TSG-RAN Working Group 1 meeting #15
Berlin, Germany
August 22nd – 25th, 2000

TSGR1#15(00)1052

Agenda item: AH99

Source: Ericsson

Title: CR 25.215-072: Clarification of radio link set as the measured object

Document for: Decision

Introduction

For the UTRAN measurements in 25.215 the term “after radio link combination in Node B” is used to indicate the measured object in Node B. However WG3 recently introduced a term called “Radio Link Set” in their specifications, i.e. in 25.401 v3.3.0. Below the definition of “Radio Link Set” taken from 25.401 section 3.1 is shown:

UTRAN Access Point: A conceptual point within the UTRAN performing radio transmission and reception. A UTRAN access point is associated with one specific *cell*, i.e. there exists one UTRAN access point for each cell. It is the UTRAN-side end point of a *radio link*.

Radio Link: A "radio link" is a logical association between a single User Equipment and a single UTRAN access point. Its physical realisation comprises one or more radio bearer transmissions.

Radio Link Set: A set of one or more Radio Links that has a common generation of Transmit Power Control (TPC) commands in the DL.

From the definition of “Radio Link Set” it can be seen that the term is exactly the same as the term “after radio link combination in Node B” used in the measurement definitions in 25.215. It is therefore proposed to introduce the term “Radio Link Set” in the UTRAN measurement definitions in 25.215 and to add a reference to 25.401.

Proposal

The attached CR for 25.215 contains the above proposed changes.

3GPP TSG RAN WG1 Meeting #15
Berlin, Germany, August 22nd – 25th, 2000

Document R1-00-1052
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.215	CR	072	Current Version:	3.3.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG-RAN #9	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]
(at least one should be marked with an X)

Source: Ericsson **Date:** 2000-08-14

Subject: Clarification of radio link set as the measured object

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: For the UTRAN measurements in 25.215 the term “after radio link combination in Node B” is used to indicate the measured object in Node B. However WG3 recently introduced a term called “Radio Link Set” in their specifications, i.e. in 25.401 v3.3.0, which has the same meaning. This CR introduces the term “Radio Link Set” for UTRAN measurements in 25.215.

Clauses affected: 2, 5.2.2, 5.2.5, 5.2.6

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

help.doc

<--------- double-click here for help and instructions on how to create a CR.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] 3G TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".

[2] 3G TS 25.212: "Multiplexing and channel coding (FDD)".

[3] 3G TS 25.213: "Spreading and modulation (FDD)".

[4] 3G TS 25.214: "Physical layer procedures (FDD)".

[5] 3G TS 25.215: "Physical layer - Measurements (FDD)".

[6] 3G TS 25.221: "Physical channels and mapping of transport channels onto physical channels (TDD)".

[7] 3G TS 25.222: "Multiplexing and channel coding (TDD)".

[8] 3G TS 25.223: "Spreading and modulation (TDD)".

[9] 3G TS 25.224: "Physical layer procedures (TDD)".

[10] 3G TS 25.301: "Radio Interface Protocol Architecture".

[11] 3G TS 25.302: "Services provided by the Physical layer".

[12] 3G TS 25.303: "UE functions and interlayer procedures in connected mode".

[13] 3G TS 25.304: "UE procedures in idle mode".

[14] 3G TS 25.331: "RRC Protocol Specification".

[15] 3G TR 25.922: "Radio Resource Management Strategies".

[16] 3G TR 25.923: "Report on Location Services (LCS)".

[17] 3G TR 25.401: "UTRAN Overall Description".

5.2.2 SIR

Definition	Signal to Interference Ratio, is defined as: (RSCP/ISCP)×SF. Measurement shall be performed on the DPCCH of a Radio Link Set~~after RL combination in Node B~~. In compressed mode the SIR shall not be measured in the transmission gap. The reference point for the SIR measurements shall be the antenna connector. where: RSCP = Received Signal Code Power, the received power on one code. ISCP = Interference Signal Code Power, the interference on the received signal. Only the non-orthogonal part of the interference is included in the measurement. SF=The spreading factor used on the DPCCH.

5.2.3 Transmitted carrier power

Definition	Transmitted carrier power, is the ratio between the total transmitted power and the maximum transmission power. Total transmission power is the mean power [W] on one carrier from one UTRAN access point. Maximum transmission power is the mean power [W] on one carrier from one UTRAN access point when transmitting at the configured maximum power for the cell. Measurement shall be possible on any carrier transmitted from the UTRAN access point. The reference point for the transmitted carrier power measurement shall be the antenna connector. In case of Tx diversity the transmitted carrier power for each branch shall be measured.

5.2.4 Transmitted code power

Definition	Transmitted code power, is the transmitted power on one channelisation code on one given scrambling code on one given carrier. Measurement shall be possible on the DPCCH-field of any dedicated radio link transmitted from the UTRAN access point and shall reflect the power on the pilot bits of the DPCCH-field. When measuring the transmitted code power in compressed mode all slots shall be included in the measurement, e.g. also the slots in the transmission gap shall be included in the measurement. The reference point for the transmitted code power measurement shall be the antenna connector. In case of Tx diversity the transmitted code power for each branch shall be measured and summed together in [W].

5.2.5 Transport channel BER

Definition	The transport channel BER is an estimation of the average bit error rate (BER)~~)~~ of ~~RL combined~~ the DPDCH data of a Radio Link Set. The transport channel (TrCH) BER is measured from the data considering only non-punctured bits at the input of the channel decoder in Node B. It shall be possible to report an estimate of the transport channel BER for a TrCH after the end of each TTI of the TrCH. The reported TrCH BER shall be an estimate of the BER during the latest TTI for that TrCH. Transport channel BER is only required to be reported for TrCHs that are channel coded.

5.2.6 Physical channel BER

Definition	The Physical channel BER is an estimation of the average bit error rate (BER) on the DPCCH of a Radio Link Set~~after RL combination in Node B~~. An estimate of the Physical channel BER shall be possible to be reported after the end of each TTI of any of the transferred TrCHs. The reported physical channel BER shall be an estimate of the BER averaged over the latest TTI of the respective TrCH.