TSG RAN Meeting #19 **RP-030069**
Birmingham, UK, 11 - 14 March 2003

Title **CRs (Rel-4 and Rel-5 Category A) to TS 25.423 and 25.433 on Clarification to 2nd Interleaving Mode for TDD**
Source **TSG RAN WG3**
Agenda Item **8.3.6**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030064	25.423	4.7.0	4.8.0	REL-4	771	-	F	Clarification to 2nd Interleaving Mode for TDD	TEI4
R3-030065	25.423	5.4.0	5.5.0	REL-5	772	-	A	Clarification to 2nd Interleaving Mode for TDD	TEI4
R3-030062	25.433	4.7.0	4.8.0	REL-4	795	-	F	Clarification to 2nd Interleaving Mode for TDD	TEI4
R3-030063	25.433	5.3.0	5.4.0	REL-5	796	-	A	Clarification to 2nd Interleaving Mode for TDD	TEI4

3GPP TSG-RAN3 Meeting #34 ***R3-030064***
Sophia Antipolis, France, February 17—21, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **771** ⌘**rev** **-** ⌘ 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 ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Clarification to 2nd Interleaving Mode for TDD
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	10/01/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

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:

2	*(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)*

Reason for change:	⌘	In current RNSAP specification, 2nd interleaving mode is placed in the *Transport Format Set* IE. The 2nd interleaving mode indicates if it is frame related or timeslot related. In RAN1 TS25.222 section 4.2.11, there is stated that this will be applied on which the CCTrCH is mapped, so it is not associated with a transport channel, but with a CCTrCH. So in current specification, in order to avoid confusion, it would clarify that in TDD mode, the 2nd Interleaving Mode should be set for the same value within the same CCTrCH.
Summary of change:	⌘	In Section 9.2.1.64 Transport Format Set, it clarifies that in TDD mode, the 2nd Interleaving Mode should be set for the same value within the same CCTrCH. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the changes only affect 2nd interleaving mode for TDD.
Consequences if not approved:	⌘	If this CR is not approved, 2nd interleaving mode will be ambiguous for TDD mode.

Clauses affected:	⌘	9.2.1.64			
Other specs	⌘	Y: X / N:	Other core specifications	⌘	25.433 Rel-4 CR795 25.433 Rel-5 CR796 25.423 Rel-5 CR772

affected:	X	Test specifications
	X	O&M Specifications
Other comments: ⌘		

How to create CRs using this form:

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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.

9.2.1.64 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the *2nd Interleaving Mode* IE]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dynamic Transport Format Information		1..<maxTFcount>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>CHOICE *Mode*	M			
>>*TDD*				
>>>**Transmission Time Interval Information**	C-TTIdynamic	1..<maxTTIcount>		
>>>>Transmission Time Interval	M		ENUMERATED(10, 20, 40, 80,…)	msec
Semi-static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic, …)	msec Value “dynamic” for TDD only
>Type of Channel Coding	M		ENUMERATED (No codingTDD, Convolutional, Turbo,…)	[FDD - The value ‘No codingTDD’ shall be treated as logical error if received]
>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,…)	
>Rate Matching Attribute	M		INTEGER (1..maxRM)	
>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,…)	
>CHOICE *Mode*	M			
>>*TDD*				
>>>2nd Interleaving Mode	M		ENUMERATED(Frame related, Timeslot related,…)	

Condition	Explanation
Blocks	The IE shall be present if the *Number of Transport Blocks* IE is set to a value greater than 0.
Coding	The IE shall be present if *Type of Channel Coding* IE is set to "Convolutional" or "Turbo".
TTIdynamic	The IE shall be present if the *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE is set to “dynamic”.

Range bound	Explanation
maxTFcount	The maximum number of different transport formats that can be included in the Transport format set for one transport channel.
maxRM	The maximum number that could be set as rate matching attribute for a transport channel.
maxTTIcount	The amount of different TTI that are possible for that transport format is.

3GPP TSG-RAN3 Meeting #34 ***R3-030065***
Sophia Antipolis, France, February 17—21, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **772** ⌘ **rev** **-** ⌘ Current version: **5.4.0** ⌘

*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:	⌘	Clarification to 2nd Interleaving Mode for TDD
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	10/01/2003
Category:	⌘	**A**
Release:	⌘	Rel-5

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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Use one of the following releases:

2	*(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)*

Reason for change:	⌘	In current RNSAP specification, 2nd interleaving mode is placed in the *Transport Format Set* IE. The 2nd interleaving mode indicates if it is frame related or timeslot related. In RAN1 TS25.222 section 4.2.11, there is stated that this will be applied on which the CCTrCH is mapped, so it is not associated with a transport channel, but with a CCTrCH. So in current specification, in order to avoid confusion, it would clarify that in TDD mode, the 2nd Interleaving Mode should be set for the same value within the same CCTrCH.
Summary of change:	⌘	In Section 9.2.1.64 Transport Format Set, it clarifies that in TDD mode, the 2nd Interleaving Mode should be set for the same value within the same CCTrCH. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the changes only affect 2nd interleaving mode for TDD.
Consequences if not approved:	⌘	If this CR is not approved, 2nd interleaving mode will be ambiguous for TDD mode.

Clauses affected:	⌘	9.2.1.64			
Other specs	⌘	Y: X / N:	Other core specifications	⌘	25.433 Rel-4 CR795 25.433 Rel-5 CR796 25.423 Rel-4 CR771

affected:	X	Test specifications
	X	O&M Specifications
Other comments: ⌘		

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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.

9.2.1.64 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the *2nd Interleaving Mode* IE]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dynamic Transport Format Information		*1..<maxTFcount>*		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>CHOICE *Mode*	M			
>>*TDD*				
>>>**Transmission Time Interval Information**	C-TTIdynamic	*1..<maxTTIcount>*		
>>>>Transmission Time Interval	M		ENUMERATED(10, 20, 40, 80,…)	msec
Semi-static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic, …)	msec Value “dynamic” for TDD only
>Type of Channel Coding	M		ENUMERATED (No codingTDD, Convolutional, Turbo,…)	[FDD - The value "No codingTDD" shall be treated as logical error if received]
>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,…)	
>Rate Matching Attribute	M		INTEGER (1..maxRM)	
>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,…)	
>CHOICE *Mode*	M			
>>*TDD*				
>>>2nd Interleaving Mode	M		ENUMERATED(Frame related, Timeslot related,…)	

Condition	Explanation
Blocks	The IE shall be present if the *Number of Transport Blocks* IE is set to a value greater than 0.
Coding	The IE shall be present if *Type of Channel Coding* IE is set to "Convolutional" or "Turbo".
TTIdynamic	The IE shall be present if the *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE is set to “dynamic”.

Range bound	Explanation
maxTFcount	The maximum number of different transport formats that can be included in the Transport format set for one transport channel.
maxRM	The maximum number that could be set as rate matching attribute for a transport channel.
maxTTIcount	The amount of different TTI that are possible for that transport format is.

3GPP TSG-RAN3 Meeting #34 ***R3-030062***
Sophia Antipolis, France, February 17—21, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **795** ⌘ **rev** **-** ⌘ 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 ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Clarification to 2nd Interleaving Mode for TDD
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	10/01/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

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:
2 (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)

Reason for change:	⌘	In current NBAP specification, 2nd interleaving mode is placed in the *Transport Format Set* IE. The 2nd interleaving mode indicates if it is frame related or timeslot related. In RAN1 TS25.222 section 4.2.11, there is stated that this will be applied on which the CCTrCH is mapped, so it is not associated with a transport channel, but with a CCTrCH. So in current specification, in order to avoid confusion, it would clarify that in TDD mode, the 2nd Interleaving Mode should be set for the same value within the same CCTrCH.
Summary of change:	⌘	In Section 9.2.1.59 Transport Format Set, it clarifies that in TDD mode, the 2nd Interleaving Mode should be set for the same value within the same CCTrCH. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the changes only affect 2nd interleaving mode for TDD.
Consequences if not approved:	⌘	If this CR is not approved, 2nd interleaving mode will be ambiguous for TDD mode.

Clauses affected:	⌘	9.2.1.59			
Other specs	⌘	Y: X / N:	Other core specifications	⌘	25.433 Rel-5 CR796 25.423 Rel-4 CR771 25.423 Rel-5 CR772

affected:	X	Test specifications
	X	O&M Specifications
Other comments: ⌘		

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9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the *2nd Interleaving Mode* IE]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dynamic Transport Format Information		*1..<maxTFcount>*		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number Of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C-Blocks		INTEGER (0..5000)	Unit: Bits
>CHOICE *Mode*	M			
>>*TDD*				
>>>Transmission Time Interval Information	C-TTIdynamic	*1..<maxTTIcount>*		
>>>>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80,…)	Unit: ms
Semi-Static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic,…,5)	Unit: ms; Value “dynamic” for TDD only; Value “5” for LCR TDD only
>Type Of Channel Coding	M		ENUMERATED (No codingTDD, Convolutional, Turbo, …)	[FDD - The value "No codingTDD" shall be treated as logical error if received]
>Coding Rate	C-Coding		ENUMERATED (1/2, 1/3,…)	
>Rate Matching Attribute	M		INTEGER (1..maxRM)	
>CRC Size	M		ENUMERATED (0, 8, 12, 16, 24,…)	
>CHOICE *Mode*	M			
>>*TDD*				
>>>2nd Interleaving Mode	M		ENUMERATED (Frame related, Timeslot related, …)	

Condition	Explanation
Blocks	The IE shall be present if the *Number Of Transport Blocks* IE is set to a value greater than 0.
Coding	The IE shall be present if the *Type Of Channel Coding* IE is set to "Convolutional" or "Turbo".
TTIdynamic	The IE shall be present if the *Transmission Time Interval* IE in the *Semi-Static Transport Format Information* IE is set to “dynamic”.

Range Bound	Explanation
maxTFcount	Maximum number of different Transport Formats that can be included in the Transport Format Set for one transport channel
maxRM	Maximum number that could be set as rate matching attribute for a transport channel
maxTTIcount	The amount of different TTIs that are possible for that Transport Format

3GPP TSG-RAN3 Meeting #34 ***R3-030063***
Sophia Antipolis, France, February 17—21, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **796** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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

Title:	⌘	Clarification to 2nd Interleaving Mode for TDD
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	10/01/2003
Category:	⌘	**A**
Release:	⌘	Rel-5

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Consequences if not approved:	⌘	If this CR is not approved, 2nd interleaving mode will be ambiguous for TDD mode.

Clauses affected:	⌘	9.2.1.59			
Other specs	⌘	Y: X / N:	Other core specifications	⌘	25.433 Rel-4 CR795 25.423 Rel-4 CR771 25.423 Rel-5 CR772

affected:	X	Test specifications
	X	O&M Specifications
Other comments: ⌘		

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9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the *2nd Interleaving Mode* IE]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
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>Number of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C-Blocks		INTEGER (0..5000)	Unit: Bits
>CHOICE *Mode*	M			
>>*TDD*				
>>>Transmission Time Interval Information	C-TTIdynamic	*1..<maxTTIcount>*		
>>>>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80,…)	Unit: ms
Semi-Static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic,…,5)	Unit: ms; Value "dynamic" for TDD only; Value "5" for LCR TDD only
>Type Of Channel Coding	M		ENUMERATED (No codingTDD, Convolutional, Turbo, …)	[FDD - The value "No codingTDD" shall be treated as logical error if received]
>Coding Rate	C-Coding		ENUMERATED (1/2, 1/3,…)	
>Rate Matching Attribute	M		INTEGER (1..maxRM)	
>CRC Size	M		ENUMERATED (0, 8, 12, 16, 24,…)	
>CHOICE *Mode*	M			
>>*TDD*				
>>>2nd Interleaving Mode	M		ENUMERATED (Frame related, Timeslot related, …)	

Condition	Explanation
Blocks	The IE shall be present if the *Number Of Transport Blocks* IE is set to a value greater than 0.
Coding	The IE shall be present if the *Type Of Channel Coding* IE is set to "Convolutional" or "Turbo".
TTIdynamic	The IE shall be present if the *Transmission Time Interval* IE in the *Semi-Static Transport Format Information* IE is set to "dynamic".

Range Bound	Explanation
MaxTFcount	Maximum number of different Transport Formats that can be included in the Transport Format Set for one transport channel
MaxRM	Maximum number that could be set as rate matching attribute for a transport channel
MaxTTIcount	The amount of different TTIs that are possible for that Transport Format