TSG-RAN Working Group1 meeting #12 TSGR1#12(00)0558

Seoul, Korea, April, 10 – April 13, 2000

Agenda Item : **AH04**

Source : **Nortel Networks**

Title : **Editorial modifications of 25.212, section 4.2.9.2**

Document for : **Decision**

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1. Introduction

This CR implements the editorial modifications that Nortel proposed on the RAN 1 reflector between RAN1#11 and RAN1#12.

It contains:

- Removal of a redundant sentence defining $N'^{cm}_{data,*}$
- Separation of the 6th paragraph of 2d DTX indication bits insertion into three parts for clarity.

3GPP/SMG Meeting #12
Seoul, Korea, April 10 – April 13 2000

Document R1-00-0558
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.

25.212	CR	071	Current Version:	3.2.0

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

For submission to:	WG1 # 12	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: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: Nortel Networks **Date:**

Subject: Editorial modifications of 25.212

Work item: TS 25.212

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

F	Correction	
A	Corresponds to a correction in an earlier release	
B	Addition of feature	
C	Functional modification of feature	
D	Editorial modification	X

Release:

Phase 2	
Release 96	
Release 97	
Release 98	
Release 99	X
Release 00	

Reason for change: Editorial corrections on section 4.2.9.2, reflecting the remarks made by Nortel Networks on the RAN1 reflector between RAN1#11 and RAN1#12.

Clauses affected: 4.2.9.2

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.

4.2.9.2 2nd insertion of DTX indication bits

The DTX indication bits inserted in this step shall be placed at the end of the radio frame. Note that the DTX will be distributed over all slots after 2nd interleaving.

The bits input to the DTX insertion block are denoted by $s_1, s_2, s_3, \ldots, s_S$,where S is the number of bits from TrCH multiplexing. The number of PhCHs is denoted by P and the number of bits in one radio frame, including DTX indication bits, for each PhCH by R..

In normal mode $R = \frac{N_{data,*}}{P} = 15N_{data1} + 15N_{data2}$, where N_{data1} and N_{data2} are defined in [2].

For compressed mode, $N'_{data,*}$ is defined as $N'_{data,*} = P(15N'_{data1} + 15N'_{data2})$. N'_{data1} and N'_{data2} are the number of bits in the data fields of the slot format used for the current compressed mode, i.e. slot format A or B as defined in [2] corresponding to the Spreading Factor and the number of transmitted slots in use.

In case of compressed mode by puncturing and fixed positions, DTX shall be inserted until $N'_{data,*,}$ bits, since the exact room for the gap is already reserved thanks to the earlier insertion of the p-bits. Therefore R is defined as $R = N'_{data,*} / P$.

In compressed mode by SF reduction and by higher layer scheduling, additional DTX shall be inserted if the transmission time reduction method does not exactly create a transmission gap of the desired TGL. The number of bits available to the CCTrCH in one radio frame in compressed mode by SF reduction and by higher layer scheduling is denoted by $N^{cm}_{data,*}$ and $R = \frac{N^{cm}_{data,*}}{P}$.

The exact value of $N^{cm}_{data,*}$ is dependent on the *TGL* and the transmission time reduction method, which are signalled from higher layers. For transmission time reduction by SF/2 method in compressed mode $N^{cm}_{data,*} = \frac{N'_{data,*}}{2}$, and for other methods it can be calculated as $N^{cm}_{data,*} = N'_{data,*} - N_{TGL}$.~~For every transmission time reduction method $N'_{data,*} = P(15N'_{data1} + 15N'_{data2})$, where N'_{data1} and N'_{data2} are the number of bits in the data fields of a slot for slot format A or B as defined in [2]~~.

N_{TGL} is the number of bits that are located within the transmission gap and defined as:

$$N_{TGL} = \begin{cases} \frac{TGL}{15} N'_{data,*}, \text{ if } N_{first} + TGL \le 15 \\ \frac{15 - N_{first}}{15} N'_{data,*}, \text{ in first frame if } N_{first} + TGL > 15 \\ \frac{TGL - (15 - N_{first})}{15} N'_{data,*}, \text{ in second frame if } N_{first} + TGL > 15 \end{cases}$$

N_{first} and TGL are defined in subclause 4.4.

NOTE : In compressed mode by SF/2 method DTX is also added in physical channel mapping stage (subclause 4.2.12.2). During 2nd DTX insertion the number of CCTrCH bits is kept the same as in normal mode.

The bits output from the DTX insertion block are denoted by $w_1, w_2, w_3, \ldots, w_{(PR)}$. Note that these bits are four valued in case of compressed mode by puncturing, and three valued otherwise. They are defined by the following relations:

$w_k = s_k$ k = 1, 2, 3, …, S

$w_k = d$ k = S+1, S+2, S+3, …, P*R*

where DTX indication bits are denoted by *d*. Here $s_k \in \{0,1, p\}$ and $d \notin \{0,1\}$.