RP-010777

TSG RAN Meeting #14

Kyoto, Japan, 11 - 14 December 2001

Title: CRs (R'99 and Rel-4/Rel-5 Category A) to TS 25.101

Source: TSG RAN WG4

Agenda Item: 8.4.3

RAN4	Spec	CR	Title	Cat	Phase	Curr	New
Tdoc						Ver	Ver
R4-011484	25.101	133	Clarification on 25.101 sec 8.8.2 averaging method.	F	Rel99	3.8.0	3.9.0
R4-011485	25.101	134	Clarification on 25.101 sec8.8.2 averaging method.	A	Rel-4	4.2.0	4.3.0
R4-011486	25.101	135	Clarification on 25.101 sec 8.8.2 averaging method.	Α	Rel-5	5.0.0	5.1.0
R4-011498	25.101	136	Correction of power control in downlink, initial convergence	F	Rel99	3.8.0	3.9.0
R4-011610	25.101	137	Correction of power control in downlink, initial convergence	Α	Rel-4	4.2.0	4.3.0
R4-011611	25.101	138	Correction of power control in downlink, initial convergence	Α	Rel-5	5.0.0	5.1.0
R4-011599	25.101	139	UMTS 1900 corrections to TS 25.101v380	F	Rel99	3.8.0	3.9.0
R4-011600	25.101	140	UMTS 1900 corrections to TS 25.101 rel4	Α	Rel-4	4.2.0	4.3.0

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Title: ೫	Cla	arification	on on a	averagin	ig meth	od for	. boa	ver c	ontr	<mark>ol init</mark> i	ial cor	verg	ence te	est	
Source: ೫	RA	N WG	4												
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Other comments:	ж														

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://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.

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established

8.8.2.1 Minimum requirements

For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

The first 10 ms shall not be used for averaging, ie the first sample to be input to the averaging filter is at the beginning of T1. The averaging shall be performed with a sliding rectangular window averaging filter. The window size of the averaging filter is linearly increased from 0 up to 50 ms during the first 50 ms of T1, and then kept equal to 50ms.

Parameter	Unit	Test 4						
Target quality value on DTCH	BLER	0.01	0.1	0.1				
Initial DPCH_Ec/lor	dB	-5.9	-25.9	-2.1	-22.1			
Information Data Rate	kbps	12.2	12.2	64	64			
\hat{I}_{or}/I_{oc}	dB	-1						
I _{oc}	dBm/3.84 MHz	-60						
Propagation condition			Sta	tic				
Maximum_DL_Power	dB		7					
Minimum_DL_Power	dB		-1	8				
DL Power Control step size, Δ_{TPC}	dB	1						
Limited Power Increase	_	"Not used"						

 Table 8.31: Test parameters for downlink power control

Table 8.32: Requirements in downlink power control

Parameter	Unit	Test 1 and Test 2	Test 3 and Test 4
$\frac{DPCH _ E_c}{I_{or}} \text{ during T1}$	dB	$-18.9 \le DPCH_Ec/lor \le -11.9$	$-15.1 \le \text{DPCH}_\text{Ec/lor} \le -8.1$
$\frac{DPCH_E_c}{I_{or}} \text{ during T2}$	dB	$-18.9 \le \text{DPCH}_\text{Ec/lor} \le -14.9$	-15.1 ≤ DPCH_Ec/lor ≤ -11.1

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ж	25.101 CR 134 [#] ev _ [#] Current version: 4.2.0 [#]
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the $#$ symbols.
Proposed change	affects: # (U)SIM ME/UE X Radio Access Network Core Network
Title: ೫	Clarification on averaging method for power control initial convergence test
Source: ೫	RAN WG4
Work item code:	Date: 육 2001-11-12
	A Release: # Rel-4 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) B (addition of feature), R97 (Release 1997) C (functional modification of feature) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can be found in 3GPP TR 21.900. REL-4 (Release 4) effect Rel-4 (Release 5) Release 5) effect This CR clarifies that : - - A sliding rectangular window filter is assumed with a window size of 50 ms. - First 10 ms shall not be used for averaging and thus shall be discarded. - The window size of the filter is linearly increased between 0 and 50 ms during the next 50 ms (following the first 10 ms) so that filter does not have to be initialised. Isolated Impact Analysis: Clarification of a test requirement. Would not affect implementations.
Consequences if not approved:	# The specification is subject to several interpretations. The averaging filter may vary depending on interpretations and test results may depend on test equipment
Clauses affected:	策 <mark>8.8.2.1</mark>
Other specs Affected:	% Other core specifications % Test specifications 0&M Specifications
Other comments:	æ

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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.

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established

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For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

The first 10 ms shall not be used for averaging, ie the first sample to be input to the averaging filter is at the beginning of T1. The averaging shall be performed with a sliding rectangular window averaging filter. The window size of the averaging filter is linearly increased from 0 up to 50 ms during the first 50 ms of T1, and then kept equal to 50ms.

Parameter	Unit	Test 4						
Target quality value on DTCH	BLER	0.01	0.1	0.1				
Initial DPCH_Ec/lor	dB	-5.9	-25.9	-2.1	-22.1			
Information Data Rate	kbps	12.2	12.2	64	64			
\hat{I}_{or}/I_{oc}	dB	-1						
I _{oc}	dBm/3.84 MHz	-60						
Propagation condition			Sta	tic				
Maximum_DL_Power	dB		7					
Minimum_DL_Power	dB		-1	8				
DL Power Control step size, Δ_{TPC}	dB	1						
Limited Power Increase	_	"Not used"						

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$\frac{DPCH _ E_c}{I_{or}} \text{ during T1}$	dB	$-18.9 \le DPCH_Ec/lor \le -11.9$	$-15.1 \le \text{DPCH}_\text{Ec/lor} \le -8.1$
$\frac{DPCH_E_c}{I_{or}} \text{ during T2}$	dB	$-18.9 \le \text{DPCH}_\text{Ec/lor} \le -14.9$	-15.1 ≤ DPCH_Ec/lor ≤ -11.1

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	CHANGE REQUEST
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For <u>HELP</u> on u	sing 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	Clarification on averaging method for power control initial convergence test
Source: अ	RAN WG4
Work item code: ^ଝ	Date:
	A Release: # Rel-5 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) R96 (Release 1996) B (addition of feature), R97 (Release 1997) C (functional modification of feature) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can be found in 3GPP TR 21.900. REL-4 (Release 5) e: # It is unclear how the downlink DPCH_Ec/Ior power measured values must be averaged for power control initial convergence test - A sliding rectangular window filter is assumed with a window size of 50 ms. e: First 10 ms shall not be used for averaging and thus shall be discarded. - The window size of the filter is linearly increased between 0 and 50 ms during the next 50 ms (following the first 10 ms) so that filter does not have to be initialised. Isolated Impact Analysis: Clarification of a test requirement. Would not affect implementations. Isolated Impact Analysis: Clarification of a test requirement. Would not affect implementations.
Consequences if not approved:	H The specification is subject to several interpretations. The averaging filter may vary depending on interpretations and test results may depend on test equipment
Clauses affected:	策 <mark>8.8.2.1</mark>
Other specs Affected:	# Other core specifications # Test specifications 0&M Specifications
Other comments:	X

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Parameter	Unit	Test 4						
Target quality value on DTCH	BLER	0.01	0.1	0.1				
Initial DPCH_Ec/lor	dB	-5.9	-25.9	-2.1	-22.1			
Information Data Rate	kbps	12.2	12.2	64	64			
\hat{I}_{or}/I_{oc}	dB	-1						
I _{oc}	dBm/3.84 MHz	-60						
Propagation condition			Sta	tic				
Maximum_DL_Power	dB		7					
Minimum_DL_Power	dB		-1	8				
DL Power Control step size, Δ_{TPC}	dB	1						
Limited Power Increase	_	"Not used"						

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Source: ೫	RA	N WG4	1									
Work item code: [♯]									Date: ೫	08.	<mark>11.2001</mark>	
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Clauses affected:	策 <mark>8.8.2</mark>
Other specs affected:	# Other core specifications # Test specifications O&M Specifications
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Parameter	Unit	Test 1	Test 2	Test 3	Test 4			
Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1			
Initial DPCH_Ec/lor	dB	-5.9	-25.9	- 2.1 3	-22.1			
Information Data Rate	kbps	12.2	12.2	64	64			
\hat{I}_{or}/I_{oc}	dB	-1						
I _{oc}	dBm/3.84 MHz	-60						
Propagation condition			Sta	itic				
Maximum_DL_Power	dB		7	,				
Minimum_DL_Power	dB		-1	8				
DL Power Control step size, Δ_{TPC}	dB	1						
Limited Power Increase	-	"Not used"						

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$\frac{DPCH_E_c}{I_{or}} \text{ during T2}$	dB	$-18.9 \leq \text{DPCH}_\text{Ec/lor} \leq -14.9$	$-15.1 \le \text{DPCH}_\text{Ec/lor} \le -11.1$

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Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network												
Title: ೫	Cor	rection	of pow	er contro	o <mark>l in the c</mark>	downli	<mark>nk, in</mark>	itial c	convergence			
Source: ೫	RA	N WG	4									
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Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1			
Initial DPCH_Ec/lor	dB	-5.9	-25.9	- 2.1 3	-22.1			
Information Data Rate	kbps	12.2	12.2	64	64			
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Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network												
Title: #	Col	rection	of pow	ver contro	ol in the d	lownli	<mark>nk, in</mark>	itial o	convergence			
Source: #	RA	N WG	4									
Work item code: ₩	8								Date: ₩	08.	11.2001	
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Reason for chang	е: Ж	The	<mark>test pa</mark>	rameters	are inco	onsiste	ent.					
Summary of chang	ge: ೫	The	test pa	arameters	s are alig	ned.						
		Isolate	d impa	ct analysi	s: Does no	ot affe	ct UE	imple	ementation			
Consequences if not approved:	ж	Mea	surem	ent with c	different p	baram	eters	can	cause ambig	uous	test resul	ts.

Clauses affected:	¥ 8.8.2
Other specs affected:	Image: Second system Image: Second system Image: Second
Other comments:	Corresponding R99 tdoc: R4-011498

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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.

This requirement verifies that DL power control works properly during the first seconds after DPCH connection is established

8.8.2.1 Minimum requirements

For the parameters specified in Table 8.31 the downlink DPCH_Ec/Ior power measured values, which are averaged over 50 ms, shall be within the range specified in Table 8.32 more than 90% of the time. T1 equals to 500 ms and it starts 10 ms after the DPDCH connection is initiated. T2 equals to 500 ms and it starts when T1 has expired. Power control is ON during the test.

Parameter	Unit	Test 1	Test 2	Test 3	Test 4			
Target quality value on DTCH	BLER	0.01	0.01	0.1	0.1			
Initial DPCH_Ec/lor	dB	-5.9	-25.9	- 2.1 3	-22.1			
Information Data Rate	kbps	12.2	12.2	64	64			
\hat{I}_{or}/I_{oc}	dB	-1						
I _{oc}	dBm/3.84 MHz	-60						
Propagation condition			Sta	itic				
Maximum_DL_Power	dB		7	,				
Minimum_DL_Power	dB		-1	8				
DL Power Control step size, Δ_{TPC}	dB	1						
Limited Power Increase	-	"Not used"						

Table 8.31: Test parameters for downlink power control

Parameter	Unit	Test 1 and Test 2	Test 3 and Test 4
$\frac{DPCH _ E_c}{I_{or}} \text{ during T1}$	dB	$-18.9 \le \text{DPCH}_\text{Ec/lor} \le -11.9$	$-15.1 \le \text{DPCH}_\text{Ec/lor} \le -8.1$
$\frac{DPCH_E_c}{I_{or}} \text{ during T2}$	dB	$-18.9 \leq \text{DPCH}_\text{Ec/lor} \leq -14.9$	$-15.1 \le \text{DPCH}_\text{Ec/lor} \le -11.1$

R4-011599

East Brunswick, NJ, USA 12th - 16th November 2001

CHANGE REQUEST						
ж	25.101 CR 139 # ev _ # Current version: 3.8.0 #					
For <u>HELP</u> on u	ing this form, see bottom of this page or look at the pop-up text over the X symbols.					
Proposed change a	ffects: ¥ (U)SIM ME/UE X Radio Access Network Core Network					
Title: ¥	Correction FCC emission mask and frequency raster for Band b) (UMTS1900 band).					
Source: #	RAN WG4					
Work item code: ℜ	Date: ₩ 2001-11-09					
Category: ⊮	F Release: %Rel99Use 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 (editorial modification)R99 D tetailed explanations of the above categories can be found in 3GPP TR 21.900.REL-4					
Reason for change	Reason for change: ^{SR} During the UMTS1900/1800 WI for release 5 it has been identified issues that needs to be corrected also in earlier releases to avoid discontinuities between different releases (Wirh rel 5 and between rel-99 and 4). These topics has been identified: FCC emission mask clarification and channel raster corrections for band b.					
Summary of chang	e: # <u>1. Channel raster</u>					
	 12 new carriers has been added to support FCC band allocation and single 5 MHz deployment. Mapping table of UARFCH table updated accordingly. 2. FCC mask correction Mask includes also an absolute emission limit –13 dBm adjusted with different measurement BW. Isolated impact analysis: The change is aligning the requirements with anticipated later release requirements. Without the change some absolute requirements are not functional between releases. 					
Consequences if not approved:	# Miss alignment between releases					
Clauses affected:	¥ <u>5.4.3, 5.4.4, 6.6.2.1</u>					
Other specs affected:	# Other core specifications # X Test specifications 0&M Specifications					

Other comments:

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 <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.

5 Frequency bands and channel arrangement

5.1 General

The information presented in this subclause is based on a chip rate of 3.84 Mcps.

NOTE: Other chip rates may be considered in future releases.

5.2 Frequency bands

UTRA/FDD is designed to operate in either of the following paired bands:

(a)	1920 – 1980 MHz:	Up-link (UE transmit, Node B receive)
	2110 – 2170 MHz:	Down-link (Node B transmit, UE receive)
(b)*	1850 – 1910 MHz:	Up-link (UE transmit, Node B receive)
	1930 – 1990 MH	z: Down-link (Node B transmit, UE receive)

* Used in Region 2.

Additional allocations in ITU region 2 are FFS.

Deployment in other frequency bands is not precluded.

5.3 TX–RX frequency separation

(a) UTRA/FDD is designed to operate with the following TX-RX frequency separation

Frequency Band	TX-RX frequency separation
For operation in frequency band as defined in subclause 5.2 (a)	190 MHz
For operation in frequency band as defined in subclause 5.2 (b)	80 MHz.

- (b) UTRA/FDD can support both fixed and variable transmit to receive frequency separation.
- (c) The use of other transmit to receive frequency separations in existing or other frequency bands shall not be precluded.

5.4 Channel arrangement

5.4.1 Channel spacing

The nominal channel spacing is 5 MHz, but this can be adjusted to optimise performance in a particular deployment scenario.

5.4.2 Channel raster

The channel raster is 200 kHz, which means that the centre frequency must be an integer multiple of 200 kHz.

5.4.3 Channel number

The carrier frequency is designated by the UTRA Absolute Radio Frequency Channel Number (UARFCN). The values are defined as follows:

Table 5.1: UARFCN definition

Uplink	$N_u = 5 * F_{uplink}$	0.0 MHz \leq F _{uplink} \leq 3276.6 MHz where F _{uplink} is the uplink frequency in MHz
Downlink	$N_d = 5 * F_{downlink}$	$\begin{array}{ll} 0.0 \mbox{ MHz} \leq F_{downlink} \ \leq 3276.6 \mbox{ MHz} \\ \mbox{where } F_{downlink} \mbox{ is the downlink frequency in MHz} \end{array}$

Table 5.1b: UARFCN definition (Band b, region 2, Additional Channels)

<u>Uplink</u>	$\frac{N_{u} = 5 * ((F_{uplink} - 100 khz) - 1850)}{1850}$	<u>1852.5, 1857.5, 1862.5, 1867.5, 1872.5, 1877.5,</u> <u>1882.5, 1887.5, 1892.5, 1897.5, 1902.5, 1907.5</u>
<u>Downlink</u>	$N_d = 5 * ((F_{downlink} - 100 khz) - 1850)$	<u>1932.5, 1937.5, 1942.5, 1947.5, 1952.5, 1957.5,</u> <u>1962.5, 1967.5, 1972.5, 1977.5, 1982.5, 1987.5</u>

5.4.4 UARFCN

The following UARFCN range shall be supported for each paired band

Table 5.2: UTRA Absolute Radio Frequency Channel Number

Frequency Band	Uplink UE transmit, Node B receive	Downlink UE receive, Node B transmit
For operation in frequency band as defined in subclause 5.2 (a)	9612 to 9888	10562 to 10838
For operation in frequency band as defined in subclause 5.2 (b)	9262 to 9538, And for additional channels in table 5.1b: 12, 37,62, 87, 112, 137, 162, 187, 212, 237, 262, 287	9662 to 9938 And for additional channels in table 5.1b: 412, 437, 462, 487, 512, 537, 562, 587, 612, 637, 662, 687

6.6 Output RF spectrum emissions

6.6.1 Occupied bandwidth

Occupied bandwidth is a measure of the bandwidth containing 99 % of the total integrated power of the transmitted spectrum, centered on the assigned channel frequency. The occupied channel bandwidth shall be less than 5 MHz based on a chip rate of 3.84 Mcps.

6.6.2 Out of band emission

Out of band emissions are unwanted emissions immediately outside the nominal channel resulting from the modulation process and non-linearity in the transmitter but excluding spurious emissions. This out of band emission limit is specified in terms of a spectrum emission mask and Adjacent Channel Leakage power Ratio.

6.6.2.1 Spectrum emission mask

The spectrum emission mask of the UE applies to frequencies, which are between 2.5 MHz and 12.5 MHz away from the UE centre carrier frequency. The out of channel emission is specified relative to the UE output power measured in a 3.84 MHz bandwidth.

6.6.2.1.1 Minimum requirement

The power of any UE emission shall not exceed the levels specified in Table 6.10

∆f* in MHz	Minimum requirement	Additional Minimum requirement for operation in Band b	Measurement bandwidth
2.5 - 3.5	$\left\{-35 - 15 \cdot \left(\frac{\Delta f}{MHz} - 2.5\right)\right\} dBc$	<u>-15 dBm</u>	30 kHz **
3.5 - 7.5	$\left\{-35 - 1 \cdot \left(\frac{\Delta f}{MHz} - 3.5\right)\right\} dBc$	<u>-13 dBm</u>	1 MHz ***
7.5 - 8.5	$\left\{-39-10\cdot\left(\frac{\Delta f}{MHz}-7.5\right)\right\}dBc$	<u>-13 dBm</u>	1 MHz ***
8.5 - 12.5 MHz	-49 dBc	<u>-13 dBm</u>	1 MHz ***
* Δf is the separa	tion between the carrier frequency and the	centre of the measuring filt	er.
** The first and las	at measurement position with a 30 kHz filter	is at Δf equals to 2.515 MH	Iz and 3.485 MHz.
general rule, the reso bandwidth. To improv different from the mea	t measurement position with a 1 MHz filter i lution bandwidth of the measuring equipme ve measurement accuracy, sensitivity and e asurement bandwidth. When the resolution should be integrated over the measuremen	nt should be equal to the n fficiency, the resolution bar bandwidth is smaller than	neasurement ndwidth can be
The lower limit shall b	be –50 dBm/3.84 MHz or which ever is high	er.	

Table 6.10: Spectrum Emission Mask Requirement

R4-011600

East Brunswick, NJ, USA 12th - 16th November 2001

										_				CR-Form-v4
CHANGE REQUEST														
ж	25	.101	CR	140		ж	ev	-	ж	Curre	ent vers	sion:	4.2.0	ж
For <u>HELP</u> on u	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.								mbols.					
Proposed change affects: # (U)SIM ME/UE X Radio Access Network Core Network														
Title: ೫	Cor bar		n to FC	C emiss	sion m	ask a	and f	reque	ency	raster	for Ba	nd b)	(UMTS1	900
Source: ೫	RA	<mark>N WG</mark>	4											
Work item code: %										D	ate: #	20	01-11-09	
	Category: # A Release: # Rel-4 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) B (addition of feature), R97 (Release 1997) C (functional modification of feature) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can be found in 3GPP TR 21.900. REL-4 (Release 4) Reason for change: # During the UMTS1900/1800 WI for release 5 it has been identified issues that needs to be corrected also in earlier releases to avoid discontinuities between different releases (Wirh rel 5 and between rel-99 and 4). These topics has been identified: FCC emission mask clarification and channel raster corrections for band b.))) es that etween as been							
Summary of change: # 1. Channel raster 12 new carriers has been added to support FCC band allocation and single 5 MHz deployment. Mapping table of UARFCH table updated accordingly. 2. FCC mask correction Mask includes also an absolute emission limit –13 dBm adjusted with different measurement BW. Isolated impact analysis: The change is aligning the requirements with anticipated later release requirements. Without the change some absolute requirements are not functional between releases.					ed later									
Consequences if not approved:	ж	Miss	alignm	nent betw	veen r	eleas	ses							
Clauses affected:	ж	5.4.3	8 <mark>, 5.4.4</mark>	, 6.6.2.1										
Other specs affected:	Ħ	X Te	est spe	re specil cificatior ecificatic	าร	ns	ж							

Other comments:

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Additional allocations in ITU region 2 are FFS.

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<u>Uplink</u>	$\frac{N_{u} = 5 * ((F_{uplink} - 100 khz) - 1850)}{1850}$	<u>1852.5, 1857.5, 1862.5, 1867.5, 1872.5, 1877.5,</u> <u>1882.5, 1887.5, 1892.5, 1897.5, 1902.5, 1907.5</u>
<u>Downlink</u>	$N_d = 5 * ((F_{downlink} - 100 khz) - 1850)$	<u>1932.5, 1937.5, 1942.5, 1947.5, 1952.5, 1957.5,</u> <u>1962.5, 1967.5, 1972.5, 1977.5, 1982.5, 1987.5</u>

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6.6.2.1.1 Minimum requirement

The power of any UE emission shall not exceed the levels specified in Table 6.10

∆f* in MHz	Minimum requirement	Additional Minimum requirement for operation in Band b	Measurement bandwidth
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general rule, the reso bandwidth. To improv different from the mea	t measurement position with a 1 MHz filter i lution bandwidth of the measuring equipme ve measurement accuracy, sensitivity and e asurement bandwidth. When the resolution should be integrated over the measuremen	nt should be equal to the n fficiency, the resolution bar bandwidth is smaller than	neasurement ndwidth can be
The lower limit shall b	be –50 dBm/3.84 MHz or which ever is high	er.	

Table 6.10: Spectrum Emission Mask Requirement