TSG RAN Meeting #25   **RP-040315**
Palm Springs, CA USA, 7 - 9 September 2004

Title   **CRs (Rel-4 and Rel-5/Rel-6 Category A) to TS25.222 for correction of symbol Xi defined in sub-frame segmentation step**
Source   **TSG RAN WG1**
Agenda Item   **7.2.4**

RAN1 Tdoc	Spec	CR	Rev	Phase	Cat	Current Version	Subject	Workitem	Remarks
R1-041017	25.222	122	1	Rel-4	F	4.7.0	Correction of symbol Xi defined in sub-frame segmentation step	TEI 4	
R1-041017	25.222	123	1	Rel-5	A	5.6.0	Correction of symbol Xi defined in sub-frame segmentation step	TEI 4	
R1-041017	25.222	124	1	Rel-6	A	6.0.0	Correction of symbol Xi defined in sub-frame segmentation step	TEI 4	

CR-Form-v7.1

CHANGE REQUEST

| ⌘ | **25.222** CR **122** | ⌘**rev** | **1** | ⌘ | Current version: | **4.7.0** | ⌘ |

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:	⌘	Correction of symbol Xi defined in sub-frame segmentation step

Source:	⌘	RAN WG1

Work item code: ⌘	TEI 4		*Date:* ⌘	04/08/2004

Category:	⌘	**F**		*Release:* ⌘	Rel-4

Use <u>one</u> 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 <u>one</u> 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: ⌘	Parameter Xi is defined as the number of bits transmitted in timeslot i in each sub-frame in the current specification, however according to the context, it should refer to the number of bits transmitted in time slot i in one radio frame.

Summary of change: ⌘	Value of Xi is changed to refer to the number of bits transmitted in time slot i in one radio frame according to the context **Isolated impact analysis:** This CR has no impacts on Node B and UE sub-frame procedure, because according to the context in the current specification, Xi should be the number of bits transmitted in time slot i in one radio frame, this CR just corrects this misalignment.

Consequences if not approved:	⌘	It will cause misunderstanding about the actual meaning of Xi.

Clauses affected:	⌘	4.2.11A

	Y	**N**		
Other specs affected: ⌘		**X**	Other core specifications	⌘
		X	Test specifications	
		X	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.

4.2.11A Sub-frame segmentation for the 1.28 Mcps option

In the 1.28Mcps TDD, it is needed to add a sub-frame segmentation unit between 2nd interleaving unit and physical channel mapping unit when the TTI of the CCTrCh is greater than 5msec. In this case, the operation of rate-matching guarantees that the size of bit streams is an even number and can be subdivided into 2 sub-frames. The transport channel multiplexing structure for uplink and downlink is shown in figure 1A.

The input to the sub-frame segmentation unit is segmented into timeslot chunks, where each timeslot chunk contains all of the bits that are to be transmitted in a given timeslot position in both of the sub-frames.

The input bit sequence is denoted by $x_{i1}, x_{i2}, x_{i3}, \mathrm{K}, x_{iX_i}$ where i is the timeslot number and X_i is the number of bits transmitted in timeslot i in a radio frame~~each sub-frame~~. The two output bit sequences per radio frame are denoted by $y_{i,n,1}, y_{i,n,2}, y_{i,n,3}, …, y_{i,n,Yi}$ where n is the sub-frame number in current radio frame and Y_i is the number of bits per sub-frame for timeslot i. The output sequences are defined as follows:

$$y_{i,n,k} = x_{i,((n-1).Y_i)+k}, \text{ n = 1 or 2, k = 1…} Y_i$$

where

$Y_i = (X_i / 2)$ is the number of bits in timeslot i per sub-frame,

x_{ik} is the kth bit of the input bit sequence and

$y_{i,n,k}$ is the kth bit of the output bit sequence corresponding to the nth sub-frame

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CHANGE REQUEST

| ⌘ | **25.222** CR **123** | ⌘**rev** **1** ⌘ | Current version: | **5.6.0** ⌘ |

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: ⌘	Correction of symbol Xi defined in sub-frame segmentation step	
Source: ⌘	RAN WG1	
Work item code: ⌘	TEI 4	***Date:*** ⌘ 04/08/2004

Category: ⌘ **A**		***Release:*** ⌘ Rel-5
	Use one of the following categories:	*Use one of the following releases:*
	F (correction)	*Ph2 (GSM Phase 2)*
	A (corresponds to a correction in an earlier release)	*R96 (Release 1996)*
	B (addition of feature),	*R97 (Release 1997)*
	C (functional modification of feature)	*R98 (Release 1998)*
	D (editorial modification)	*R99 (Release 1999)*
	Detailed explanations of the above categories can	*Rel-4 (Release 4)*
	be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
		Rel-6 (Release 6)
		Rel-7 (Release 7)

Reason for change: ⌘	Parameter Xi is defined as the number of bits transmitted in timeslot i in each sub-frame in the current specification, however according to the context, it should refer to the number of bits transmitted in time slot i in one radio frame.
Summary of change: ⌘	Value of Xi is changed to refer to the number of bits transmitted in time slot i in one radio frame according to the context
Consequences if not approved: ⌘	It will cause misunderstanding about the actual meaning of Xi. **Isolated impact analysis:** This CR has no impacts on Node B and UE sub-frame procedure, because according to the context in the current specification, Xi should be the number of bits transmitted in time slot i in one radio frame, this CR just corrects this misalignment.

Clauses affected: ⌘	4.2.11A

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

Other comments: ⌘	

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The input to the sub-frame segmentation unit is segmented into timeslot chunks, where each timeslot chunk contains all of the bits that are to be transmitted in a given timeslot position in both of the sub-frames.

The input bit sequence is denoted by $x_{i1}, x_{i2}, x_{i3}, \mathrm{K}, x_{iX_i}$ where i is the timeslot number and X_i is the number of bits transmitted in timeslot i in a radio frame~~each sub-frame~~. The two output bit sequences per radio frame are denoted by $y_{i,n,1}, y_{i,n,2}, y_{i,n,3}, \ldots, y_{i,n,Yi}$ where n is the sub-frame number in current radio frame and Y_i is the number of bits per sub-frame for timeslot i. The output sequences are defined as follows:

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where

$Y_i = (X_i / 2)$ is the number of bits in timeslot i per sub-frame,

x_{ik} is the k$^{\text{th}}$ bit of the input bit sequence and

$y_{i,n,k}$ is the k$^{\text{th}}$ bit of the output bit sequence corresponding to the n$^{\text{th}}$ sub-frame

CR-Form-v7.1

CHANGE REQUEST

⌘ | **25.222** CR **124** | ⌘**rev** **1** | ⌘ Current version: **6.0.0** | ⌘

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

Title: ⌘	Correction of symbol Xi defined in sub-frame segmentation step	
Source: ⌘	RAN WG1	
Work item code: ⌘	TEI 4	***Date:*** ⌘ 04/08/2004
Category: ⌘ **A**		***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)*
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Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change: ⌘	Parameter Xi is defined as the number of bits transmitted in timeslot i in each sub-frame in the current specification, however according to the context, it should refer to the number of bits transmitted in time slot i in one radio frame.
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	Isolated impact analysis: This CR has no impacts on Node B and UE sub-frame procedure, because according to the context in the current specification, Xi should be the number of bits transmitted in time slot i in one radio frame, this CR just corrects this misalignment.
Consequences if not approved: ⌘	It will cause misunderstanding about the actual meaning of Xi.

Clauses affected: ⌘	4.2.11A

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

Other comments: ⌘	

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