>HELP</u> on t	using	this foi	m, see	e bottom of thi	is page or	look	at th	ne pop-up tex	t ove	r the ૠ syı	mbols.
Proposed change	affec	ts:	JICC a	apps %	ME X	Ra	dio A	Access Netwo	ork X	Core Ne	etwork
itle: #	TG	PL lim	itation	s for inter-free	luency me	asur	eme	nts			
Source:	RA	N WG	4								
Vork item code: ₩	TE	I						Date: 8	€ 27	7/05/2003	
Category: ₩	Deta	F (cor. A (cor. B (add C (fun D (edi iiled ex	rection) respon dition of ctional torial m	owing categories ds to a correction f feature), modification of modification) mos of the above TR 21.900.	on in an ea feature)			2	f the f (GS (Rei (Rei (Rei (Rei (Rei	el-5 following rela M Phase 2) lease 1996) lease 1998) lease 1999) lease 4) lease 5)	eases:
Reason for chang	e: %	para envii	meter ronme	S25.331 defir TGPL. Some nts and thereb testing.	of the high	nest v	/alue	es are not rea	alistic	in any	
Summary of chan	ge: Ж	order are applications are applications. Isolate No character and the character are applications are applications are applications. In order are applications are applications are applications are applications are applications.	to limitoplicable description to limit the limit to limit the limit the limit to limit the limit to limit the limit the limit the limit to limit the limit the limit to limit the limit to limit the limit the limit to limit the limit to limit the limit t	nn in Table 8. t the maximum le. eact Analysis: are required the UE perfo	n TGPL vain the UE.	alues	for verner	which the per	form:	ance requi	rements
Consequences if not approved:	ж	woul	d neve	ecification will er be used in a exity and delay	any deploy	/men					
Clauses affected:	ж	8.1.2	2.3								
Other specs affected:	æ	Y N X Y N	Test	r core specific specifications		ж	TS3	34.121			

Other comments:

ж

Equivalent CRs in other Releases: CR589r1 cat. F to 25.133 v3.13.0, CR590r1 cat. A to 25.133 v4.8.0, CR592r1 cat. A to 25.133 v6.1.0

How to create CRs using this form:

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

8.1.2.3 FDD inter frequency measurements

In the CELL_DCH state when a transmission gap pattern sequence with the "FDD measurements" purpose is provided by the network the UE shall continuously measure identified inter frequency cells and search for new inter frequency cells indicated in the measurement control information.

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose FDD measurement using the following combinations for TGL1, TGL2, and TGD_ and Max TGPL:

Table 8.1

TGL1 [slots]	TGL2 [slots]	TGD [slots]	Max TGPL [frames]
7	-	undefined	<u>18</u>
14	-	undefined	<u>36</u>
10	-	Undefined	<u>24</u>
7	7	15269	18 + ceil(TGD/15)
14	14	45269	36 + ceil(TGD/15)
10	5	33269	

R4-030570

Paris, France			•	•	<i></i>					-030370	
			(CHANGE	REQ	UE	ST	-			CR-Form-
¥	25	.133	CR	592	жrev	1	¥	Current ver	sion:	6.1.0	æ
For <u>HELP</u> on t	using	this for	m, see	e bottom of this	s page or	look	at th	e pop-up tex	t ove	r the % syi	mbols.
Proposed change	affec	ts: l	JICC a	apps #	ME X	Ra	dio A	access Netwo	ork X	Core No	etwork
Title: #	TG	PL lim	itation	s for inter-freq	uency me	asur	emei	nts			
Source: #	RA	N WG	4								
Work item code: ₩	TE	l						Date: 8	£ 27	7/05/2003	
Category: ೫	Deta	F (cord A (cord B (add C (fund D (editional)	rection) respon dition of ctional torial m	owing categories ds to a correction f feature), modification of the constraint of the shove TR 21.900.	n in an eal			2	of the f (GS (Rei (Rei (Rei (Rei (Rei	el-6 following related to the second	
Reason for chang	e: Ж	para envii	meter ronme	S25.331 defin TGPL. Some onts and therebet testing.	of the high	nest v	/alue	es are not rea	alistic	in any	
Summary of chan	ge: Ж	order are applications are applications. Isolate No character In order	to limitoplicable description to limit the limit to limit the limit the limit to limit the limit to limit the limit the limit the limit to limit the limit the limit to limit the limit to limit the limit the limit to limit the limit to limit the limit t	nn in Table 8.1 t the maximum ele. eact Analysis: are required in the UE perfor in mode pattern	n TGPL vanned the TGPL vanned	alues	for verner	which the per	rform:	ance requi	rements
Consequences if not approved:	ж	woul	d neve	ecification will or be used in a exity and delay	ny deploy	/men					
Clauses affected:	ж	8.1.2	2.3								
Other specs affected:	ж	Y N X Y N	Test	r core specifications		æ	TS3	34.121			

Other comments:

ж

Equivalent CRs in other Releases: CR589r1 cat. F to 25.133 v3.13.0, CR590r1 cat. A to 25.133 v4.8.0, CR591r1 cat. A to 25.133 v5.6.0

How to create CRs using this form:

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

8.1.2.3 FDD inter frequency measurements

In the CELL_DCH state when a transmission gap pattern sequence with the "FDD measurements" purpose is provided by the network the UE shall continuously measure identified inter frequency cells and search for new inter frequency cells indicated in the measurement control information.

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose FDD measurement using the following combinations for TGL1, TGL2, and TGD_ and Max TGPL:

Table 8.1

TGL1 [slots]	TGL2 [slots]	TGD [slots]	Max TGPL [frames]
7	-	undefined	<u>18</u>
14	-	undefined	<u>36</u>
10	-	Undefined	<u>24</u>
7	7	15269	18 + ceil(TGD/15)
14	14	45269	36 + ceil(TGD/15)
10	5	33269	

R4-030614

Paris, France 19 - 23 May, 2003

			СНА	NGE	REQ	UE	ST	•		CR-Form-v7
*	25	.133	CR <mark>599</mark>		жrev		¥	Current vers	3.1	1 <mark>3.0</mark> ^ж
For <u>HELP</u> (on using	this for	m, see bottor	n of this	page or	look	at the	e pop-up tex	t over the	₩ symbols.
Proposed chan	ge affec	ets:	JICC apps ⋇ [ME X	Rad	dio A	ccess Netwo	ork C	ore Network
Title:	₩ Co	rrection	to SFN-CFN	l observ	ed time	differ	ence			
Source:	₩ RA	N WG	4							
Work item code	e: % TE	I						Date: ₩	27/05/2	2003
Category: Reason for cha	Deta be fo	F (corr A (corr B (add C (fund D (edit ailed exp bund in 3	responds to a dilition of feature ctional modificational modificationations of the GPP TR 21.9	correction), ation of fe ion) e above 00.	n in an ea eature) categorie	s can		2 R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	the follow (GSM Ph (Release (Release (Release (Release (Release (Release	1996) 1997) 1998) 1999) 4) 5)
Summary of ch	ange: %	The C	ELL_FACH st requency and	ate have						e difference in
Consequences not approved:	if ₩	with the state of	requirements the UE measured impact: CR has an isceen specificate	urement olated in	abilities	defin	ied in	n 25.215.		-
Clauses affecte	ed: #	9.1.7								
Other specs affected:	*	Y N X X	Other core s Test specific O&M Specif	ations	tions	*	34.1	21		
Other commen	ts: ૠ	Equiv	/alent CRs in .133 v5.6.0, (33 v4.8.0,	CR601 cat. A

How to create CRs using this form:

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

9.1.7 SFN-CFN observed time difference

This measurement is for handover timing purposes to identify active cell and neighbour cell Note: time difference.

9.1.7.1 Intra frequency measurement requirement

The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2. The measurement period

The accuracy requirement in table 9.16 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH _RSCP1|_{in dBm} - CPICH _RSCP2|_{in dBm}| \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in,dR}} - \left(\frac{CPICH_E_c}{I_{or}}\right)_{in,dR} \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}} \quad - \quad \left(\frac{P - CCPCH _ E_c}{I_{or}}\right)_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

Table 9.16

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm/3.84 MHz]
SFN-CFN observed time difference	chip	±1	-9450

9.1.7.2 Inter frequency measurement requirement

The measurement period for CELL DCH state can be found in sub clause 8.1.2.3. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.3.

The accuracy requirement in table 9.17 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in\ dBm} - CPICH \ RSCP2|_{in\ dBm}| \le 20dB$$

| Channel 1_Io|_dBm/3.84 MHz - Channel 2_Io|_dBm/3.84 MHz | $\leq 20~dB.$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dR}}$$
 - $\left(\frac{CPICH_E_c}{I_{or}}\right)_{in\ dR} \le 20dB$

R4-030615

Paris, France 19 - 23 May, 2003

			(CHAN	GE F	REQ	UE	ST				CR-Form-v7
*	25	.133	CR	600	æ	rev		ж	Current ve	rsion:	4.8.0	ж
For <u>HELP</u> on	using	this for	m, see	bottom o	of this pa	age or i	look a	at the	e pop-up te	xt over	the % syi	nbols.
Proposed change	e affec	ets: l	JICC a	pps Ж]	ME X	Rad	dio Ad	ccess Netw	ork	Core Ne	etwork
Title:	€ Co	rrectio	n to SF	N-CFN o	bserved	I time o	differe	ence				
Source:	≋ RA	N WG	4									
Work item code:	₩ TE	I							Date:	27	/05/2003	
Category:	Deta	F (cord A (cord B (add C (fundation D (editable)	rection) respond dition of ctional i torial mo planatio	wing cates ds to a correspondification odification ns of the a TR 21.900.	rection in on of feat) above cat	ure)		elease	2	of the for (GSI) (Rele (Rele (Rele (Rele (Rele (Rele	el-4 bllowing rele M Phase 2) ease 1996) ease 1997) ease 1999) ease 4) ease 5) ease 6)	eases:
Reason for chang	уе: Ж			ection 5.1 H state.	l.8, SFN	I-CFN	obser	rved	time differe	nce is	not applic	able for
Summary of char	ıge: ₩								SFN-CFN of requiremen		d time differ	ence in
Consequences if not approved:	*	with Isola This	the UE ted imp CR ha	measure	ement al	oilities	defin	ed in	correction o			
Clauses affected:	* **	9.1.7	7									
Other specs affected:	ж	Y N X X	Test	core spe specificati Specifica	ions	ns	*	34.12	21			
Other comments:	* **	Equi		CRs in otl					at. F to 25.1 1.0	33 v3.	13.0, CR6	601 cat. A

How to create CRs using this form:

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

9.1.7 SFN-CFN observed time difference

This measurement is for handover timing purposes to identify active cell and neighbour cell Note: time difference.

9.1.7.1 Intra frequency measurement requirement

The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2. The measurement period

The accuracy requirement in table 9.16 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in \ dBm} - CPICH \ RSCP2|_{in \ dBm}| \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in,dR}} - \left(\frac{CPICH_E_c}{I_{or}}\right)_{in,dR} \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}} \quad - \quad \left(\frac{P - CCPCH _ E_c}{I_{or}}\right)_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

Table 9.16

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm/3.84 MHz]
SFN-CFN observed time difference	chip	±1	-9450

9.1.7.2 Inter frequency measurement requirement

The measurement period for CELL DCH state can be found in sub clause 8.1.2.3. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.3.

The accuracy requirement in table 9.17 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in\ dBm} - CPICH \ RSCP2|_{in\ dBm}| \le 20dB$$

| Channel 1_Io|_dBm/3.84 MHz - Channel 2_Io|_dBm/3.84 MHz | $\leq 20~dB.$

$$\frac{I_o}{\langle \hat{I}_{or} \rangle_{in,dR}} - \left(\frac{CPICH_E_c}{I_{or}} \right)_{in,dR} \le 20dB$$

R4-030616

Paris, France 19 - 23 May, 2003

			СНА	NGE	REQ	UE	ST				CR-Form-v7
æ	25	.133	CR <mark>601</mark>		жrev		¥	Current vers	sion:	5.6.0	ж
For <u>HELP</u>	on using	this for	m, see botto	n of this	page or	look	at the	e pop-up tex	t over	the % sy	mbols.
Proposed char	nge affed	cts: (JICC apps #		ME X	Rad	dio A	ccess Netwo	ork	Core N	etwork
Title:	₩ Co	rrection	n to SFN-CFI	V observ	ed time	differ	ence				
Source:	₩ RA	N WG	4								
Work item cod	e: % TE	:1						Date: %	8 27/	05/2003	
Category:	Deta	F (corr A (corr B (add C (fund D (edit ailed exp	the following carection) responds to a lition of feature ctional modificational modificationantions of the GPP TR 21.9	correction e), ation of fe ion) ne above	n in an ea eature)		elease	Release: % Use one of 2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	f the for (GSN (Rele (Rele (Rele (Rele (Rele		
Reason for cha	ange: #		.215 section		FN-CFN	obse	rved	time differer	nce is	not applic	able for
Summary of ch	hange: #	The C	FACH state CELL_FACH state requency and	tate have						time diffe	rence in
Consequences not approved:	sif ¥	with the state of	requirements the UE meas ted impact: CR has an is een specifica	urement olated ir	abilities	defin	ied in	25.215.			
Clauses affecte	ed: #	9.1.7									
Other specs affected:	¥	Y N X X	Other core s Test specifi O&M Specifi	cations		*	34.1	21			
Other commen	ıts: #	Equiv	valent CRs in						33 v3.	13.0, CR	600 cat. A

How to create CRs using this form:

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

9.1.7 SFN-CFN observed time difference

This measurement is for handover timing purposes to identify active cell and neighbour cell Note: time difference.

9.1.7.1 Intra frequency measurement requirement

The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2. The measurement period

The accuracy requirement in table 9.16 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in \ dBm} - CPICH \ RSCP2|_{in \ dBm}| \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in,dR}} - \left(\frac{CPICH_E_c}{I_{or}}\right)_{in,dR} \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}} \quad - \quad \left(\frac{P - CCPCH _ E_c}{I_{or}}\right)_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

Table 9.16

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm/3.84 MHz]
SFN-CFN observed time difference	chip	±1	-9450

9.1.7.2 Inter frequency measurement requirement

The measurement period for CELL DCH state can be found in sub clause 8.1.2.3. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.3.

The accuracy requirement in table 9.17 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in\ dBm} - CPICH \ RSCP2|_{in\ dBm}| \le 20dB$$

| Channel 1_Io|_dBm/3.84 MHz - Channel 2_Io|_dBm/3.84 MHz | $\leq 20~dB.$

$$\frac{I_o}{\langle \hat{I}_{or} \rangle_{in,dR}} - \left(\frac{CPICH_E_c}{I_{or}} \right)_{in,dR} \le 20dB$$

R4-030617

Paris, France 19 - 23 May, 2003

			CH	IANGE	REQ	UE	ST	•			CR-Form-v7
*	2	5.133	CR 6	02	≋rev		æ	Current	version:	6.1.0	¥
For <u>HELP</u>	on using	this for	m, see be	ottom of thi	s page or	look a	at the	e pop-up	text ove	r the % sy	mbols.
Proposed chai	nge affe	ects: l	JICC app	s# <mark></mark>	ME X	Rad	dio A	ccess Ne	twork	Core N	etwork
Title:	₩ C	orrection	n to SFN-	CFN obser	ved time	differe	ence				
Source:	₩ R	AN WG	4								
Work item cod	le:₩ <mark>⊺</mark> ।	El						Date	e:	7/05/2003	
Category:	Det	e <u>one</u> of F (core A (core B (add C (fun D (editatiled exp	rection) responds a dition of fea ctional modi torial modi	dification of fication) of the above	on in an ea feature)		elease	2	ne of the f (GS 6 (Re 7 (Re 8 (Re 9 (Re 4 (Re 5 (Re	el-6 following rel M Phase 2) lease 1996) lease 1998) lease 1999) lease 4) lease 5)	
Reason for ch	ange: 3		.215 sect	ion 5.1.8, S	SFN-CFN	obse	rved	time diffe	erence is	not applic	cable for
Summary of c	hange:	€ The (CELL_FAC	H state hav and inter fre						d time diffe	rence in
Consequences not approved:		with Isola This	the UE m ted impac CR has a	ents for SF easurements: <u>t:</u> n isolated ifications.	nt abilities	defin	ed in	n 25.215.			Ü
Clauses affect	ed: 3	€ <mark>9.1.7</mark>	•								
Other specs affected:	3	Y N X X	Test spe	ore specific ecifications pecification		*	34.1	21			
Other commer	nts: 8	Equi		s in other l					5.133 v3	3.13.0, CR6	600 cat. A

How to create CRs using this form:

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

9.1.7 SFN-CFN observed time difference

This measurement is for handover timing purposes to identify active cell and neighbour cell Note: time difference.

9.1.7.1 Intra frequency measurement requirement

The measurement period for CELL_DCH state can be found in sub clause 8.1.2.2. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.2.

The accuracy requirement in table 9.16 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in\ dBm} - CPICH \ RSCP2|_{in\ dBm}| \le 20dB$$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}}$$
 - $\left(\frac{CPICH_E_c}{I_{or}}\right)_{in\ dB} \le 20dB$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}} \quad - \quad \left(\frac{P - CCPCH _ E_c}{I_{or}}\right)_{in\ dB} \text{ is low enough to ensure successful SFN decoding.}$$

Table 9.16

Parameter	Unit	Accuracy [chip]	Conditions lo [dBm/3.84 MHz]
SFN-CFN observed time difference	chip	± 1	-9450

9.1.7.2 Inter frequency measurement requirement

The measurement period for CELL DCH state can be found in sub clause 8.1.2.3. The measurement period for CELL_FACH state can be found in sub clause 8.4.2.3.

The accuracy requirement in table 9.17 is valid under the following conditions:

CPICH_RSCP1,2 $|_{dBm} \ge -114 dBm$.

$$|CPICH \ RSCP1|_{in\ dBm} - CPICH \ RSCP2|_{in\ dBm}| \le 20dB$$

| Channel 1_Io|_dBm/3.84 MHz - Channel 2_Io|_dBm/3.84 MHz | $\leq 20~dB.$

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in,dR}} - \left(\frac{CPICH_E_c}{I_{or}}\right)_{in,dR} \le 20dB$$