

TSG-RAN Working Group 1 meeting #11  
San Diego, USA  
February 29 – March 03, 2000

***TSGR1#10(00)0013***

**Agenda item:** AH 4 / 8

**Source:** Nokia

**Title:** CR 25.212-038rev1: Definition clarification

**Document for:** Decision

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In 25.212, the relation of the parameters TGL, Nfirst, Nlast describing the compressed mode transmission gap with the parameters of 25.215 is not explained. This explanation is added to the "Definitions" section.

**3GPP/SMG Meeting #11**  
**San Diego, USA, Feb 29 – Mar 03 2000**

**Document R1-00-0013**

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

<h2 style="margin: 0;">CHANGE REQUEST</h2>			<i>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</i>
<b>25.212</b>	<b>CR</b>	<b>038rev1</b>	Current Version: <b>3.1.0</b>
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>		<small>↑ CR number as allocated by MCC support team</small>	
For submission to: <b>RAN # 7</b> <small>list expected approval meeting # here ↑</small>	for approval <input checked="" type="checkbox"/> for information <input type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/>	<small>(for SMG use only)</small>

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

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

**Source:**    **Nokia**    **Date:**    **16-Feb-2000**

**Subject:**    **Definition clarification for TS 25.212**

**Work item:**    \_\_\_\_\_

<b>Category:</b>	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input checked="" type="checkbox"/>	<b>Release:</b>	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
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(only one category shall be marked with an X)

**Reason for change:**    **The relation between compressed mode parameters in 25.212 and in 25.215 is not mentioned; this is added.**

**Clauses affected:**    **3.1, 3.3**

<b>Other specs affected:</b>	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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**Other comments:**    \_\_\_\_\_

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

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# 1 Scope

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

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# 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 25.201: "Physical layer – General Description"
- [2] 3G TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)"
- [3] 3G TS 25.213: "Spreading and modulation (FDD)"
- [4] 3G TS 25.214: "Physical layer procedures (FDD)"
- [5] 3G TS 25.215: "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 25.225: "Measurements (TDD)"
- [11] 3G TS 25.302: "Services Provided by the Physical Layer"
- [12] 3G TS 25.402: "Synchronisation in UTRAN, Stage 2"

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# 3 Definitions, symbols and abbreviations

## 3.1 Definitions

For the purposes of the present document, the [following] terms and definitions [given in ... and the following] apply.

**TG:** Transmission Gap is consecutive empty slots that have been obtained with a transmission time reduction method. The transmission gap can be contained in one or two consecutive radio frames.

**TGL:** Transmission Gap Length is the number of consecutive empty slots that have been obtained with a transmission time reduction method.  $0 \leq TGL \leq 14$ . The CFN of the frames containing transmission gaps as well as the lengths and positions of the transmission gaps within their frames can be calculated with the compressed mode parameters described in [5].

**TrCH number:** Transport channel number represents a TrCH ID assigned to L1 by L2. Transport channels are multiplexed to the CCTrCH in the ascending order of these IDs.

## 3.2 Symbols

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

$\hat{x}$	round towards $\mathbb{Y}$ , i.e. integer such that $x \leq \hat{x} < x+1$
$\check{x}$	round towards $-\mathbb{Y}$ , i.e. integer such that $x-1 < \check{x} \leq x$
$ x $	absolute value of $x$
$N_{first}$	The first slot in the $TG$ .
$N_{last}$	The last slot in the $TG$ . $N_{last}$ is either a slot in the same radio frame as $N_{first}$ or a slot in the radio frame immediately following the slot that contains $N_{first}$ .

Unless otherwise is explicitly stated when the symbol is used, the meaning of the following symbols is:

$i$	TrCH number
$j$	TFC number
$k$	Bit number
$l$	TF number
$m$	Transport block number
$n_i$	Radio frame number of TrCH $i$ .
$p$	PhCH number
$r$	Code block number
$I$	Number of TrCHs in a CCTrCH.
$C_i$	Number of code blocks in one TTI of TrCH $i$ .
$F_i$	Number of radio frames in one TTI of TrCH $i$ .
$M_i$	Number of transport blocks in one TTI of TrCH $i$ .
$P$	Number of PhCHs used for one CCTrCH.
$PL$	Puncturing Limit for the uplink. Signalled from higher layers
$RM_i$	Rate Matching attribute for TrCH $i$ . Signalled from higher layers.

Temporary variables, i.e. variables used in several (sub)sections with different meaning.

$x, X$
$y, Y$
$z, Z$

## 3.3 Abbreviations

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

ARQ	Automatic Repeat Request
BCH	Broadcast Channel
BER	Bit Error Rate
BLER	Block Error Rate
BS	Base Station
CCPCH	Common Control Physical Channel
CCTrCH	Coded Composite Transport Channel
<u>CFN</u>	<u>Connection Frame Number</u>
CRC	Cyclic Redundancy Code
DCH	Dedicated Channel
DL	Downlink (Forward link)
DPCH	Dedicated Physical Channel
DPCCH	Dedicated Physical Control Channel
DPDCH	Dedicated Physical Data Channel
DS-CDMA	Direct-Sequence Code Division Multiple Access
DSCH	Downlink Shared Channel
DTX	Discontinuous Transmission
FACH	Forward Access Channel
FDD	Frequency Division Duplex