TSG RAN Meeting #26 **RP-040455**
Athens, Greece, 8 - 10 December 2004

Title **CR (Rel-6 Category B) to TS25.215 for Introduction of 'DL Transmission Branch Load' measurement**
Source **TSG RAN WG1**
Agenda Item **8.9**

RAN1 Tdoc	Spec	CR	Rev	Phase	Cat	Current Version	Subject	Work item	Remarks
R1-041494	25.215	147	3	Rel-6	B	6.0.0	Introduction of 'DL Transmission Branch Load' measurement	TEI-6	Linked CRs not yet available

3GPP TSG-RAN WG1 Meeting #39
Shin Yokohama, Japan, 15-19 November 2004

Tdoc ⌘R1-041494

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.215** **CR** **147** ⌘**rev** **3** ⌘ Current version: **6.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Introduction of 'DL Transmission Branch Load' measurement
Source:	⌘	RAN WG1
Work item code:	⌘	TEI6
Date:	⌘	16/11/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

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 one of the following releases:
Ph2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change:	⌘	With the current specifications, it is not possible for the Node B to report to the RNC some internal power limitations (e.g. power amplifier) with respect to each transmission branch. In case of Tx diversity this can lead to signal degradation (e.g. EVM increase due to signal compression) and potentially call drops (e.g. suboptimal call and congestion control algorithms). This effect ONLY occurs if TX diversity is used.
Summary of change:	⌘	Introduction of a new UTRAN measurement reporting the maximum of the branch loads calculated for each TX branch.
Consequences if not approved:	⌘	Internal transmission Node B power limitations in case of TX diversity cannot be reported and may lead to QoS degradation and suboptimal call congestion and call control operations.

Clauses affected:	⌘	2, 5.2.x (new)			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ TS 25.302 (RAN2), TS 25.423, TS 25.433 (RAN3), TS 25.133 (RAN4)
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	Revision of R1-041484. For the section 5.2.x it is suggested to take 5.2.16.			

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.

TEXT OMITTED

5.2 UTRAN measurement abilities

The structure of the table defining a UTRAN measurement quantity is shown below.

Column field	Comment
Definition	Contains the definition of the measurement.

The term "antenna connector" used in this sub-clause to define the reference point for the UTRAN measurements refers to the "BS antenna connector" test port A and test port B as described in [19]. The term "antenna connector" refers to Rx or Tx antenna connector as described in the respective measurement definitions.

TEXT OMITTED

5.2.15 Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission

Definition	Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission is the ratio between the total transmitted power of all codes not used for HS-PDSCH or HS-SCCH transmission on one DL carrier from one UTRAN access point, and the maximum transmission power possible to use on that DL carrier at this moment of time. Total transmission power of all codes not used for HS-PDSCH or HS-SCCH transmission is the mean power [W] of all codes not used for HS-PDSCH or HS-SCCH transmission 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. The measurement shall be possible on any carrier transmitted from the UTRAN access point. The reference point for the transmitted carrier power measurement of all codes not used for HS-PDSCH or HS-SCCH transmission shall be the Tx antenna connector. In case of Tx diversity the transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission is the ratio between the sum of the total transmitted powers of all codes not used for HS-PDSCH or HS-SCCH transmission of all branches and the maximum transmission power. When cell portions are defined in the cell, the transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission for each cell portion shall be measured and reported to higher layers.

5.2.x DL Transmission Branch Load

Definition	The 'DL transmission branch load' is the maximum of the transmission branch loads calculated for each branch. A 'transmission branch load' is the ratio between the total transmitted power [W] on the considered branch and the 'maximum DL branch capability' on this branch. The 'maximum DL branch capability' defines the maximum transmission power possible to use on that branch. The reference point for the transmission branch load measurement shall be the TX antenna connector.

TEXT OMITTED