TSG RAN Meeting #27   **RP-050044**
Tokyo, Japan, 9 - 11 March 2005

Title   CR (Rel-6 Category F) to TS25.212 for PLnon-max and Plmax
Source   TSG RAN WG1
Agenda Item   9.6

RAN1 Tdoc	Spec	CR	Rev	Rel	Cat	Current Version	Subject	Work item	Remarks
R1-050194	25.212	198	1	Rel-6	F	6.3.0	PLnon-max and PLmax	EDCH-Phys	

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.212** CR **198** ⌘ rev **1** ⌘ Current version: **6.3.0** ⌘

*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 **X** Radio Access Network **X** Core Network ☐

Title: ⌘	PLnon-max and PLmax	
Source: ⌘	RAN WG1	
Work item code: ⌘	EDCH-Phys	***Date:*** ⌘ 17/2/2005

Category: ⌘ **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-6

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: ⌘	In section 4.8.4.1, $PL_{non\text{-}max}$ and PL_{max} parameters are used to determine the combination of SF and number of E-DPDCH codes. However, it is not yet completely defined how to set values for those parameters.
Summary of change: ⌘	Clarificatoin of how to set values for $PL_{non\text{-}max}$ and PL_{max} parameters.
Consequences if not approved: ⌘	SF and number of E-DPDCH codes cannot be decided in a proper manner.

Clauses affected: ⌘	2, 4.8.4.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
			Test specifications	
			O&M Specifications	

Other comments: ⌘	

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.

<<<<<<<<< Modification #1 start >>>>>>>>>>>

1 Scope

The present document describes the characteristics of the Layer 1 multiplexing and channel coding in the FDD mode of UTRA.

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] 3GPP TS 25.201: "Physical layer - General Description".

[2] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".

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

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

[5] 3GPP TS 25.215: "Physical layer – Measurements (FDD)".

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

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

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

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

[10] 3GPP TS 25.225: "Physical layer – Measurements (TDD)".

[11] 3GPP TS 25.302: "Services Provided by the Physical Layer".

[12] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".

[13] 3GPP TS 25.331: "Radio Resource Control (RRC); Protocol Specification".

[14] ITU-T Recommendation X.691 (12/97) "Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)"

[15] 3GPP TS 25.306: "UE Radio Access capabilities".

3 Definitions, symbols and abbreviations

<<<<<<<<< Modification #1 end >>>>>>>>>>>

<<<<<<<<< Modification #2 start >>>>>>>>>>>

4.8.4.1 Determination of SF and number of PhCHs needed

The maximum amount of puncturing that can be applied is

- $1-PL_{non\text{-}max}$ if the number of code channels is less than the maximum allowed by the UE capability and restrictions imposed by UTRAN.

- $1-PL_{max}$ if the number of code channels equals to the maximum allowed by the UE capability and restrictions imposed by UTRAN.

The number of available bits per TTI of one E-DPDCH for all possible spreading factors is denoted by N_{64}, N_{32}, N_{16}, N_8, N_4 and N_2, where the index refers to the spreading factor.

The possible number of bits available to the CCTrCH of E-DCH type on all PhCHs, $N_{e,data}$, then are $\{N_{64}, N_{32}, N_{16}, N_8, N_4, 2 \times N_4, 2 \times N_2, 2 \times N_2 + 2 \times N_4\}$.

SET0 denotes the set of $N_{e,data}$ values allowed by the UTRAN and supported by the UE, as part of the UE's capability. SET0 can be a subset of $\{N_{64}, N_{32}, N_{16}, N_8, N_4, 2 \times N_4, 2 \times N_2, 2 \times N_2 + 2 \times N_4\}$.

The total number of bits in a TTI before rate matching with transport format j is $N_{e,j}$. The total number of bits available for the E-DCH transmission per TTI with transport format j, $N_{e,data,j}$, is determined by executing the following algorithm, where $PL_{non\text{-}max}$ is signalled from higher layers and PL_{max} is equal to 0.44 for all E-DCH UE categories defined in [15] except the highest E-DCH UE category, for which PL_{max} is equal to 0.33:

  SET1 = $\{ N_{e,data}$ in SET0 such that $N_{e,data} - N_{e,j}$ is non negative $\}$

  If SET1 is not empty and the smallest element of SET1 requires just one E-DPDCH then

   $N_{e,data,j} = \min$ SET1

  Else

   SET2 = $\{ N_{e,data}$ in SET0 such that $N_{e,data} - PL_{non\text{-}max} \times N_{e,j}$ is non negative $\}$

   If SET2 is not empty then

    Sort SET2 in ascending order

    $N_{e,data} = \min$ SET2

    While $N_{e,data}$ is not the max of SET2 and the follower of $N_{e,data}$ requires no additional E-DPDCH do

     $N_{e,data} = $ follower of $N_{e,data}$ in SET2

    End while

    $N_{e,data,j} = N_{,e,data}$

   Else

    $N_{e,data,j} = \max$ SET0 provided that $N_{e,data,j} - PL_{max} \times N_{e,j}$ is non negative

   End if

  End if

End if

4.8.4.2 HARQ bit separation

<<<<<<<<< Modification #2 end >>>>>>>>>>>>