TSG RAN Meeting #19 Birmingham, United Kingdom, 11 - 14 March, 2003

Title CRs (Rel-4 and Rel-5 Category A) to TS 25.123

Source TSG RAN WG4

Agenda Item 8.4.4

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020047	25.123	291		F	Rel-4	4.7.0	Total received power density definition for TDD BS	TEI4
R4-020048	25.123	292		Α	Rel-5	5.3.0	Total received power density definition for TDD BS	TEI4

RP-030033

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030047

Madrid, Spain 17 - 22 February, 2003

		(CHANG	E REQ	UES	ST				CR-Form-v7
X	25.12	23 CR	291	≋rev		¥	Current vers	sion:	4.7.0	¥
For <mark>HELP</mark> on us	ing this	form, see	e bottom of t	this page or	look a	t the	e pop-up text	over	the	nbols.
Proposed change a	ffects:	UICC a	apps#	ME	Radio	o Ac	ccess Netwo	rk X	Core Ne	etwork
Title: ♯	Total r	eceived p	ower densit	y definition	for TDI	D BS	S			
Source: #	RAN V	VG4								
	TEI4	704					Date: ₩	04/0	03/2003	
0.4	_						D -196	Dal	4	
Category: ## F Use one of the following categories: ## F Use one of the following categories: ## F (correction) ## A (corresponds to a correction in an earlier release) ## B (addition of feature), ## C (functional modification of feature) ## D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. ## Release: ## Rel-4 ## Release: ## Release: ## Rel-4 ## Release: ## Rel-4 ## Release: ## Release: ## Rel-4 ## Release: ## Relea						llowing rele 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4)	eases:			
									•	
Reason for change:	th	e total re		er density as	s meas	ure	urement is do d at the UE a ng.			
Summary of change	ar cl	nd interfe	rence, as me nat the refere	easured at t	the BS	ante	ived power o enna connect AN RTWB r	tor. T	his chang	e is also
Consequences if not approved:	Is A W in	There will be no definition for the total received power density at the BS antenna connector. Isolated Impact Analysis: Addition of new parameter lob which was missing in the specification Would not affect implementations behaving like indicated in the CR, would affect implementations interpreting the corrected definition otherwise. Would not affect implementations interpreting the current definition to be the total received power								
			he BS anter					.0 .0.0		- po 1101
Olaman afficients d	00 0	0. 0.0.1	0. 0.0.4.4							
Clauses affected:	署 3.	.2; 9.2.1.	3; 9.2.1.4							
	γ	N								

TS 25.225. Reference point has been defined to be the BS antenna connector instead of UE antenna connector in

RAN#18

X Other core specifications

X Test specifications

Other specs

affected:

X O&M Specifications

Other comments: # Equivalent CRs in other Releases: CR292 cat. A to 25.123 v5.3.0

How to create CRs using this form:

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

- 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.

3.2 Symbols

For the purposes of the present document, the following symbols apply:

[]	Values included in square bracket must be considered for further studies, because it means that a decision about that value was not taken.
$\frac{DPCH_E_c}{I_{or}}$	The ratio of the transmit energy per PN chip of the DPCH to the total transmit power spectral
- or	density at the Node B antenna connector.
E_c	Average energy per PN chip.
$\frac{E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for different fields or physical channels to the
	total transmit power spectral density at the Node B antenna connector.
I_o	The total received power spectral density, including signal and interference, as measured at the UE
T.1.	antenna connector.
<u>Iob</u>	The total received power density, including signal and interference, as measured at the BS antenna connector.
I_{oc}	The power spectral density (integrated in a noise bandwidth equal to the chip rate and normalized
	to the chip rate) of a band limited white noise source (simulating interference from cells, which are
7	not defined in a test procedure) as measured at the UE antenna connector.
I_{or}	The total transmit power spectral density (integrated in a bandwidth of $(1+\alpha)$ times the chip rate and normalized to the chip rate) of the down link signal at the Node B antenna connector.
\hat{I}_{or}	The received power spectral density (integrated in a bandwidth of $(1+\alpha)$ times the chip rate and
1 or	normalized to the chip rate) of the down link signal as measured at the UE antenna connector.
$OCNS_E_c$	The ratio of the average transmit energy per PN chip for the OCNS to the total transmit power
$\frac{OCNS_E_c}{I_{or}}$	The radio of the average dansime energy per 114 cmp for the overs to the total dansime power
	spectral density at the Node B antenna connector.
$rac{PICH_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the PICH to the total transmit power
	spectral density at the Node B antenna connector.
$\frac{PCCPCH_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the PCCPCH to the total transmit power
	spectral density at the Node B antenna connector.
$\frac{SCH_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the SCH to the total transmit power
	spectral density at the Node B antenna connector. The transmit energy per PN chip for the SCH is
PENALTY_TIM	averaged over the 256 chip duration when the SCH is present in the time slot Defined in TS 25.304

Qhyst Defined in TS 25.304 Qoffset_{s,n} Defined in TS 25.304 Qqualmin Defined in TS 25.304 Qrxlevmin Defined in TS 25.304 Sintersearch Defined in TS 25.304 Sintrasearch Defined in TS 25.304 SsearchRAT Defined in TS 25.304 T1 Time period 1 Time period 2 TEMP_OFFSET Defined in TS 25.304 Treselection Defined in TS 25.304 UE_TXPWR_MAX_RACH Defined in TS 25.304

<NEXT CHANGED SECTION>

9.2.1.3 Received Total Wide Band Power

The measurement period shall be 100 ms.

9.2.1.3.1 Absolute accuracy requirements

9.2.1.3.1.1 3.84 Mcps TDD Option

Table 9.35: RECEIVED TOTAL WIDE BAND POWER Intra frequency absolute accuracy

Parameter	Unit	Accuracy [dB]	Conditions lob [dBm/3.84 MHz]
RECEIVED TOTAL	dBm/3.84	± 4	-10574
WIDE BAND	MHz		
POWER <u>lob</u>			

9.2.1.3.1.2 1.28 Mcps TDD Option

Table 9.35A: RECEIVED TOTAL WIDE BAND POWER Intra frequency absolute accuracy

Parameter	Unit	Accuracy [dB]	Conditions lob [dBm/1.28MHz]
RECEIVED TOTAL	dBm/1.28	± 4	-10574
WIDE BAND	MHz		
POWERIOD .			

9.2.1.3.2 Range/mapping

The reporting range for RECEIVED TOTAL WIDE BAND POWER is from -112 ... -50 dBm.

In table 9.36 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.36

Reported value	Measured quantity value	Unit
RECEIVED TOTAL WIDE BAND POWER_LEV _000	RECEIVED TOTAL WIDE BAND POWER < -112,0	dBm
RECEIVED TOTAL WIDE BAND POWER_LEV _001	-112,0 ≤ RECEIVED TOTAL WIDE BAND POWER < - 111,9	dBm
RECEIVED TOTAL WIDE BAND POWER_LEV _002	-111,9 ≤ RECEIVED TOTAL WIDE BAND POWER < - 111,8	dBm
RECEIVED TOTAL WIDE BAND POWER_LEV _619	-50,2 ≤ RECEIVED TOTAL WIDE BAND POWER < -50,1	dBm
RECEIVED TOTAL WIDE BAND POWER_LEV _620	-50,1 ≤ RECEIVED TOTAL WIDE BAND POWER < -50,0	dBm
RECEIVED TOTAL WIDE BAND POWER_LEV _621	-50,0 ≤ RECEIVED TOTAL WIDE BAND POWER	dBm

9.2.1.4 SIR

The measurement period shall be 80 ms.

9.2.1.4.1 Absolute accuracy requirements

9.2.1.4.1.1 3.84 Mcps TDD Option

Table 9.37: SIR Intra frequency absolute accuracy

Parameter	Unit	Accuracy [dB]	Conditions
			Range
SIR	dB	± 3	For 0 <sir<20 db="" lob<br="" when="">> -105 dBm/3.84MHz</sir<20>
SIR	dB	+/-(3 - SIR)	For -7 <sir<0 db="" lob<br="" when="">> -105 dBm/3.84MHz</sir<0>

9.2.1.4.1.2 1.28 Mcps TDD Option

Table 9.37A: SIR Intra frequency absolute accuracy

Parameter	Unit	Accuracy [dB]	Conditions
			Range
SIR	dB	± 3	For 0 <sir<20 db="" lob<="" td="" when=""></sir<20>
			> -105 dBm/1.28MHz
SIR	dB	+/-(3 - SIR)	For -7 <sir<0 db="" lob<="" td="" when=""></sir<0>
		·	> -105 dBm/1.28MHz

9.2.1.4.2 Range/mapping

The reporting range for SIR is from -11 ... 20 dB.

In table 9.38 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.38

Reported value	Measured quantity value	Unit
UTRAN_SIR_00	SIR < -11,0	dB
UTRAN_SIR_01	-11,0 ≤ SIR < -10,5	dB
UTRAN_SIR_02	-10,5 ≤ SIR < -10,0	dB
UTRAN_SIR_61	19,0 ≤ SIR < 19,5	dB
UTRAN_SIR_62	19,5 ≤ SIR < 20,0	dB
UTRAN_SIR_63	20,0 ≤ SIR	dB

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030048

Madrid, Spain 17 - 22 February, 2003

waaria, sp	aiii	17	- 2	Z F C	vi ual	y, 200	<u> </u>						00.5
					CHA	NGE	REG	UE	ST	ı			CR-Form-v7
*		25	.12	3 CF	292		жrev		¥	Current v	ersion:	5.3.0	¥
For <u>HELP</u>	on u	sing t	this i	form, s	ee botto	m of this	page or	look	at the	e pop-up te	ext ove	r the	mbols.
Proposed char	nge a	affec	ts:	UICC	CappsЖ		ME	Rad	dio A	ccess Netv	vork X	Core N	etwork
Title:	₩	Tot	al re	ceived	power	density d	efinition	for TI	DD B	S			
Source:	¥		N W			ĺ							
Work item cod	lo. ¥	TEI	И							Date:	¥ 04	/03/2003	
Work item cou	C. 00	11	14							Date.	σ U4	703/2003	
Category:	\mathfrak{H}	Α								Release:	ж Re	el-5	
0 ,						categories	:			Use <u>one</u>		ollowing re	
				orrectio				!:	-1	2		M Phase 2,	
					onas to a of feature	correction	ın an ea	iriier re	elease	e) R96 R97	•	lease 1996) lease 1997)	
						e), cation of fe	eature)			R98		ease 1997) lease 1998)	
					modifica					R99		ease 1999)	
						he ábove	categorie	s can		Rel-4	(Rel	lease 4)	
		be fo	und	in 3GPI	P <u>TR 21.9</u>	<u>900</u> .				Rel-5		ease 5)	
										Rel-6	(Rei	lease 6)	
Reason for cha	ange	· 9£	Th	A CUITT	nt narar	mater for	the LITE	QΔNIr	mage	urement is	define	d to be lo	which is
Neason for Cha	ange	. o								d at the UI			
						arameter					_ aritor	ina comic	otor.
				тооро	rialing po		101 1110 1	0 .0		9.			
Summary of ch	hang	e :₩	Ad	dition (of new p	aramete	r lob, the	e total	l rece	ived powe	r densi	ty, includir	ng signal
•	•									enna conn			
			cla	rifying	that the	referenc	e point f	or the	e UTF	RAN RTWI	3 meas	urement is	s BS
			an	tenna (connecto	or.							
		0.0				1 6: 14:	• •					50	
Consequences	S IT	\mathfrak{H}				definition	for the	otal r	eceiv	ed power	aensity	at the BS	antenna
not approved:			CO	nnecto	η.								
			ler	nlated l	Impact A	Analysis:							
							r lob wh	ich w	as mi	issing in th	e spec	ification	
										like indicat			uld affect
										efinition ot			
										nition to be			
						antenna							
Clauses affects	ed:	\mathfrak{H}	3.2	2; 9.2.	1.3; 9.2.	.1.4							
		i	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \										
Other cree		ഹ		N Oth		anasitis -	tions	مو	TO	DE 20E D-	forese	noint he	. b.o.:
Other specs		Ж		X Oth	iei core	specifica	แบบร	*		25.225. Re		•	

X Test specifications

affected:

instead of UE antenna connector in

RAN#18

X O&M Specifications

Other comments: # Equivalent CRs in other Releases: CR291 cat. F to 25.123 v4.7.0

How to create CRs using this form:

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

- 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.

3.2 Symbols

For the purposes of the present document, the following symbols apply:

[]	Values included in square bracket must be considered for further studies, because it means that a decision about that value was not taken.
$\frac{DPCH_E_c}{I_{or}}$	The ratio of the transmit energy per PN chip of the DPCH to the total transmit power spectral
or	density at the Node B antenna connector.
\boldsymbol{E}_c	Average energy per PN chip.
$\frac{E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for different fields or physical channels to the
	total transmit power spectral density at the Node B antenna connector.
I_o	The total received power spectral density, including signal and interference, as measured at the UE
<u>Iob</u>	antenna connector. The total received power density, including signal and interference, as measured at the BS antenna connector.
I_{oc}	The power spectral density (integrated in a noise bandwidth equal to the chip rate and normalized
	to the chip rate) of a band limited white noise source (simulating interference from cells, which are not defined in a test procedure) as measured at the UE antenna connector.
I_{or}	The total transmit power spectral density (integrated in a bandwidth of $(1+\alpha)$ times the chip rate
\hat{I}_{or}	and normalized to the chip rate) of the down link signal at the Node B antenna connector.
Ior	The received power spectral density (integrated in a bandwidth of $(1+\alpha)$ times the chip rate and normalized to the chip rate) of the down link signal as measured at the UE antenna connector.
$OCNS_E_c$	The ratio of the average transmit energy per PN chip for the OCNS to the total transmit power
I_{or}	The fault of the average transmit energy per FIV chip for the OCIVS to the total transmit power
U.	spectral density at the Node B antenna connector.
$rac{PICH_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the PICH to the total transmit power
	spectral density at the Node B antenna connector.
$\frac{PCCPCH_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the PCCPCH to the total transmit power
	spectral density at the Node B antenna connector.
$\frac{SCH_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the SCH to the total transmit power
DENALTY TIM	spectral density at the Node B antenna connector. The transmit energy per PN chip for the SCH is averaged over the 256 chip duration when the SCH is present in the time slot

PENALTY_TIME Defined in TS 25.304 Defined in TS 25.304 Qhyst Defined in TS 25.304 Qoffset_{s,n} Qqualmin Defined in TS 25.304 Qrxlevmin Defined in TS 25.304 Sintersearch Defined in TS 25.304 Sintrasearch Defined in TS 25.304 SsearchRAT Defined in TS 25.304 T1 Time period 1 T2 Time period 2 TEMP_OFFSET Defined in TS 25.304 Treselection Defined in TS 25.304 UE_TXPWR_MAX_RACH Defined in TS 25.304

<NEXT CHANGED SECTION>

9.2.1.3 Received Total Wide Band Power

The measurement period shall be 100 ms.

9.2.1.3.1 Absolute accuracy requirements

9.2.1.3.1.1 3.84 Mcps TDD Option

Table 9.35: RECEIVED TOTAL WIDE BAND POWER Intra frequency absolute accuracy for Wide Area BS

Parameter	Unit	Accuracy [dB]	Conditions
			lob [dBm/3.84 MHz]
<u>Iob</u> RECEIVED	dBm/3.84	± 4	-10574
TOTAL WIDE BAND	MHz		
POWER			

Table 9.35A: RECEIVED TOTAL WIDE BAND POWER Intra frequency absolute accuracy for Local Area BS

Parameter	Unit	Accuracy [dB]	Conditions
			lo <mark>b</mark> [dBm/3.84MHz]
Iobreceived TOTAL WIDE BAND POWER	dBm/3.84 MHz	± 4	-9160

9.2.1.3.1.2 1.28 Mcps TDD Option

Table 9.35B: RECEIVED TOTAL WIDE BAND POWER Intra frequency absolute accuracy for Wide Area BS

Parameter	Unit	Accuracy [dB]	Conditions
			lo <mark>b</mark> [dBm/1.28MHz]
<u>Iob</u> RECEIVED	dBm/1.28	± 4	-10574
TOTAL WIDE BAND	MHz		
POWER			

Table 9.35C: RECEIVED TOTAL WIDE BAND POWER Intra frequency absolute accuracy for Local Area BS

Parameter	Unit	Accuracy [dB]	Conditions Io <u>b</u> [dBm/1.28MHz]
IobRECEIVED TOTAL WIDE BAND	dBm/1.28 MHz	± 4	-9160
POWER			

9.2.1.3.2 Range/mapping

The reporting range for RECEIVED TOTAL WIDE BAND POWER is from -112 ... -50 dBm.

In table 9.36 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.36

Reported value	Measured quantity value	Unit
RECEIVED TOTAL WIDE BAND	RECEIVED TOTAL WIDE BAND POWER < -112,0	dBm
POWER_LEV _000		
RECEIVED TOTAL WIDE BAND	-112,0 ≤ RECEIVED TOTAL WIDE BAND POWER < -	dBm
POWER_LEV _001	111,9	
RECEIVED TOTAL WIDE BAND	-111,9 ≤ RECEIVED TOTAL WIDE BAND POWER < -	dBm
POWER_LEV _002	111,8	
RECEIVED TOTAL WIDE BAND	-50,2 ≤ RECEIVED TOTAL WIDE BAND POWER < -50,1	dBm
POWER_LEV _619		
RECEIVED TOTAL WIDE BAND	-50,1 ≤ RECEIVED TOTAL WIDE BAND POWER < -50,0	dBm
POWER_LEV _620		
RECEIVED TOTAL WIDE BAND	-50,0 ≤ RECEIVED TOTAL WIDE BAND POWER	dBm
POWER_LEV _621		

9.2.1.4 SIR

The measurement period shall be 80 ms.

9.2.1.4.1 Absolute accuracy requirements

9.2.1.4.1.1 3.84 Mcps TDD Option

Table 9.37: SIR Intra frequency absolute accuracy

Parameter	Unit	Accuracy [dB]	Conditions
			Range
SIR	dB	± 3	For 0 <sir<20 db="" lob<="" td="" when=""></sir<20>
			> -105 dBm/3.84MHz
SIR	dB	+/-(3 - SIR)	For -7 <sir<0 db="" lob<="" td="" when=""></sir<0>
			> -105 dBm/3.84MHz

9.2.1.4.1.2 1.28 Mcps TDD Option

Table 9.37A: SIR Intra frequency absolute accuracy

Parameter	Unit	Accuracy [dB]	Conditions
			Range
SIR	dB	± 3	For 0 <sir<20 db="" lob<="" td="" when=""></sir<20>
			> -105 dBm/1.28MHz
SIR	dB	+/-(3 - SIR)	For -7 <sir<0 db="" lob<="" td="" when=""></sir<0>
		,	> -105 dBm/1.28MHz

9.2.1.4.2 Range/mapping

The reporting range for SIR is from -11 ... 20 dB.

In table 9.38 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.38

Reported value	Measured quantity value	Unit
UTRAN_SIR_00	SIR < -11,0	dB
UTRAN_SIR_01	-11,0 ≤ SIR < -10,5	dB
UTRAN_SIR_02	-10,5 ≤ SIR < -10,0	dB
UTRAN_SIR_61	19,0 ≤ SIR < 19,5	dB
UTRAN_SIR_62	19,5 ≤ SIR < 20,0	dB
UTRAN_SIR_63	20,0 ≤ SIR	dB