TSG-RAN Meeting #18 ***RP-020858***

***New-Orleans, USA, 03* - 06 December 2002**

Title: **CRs (Rel-4 and Rel-5 category A) to TS 25.331 (1).**

Source: **TSG-RAN WG2**

Agenda item: **7.2.4**

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Version
R2-022686	Agreed	25.331	1700	-	Rel-4	Correction of ASN1 IE "InterFreqCellInfoList-r4"	F	4.7.0	4.8.0
R2-022687	Agreed	25.331	1701	-	Rel-5	Correction of ASN1 IE "InterFreqCellInfoList-r4"	A	5.2.0	5.3.0
R2-022688	Agreed	25.331	1702	-	Rel-4	Correction of Special Burst Scheduling for TDD	F	4.7.0	4.8.0
R2-022689	Agreed	25.331	1703	-	Rel-5	Correction of Special Burst Scheduling for TDD	A	5.2.0	5.3.0
R2-022690	Agreed	25.331	1704	-	Rel-4	Correction of measurement reporting event 6f for 1.28 Mcps TDD	F	4.7.0	4.8.0
R2-022691	Agreed	25.331	1705	-	Rel-5	Correction of measurement reporting event 6f for 1.28 Mcps TDD	A	5.2.0	5.3.0
R2-023168	Agreed	25.331	1780	-	Rel-4	Ciphering during SRNS relocation without reuse of COUNT-C	F	4.7.0	4.8.0
R2-023169	Agreed	25.331	1781	-	Rel-5	Ciphering during SRNS relocation without reuse of COUNT-C	A	5.2.0	5.3.0
R2-023178	Agreed	25.331	1782	-	Rel-4	Correction to IE “Intra Domain NAS Node Selector”	F	4.7.0	4.8.0
R2-023179	Agreed	25.331	1783	-	Rel-5	Correction to IE “Intra Domain NAS Node Selector”	A	5.2.0	5.3.0
R2-023180	Agreed	25.331	1784	-	Rel-4	Correction to PRACH selection	F	4.7.0	4.8.0
R2-023181	Agreed	25.331	1785	-	Rel-5	Correction to PRACH selection	A	5.2.0	5.3.0

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Xi'an, China, 23rd – 27th September 2002

Tdoc ⌘R2-022686

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1700** ⌘ **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 [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction of ASN1 IE "InterFreqCellInfoList-r4"
Source:	⌘	Siemens AG
Work item code:	⌘	TEI4
Date:	⌘	10/09/2002
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 the Rel-4 ASN1 representation of IE "Inter-frequency cell info list" ("InterFreqCellInfoList-r4") which is used in the Rel-4 Measurement control message, the IE "Cells for Measurement" is missing.

Since this IE is necessary to select cells from the CELL_INFO_LIST for interfrequeny measurements it should be corrected in ASN1.

Summary of change: ⌘ The optional ASN1 IE " CellsForInterFreqMeasList" is added to the ASN1 IE " InterFreqCellInfoList-r4" which is part of the Rel-4 Version of the Measurement control message".

Isolated impact analysis:

Affected Functionality: UE Rel-4 inter-frequency measurements

Correction to a function where specification contained an error. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

If the UE does not implement this CR:

A UE will not be able to decode Rel-4 Measurement control messages correctly, which contain this IE "Inter-frequency cell info list".

If the UTRAN does not implement this CR:

UTRAN will not be able to send correct Rel-4 Measurement control messages which contain the IE "Inter-frequency cell info list".

If UE and UTRAN do not implement this CR

Rel-4 UTRAN will not be able to select particular cells from Inter-frequency cell

		info list for inter-frequency measurements. 34.108: The current specification contains no references to the concerned functions. 34.123 The current specification contains no references to the concerned functions.
Consequences if not approved:	⌘	Rel-4 UTRAN will not be able to select particular cells from the Inter-frequency cell info list for inter-frequency measurements.

Clauses affected:	⌘	11.3			
Other specs affected:	⌘	**Y** / **N**	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.

10.3.7.13 Inter-frequency cell info list

Contains the information for the list of measurement objects for an inter-frequency measurement.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Inter-frequency cell removal*	OP			
>Remove all inter-frequency cells				No data
>Remove some inter-frequency cells				
>>Removed inter-frequency cells	MP	1 .. <maxCellMeas>		
>>>Inter-frequency cell id	MP		Integer(0 .. <maxCellMeas>-1)	
>No inter-frequency cells removed				No data
New inter-frequency cells	OP	1 to <maxCellMeas>		
>Inter-frequency cell id	MD		Integer(0 .. <maxCellMeas>-1)	
>Frequency info	MD		Frequency info 10.3.6.36	Default value is the value of the previous "frequency info" in the list. NOTE: The first occurrence is then MP.
>Cell info	MP		Cell info 10.3.7.2	
Cell for measurement	CV-*BCHopt*	1 to <maxCellMeas>		
>Inter-frequency cell id	MP		Integer(0 .. <maxCellMeas>-1)	

Condition	Explanation
BCHopt	This IE is not needed when sent in SYSTEM INFORMATION. Otherwise, the IE is Optional

[...]

```
InterFreqCellInfoList ::=           SEQUENCE {
    removedInterFreqCellList            RemovedInterFreqCellList            OPTIONAL,
    newInterFreqCellList                NewInterFreqCellList                OPTIONAL,
    cellsForInterFreqMeasList           CellsForInterFreqMeasList           OPTIONAL
}

InterFreqCellInfoList-r4 ::=        SEQUENCE {
    removedInterFreqCellList            RemovedInterFreqCellList            OPTIONAL,
    newInterFreqCellList                NewInterFreqCellList-r4             OPTIONAL,
    cellsForInterFreqMeasList           CellsForInterFreqMeasList           OPTIONAL
}

InterFreqCellInfoSI-List-RSCP ::=       SEQUENCE {
    removedInterFreqCellList            RemovedInterFreqCellList            OPTIONAL,
    newInterFreqCellList                NewInterFreqCellSI-List-RSCP        OPTIONAL
}
```

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Tdoc ⌘R2-022687

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1701** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*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 ASN1 IE "InterFreqCellInfoList-r4"	
Source: ⌘	Siemens AG	
Work item code: ⌘	TEI4	***Date:*** ⌘ 10/09/2002
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)*
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 the Rel-4 ASN1 representation of IE "Inter-frequency cell info list" ("InterFreqCellInfoList-r4") which is used in the Rel-4 Measurement control message, the IE "Cells for Measurement" is missing.

Since this IE is necessary to select cells from the CELL_INFO_LIST for interfrequeny measurements it should be corrected in ASN1.

Summary of change: ⌘

The optional ASN1 IE " CellsForInterFreqMeasList" is added to the ASN1 IE " InterFreqCellInfoList-r4" which is part of the Rel-4 Version of the Measurement control message".

Isolated impact analysis:

Affected Functionality: UE Rel-4 inter-frequency measurements

Correction to a function where specification contained an error. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

If the UE does not implement this CR:

A UE will not be able to decode Rel-4 Measurement control messages correctly, which contain this IE "Inter-frequency cell info list".

If the UTRAN does not implement this CR:

UTRAN will not be able to send correct Rel-4 Measurement control messages which contain the IE "Inter-frequency cell info list".

If UE and UTRAN do not implement this CR

Rel-4 UTRAN will not be able to select particular cells from Inter-frequency cell

		info list for inter-frequency measurements. 34.108: The current specification contains no references to the concerned functions. 34.123 The current specification contains no references to the concerned functions.
Consequences if not approved:	⌘	Rel-4 UTRAN will not be able to select particular cells from the Inter-frequency cell info list for inter-frequency measurements.

Clauses affected:	⌘	11.3			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	
			X Test specifications		
			X O&M Specifications		
Other comments:	⌘				

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10.3.7.13 Inter-frequency cell info list

Contains the information for the list of measurement objects for an inter-frequency measurement.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Inter-frequency cell removal*	OP			
>Remove all inter-frequency cells				No data
>Remove some inter-frequency cells				
>>Removed inter-frequency cells	MP	1 .. <maxCellMeas>		
>>>Inter-frequency cell id	MP		Integer(0 .. <maxCellMeas>-1)	
>No inter-frequency cells removed				No data
New inter-frequency cells	OP	1 to <maxCellMeas>		
>Inter-frequency cell id	MD		Integer(0 .. <maxCellMeas>-1)	
>Frequency info	MD		Frequency info 10.3.6.36	Default value is the value of the previous "frequency info" in the list. NOTE: The first occurrence is then MP.
>Cell info	MP		Cell info 10.3.7.2	
Cell for measurement	CV-*BCHopt*	1 to <maxCellMeas>		
>Inter-frequency cell id	MP		Integer(0 .. <maxCellMeas>-1)	

Condition	Explanation
BCHopt	This IE is not needed when sent in SYSTEM INFORMATION. Otherwise, the IE is Optional

[...]

```
InterFreqCellInfoList ::=           SEQUENCE {
    removedInterFreqCellList            RemovedInterFreqCellList            OPTIONAL,
    newInterFreqCellList                NewInterFreqCellList                OPTIONAL,
    cellsForInterFreqMeasList           CellsForInterFreqMeasList           OPTIONAL
}

InterFreqCellInfoList-r4 ::=        SEQUENCE {
    removedInterFreqCellList            RemovedInterFreqCellList            OPTIONAL,
    newInterFreqCellList                NewInterFreqCellList-r4             OPTIONAL,
    cellsForInterFreqMeasList           CellsForInterFreqMeasList           OPTIONAL
}

InterFreqCellInfoSI-List-RSCP ::=       SEQUENCE {
    removedInterFreqCellList            RemovedInterFreqCellList            OPTIONAL,
    newInterFreqCellList                NewInterFreqCellSI-List-RSCP        OPTIONAL
}
```

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Tdoc ⌘R2-022688

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CHANGE REQUEST

⌘ **25.331** **CR** **1702** ⌘ **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 [X] Radio Access Network [X] Core Network [ ]

Title: ⌘	Correction of Special Burst Scheduling for TDD	
Source: ⌘	Siemens AG	
Work item code: ⌘	TEI4	***Date:*** ⌘ 10/09/2002
Category: ⌘	**F**	***Release:*** ⌘ Rel-4

Use one of the following categories:
F *(correction)*
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R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘

Discontinous Transmission (DTX) is used in 3.84 Mcps and 1.28 Mcps TDD (TS 25.224 clause 4.5 and 5.4). A Special Burst Period Scheduling/Generation parameter is used for this and is signalled to UE within the "Uplink physical channel control" message.

From the tabular of the current specification, it is only possible to signal this parameter for 3.84 Mcps TDD and in the Rel-4 ASN1 implementation this parameter is missing at all. Therefor it is not possible to signal this parameter correctly.

Summary of change: ⌘

Clause 10.2.59
The IE "Special Burst Scheduling" is moved in tabluar, so it can be used for both TDD options.

ASN1 Implementation:
The IE "specialBurstScheduling" is inserted into the UplinkPhysicalChannelControl-r4-IEs accordingly to the proposed tabular correction.

Isolated impact analysis:

Affected Functionality: Rel-4 Implemention of DTX signalling (TDD only)

Correction to a function where specification contained an error. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

If the UE does not implement this CR:

		A UE will not be able to perform DTX correctly, because an essential parameter could not be signalled. If the UTRAN does not implement this CR: UTRAN will not be able to confirgure DTX correctly with Rel-4 Uplink physical channel control messages. If UE and UTRAN do not implement this CR: DTX for TDD could not be configured correctly within Rel-4. 34.108: The current specification contains no references to the concerned functions. 34.123 The current specification contains no references to the concerned functions.
Consequences if not approved:	⌘	Rel-4 UTRAN will not be able to configure DTX for TDD correctly.

Clauses affected:	⌘	10.2.59, 11.3			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			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.

10.2.59 UPLINK PHYSICAL CHANNEL CONTROL

NOTE: Only for TDD.

This message is used to transfer uplink physical channel parameters to the UE.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN→UE

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
Message Type	MP		Message Type		
UE information elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	OP		Integrity check info 10.3.3.16		
PhyCH information elements					
CCTrCH power control info	OP		CCTrCH power control info 10.3.6.8	Power control information for one CCTrCH	
Special Burst Scheduling	OP		Special Burst Scheduling 10.3.6.75a	UL Special Burst generation period in radio frames	
CHOICE *TDD option*	MP				REL-4
>3.84 Mcps TDD					REL-4
>>Alpha	OP		Alpha 10.3.6.5		
~~>>Special Burst Scheduling~~	~~OP~~		~~Special Burst Scheduling 10.3.6.75a~~	~~UL Special Burst generation period in radio frames~~	
>>Timing Advance Control	OP		UL Timing Advance Control 10.3.6.96		
>>PRACH Constant Value	OP		Constant value TDD 10.3.6.11a	Operator controlled PRACH Margin	
>>PUSCH Constant Value	OP		Constant value TDD 10.3.6.11a	Operator controlled PUSCH Margin	
>>UE positioning related parameters	CV-*IPDLs*				REL-4
>>>IPDL-Alpha	MP		Alpha 10.3.6.5		REL-4
>>>Max power increase	MP		Integer (0..3)	In dB	REL-4
>1.28 Mcps TDD					REL-4
>>Uplink synchronisation parameters	MD			Default: Uplink synchronisation step size 1. Uplink synchronisation	REL-4

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
				frequency 1.	
>>>Uplink synchronisation step size	MP		Integer(1..8)	This parameter specifies the step size to be used for the adjustment of the uplink transmission timing	REL-4
>>>Uplink synchronisation frequency	MP		Integer(1..8)	This parameter specifies the frequency of the adjustment of the uplink transmission timing	REL-4

Condition	Explanation
IPDLs	This IE is present only if idle periods are applied

[...]

```
UplinkPhysicalChannelControl-r3-IEs ::= SEQUENCE {
    -- User equipment IEs
        rrc-TransactionIdentifier       RRC-TransactionIdentifier,
    -- Physical channel IEs
        ccTrCH-PowerControlInfo         CCTrCH-PowerControlInfo             OPTIONAL,
        timingAdvance                   UL-TimingAdvanceControl             OPTIONAL,
        alpha                           Alpha                               OPTIONAL,
        specialBurstScheduling          SpecialBurstScheduling              OPTIONAL,
        prach-ConstantValue             ConstantValueTdd                    OPTIONAL,
        pusch-ConstantValue             ConstantValueTdd                    OPTIONAL
}

UplinkPhysicalChannelControl-v4xyext-IEs ::= SEQUENCE {
    -- In case of TDD, openLoopPowerControl-IPDL-TDD is included instead of IE
    -- up-IPDL-Parameters in up-OTDOA-AssistanceData
    openLoopPowerControl-IPDL-TDD   OpenLoopPowerControl-IPDL-TDD-r4    OPTIONAL
}

UplinkPhysicalChannelControl-r4-IEs ::= SEQUENCE {
    -- Physical channel IEs
        ccTrCH-PowerControlInfo         CCTrCH-PowerControlInfo-r4          OPTIONAL,
        specialBurstScheduling          SpecialBurstScheduling              OPTIONAL,
        tddOption                       CHOICE {
            tdd384                          SEQUENCE {
                timingAdvance                   UL-TimingAdvanceControl-r4  OPTIONAL,
                alpha                           Alpha                       OPTIONAL,
                prach-ConstantValue             ConstantValueTdd            OPTIONAL,
                pusch-ConstantValue             ConstantValueTdd            OPTIONAL,
                openLoopPowerControl-IPDL-TDD   OpenLoopPowerControl-IPDL-TDD-r4    OPTIONAL
            },
            tdd128                          SEQUENCE {
                ul-SynchronisationParameters    UL-SynchronisationParameters-r4 OPTIONAL
            }
        }
}
```

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Tdoc ⌘R2-022689

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1703** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*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 Special Burst Scheduling for TDD
Source:	⌘	Siemens AG
Work item code:	⌘	TEI4
Date:	⌘	10/09/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
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R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘

Discontinous Transmission (DTX) is used in 3.84 Mcps and 1.28 Mcps TDD (TS 25.224 clause 4.5 and 5.4). A Special Burst Period Scheduling/Generation parameter is used for this and is signalled to UE within the "Uplink physical channel control" message.

From the tabular of the current specification, it is only possible to signal this parameter for 3.84 Mcps TDD and in the Rel-4 ASN1 implementation this parameter is missing at all. Therefor it is not possible to signal this parameter correctly.

Summary of change: ⌘

Clause 10.2.59
The IE "Special Burst Scheduling" is moved in tabluar, so it can be used for both TDD options.

ASN1 Implementation:
The IE "specialBurstScheduling" is inserted into the UplinkPhysicalChannelControl-r4-IEs accordingly to the proposed tabular correction.

Isolated impact analysis:

Affected Functionality: Rel-4 Implemention of DTX signalling (TDD only)

Correction to a function where specification contained an error. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

If the UE does not implement this CR:

		A UE will not be able to perform DTX correctly, because an essential parameter could not be signalled. If the UTRAN does not implement this CR: UTRAN will not be able to confirgure DTX correctly with Rel-4 Uplink physical channel control messages. If UE and UTRAN do not implement this CR: DTX for TDD could not be configured correctly within Rel-4. 34.108: The current specification contains no references to the concerned functions. 34.123 The current specification contains no references to the concerned functions.
Consequences if not approved:	⌘	Rel-4 UTRAN will not be able to configure DTX for TDD correctly.

Clauses affected:	⌘	10.2.59, 11.3			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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10.2.59 UPLINK PHYSICAL CHANNEL CONTROL

NOTE: Only for TDD.

This message is used to transfer uplink physical channel parameters to the UE.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN→UE

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
Message Type	MP		Message Type		
UE information elements					
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36		
Integrity check info	OP		Integrity check info 10.3.3.16		
PhyCH information elements					
CCTrCH power control info	OP		CCTrCH power control info 10.3.6.8	Power control information for one CCTrCH	
Special Burst Scheduling	OP		Special Burst Scheduling 10.3.6.75a	UL Special Burst generation period in radio frames	
CHOICE *TDD option*	MP				REL-4
>3.84 Mcps TDD					REL-4
>>Alpha	OP		Alpha 10.3.6.5		
~~>>Special Burst Scheduling~~	~~OP~~		~~Special Burst Scheduling 10.3.6.75a~~	~~UL Special Burst generation period in radio frames~~	
>>Timing Advance Control	OP		UL Timing Advance Control 10.3.6.96		
>>PRACH Constant Value	OP		Constant value TDD 10.3.6.11a	Operator controlled PRACH Margin	
>>PUSCH Constant Value	OP		Constant value TDD 10.3.6.11a	Operator controlled PUSCH Margin	
>>UE positioning related parameters	CV-*IPDLs*				REL-4
>>>IPDL-Alpha	MP		Alpha 10.3.6.5		REL-4
>>>Max power increase	MP		Integer (0..3)	In dB	REL-4
>1.28 Mcps TDD					REL-4
>>Uplink synchronisation parameters	MD			Default: Uplink synchronisation step size 1. Uplink synchronisation	REL-4

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
				frequency 1.	
>>>Uplink synchronisation step size	MP		Integer(1..8)	This parameter specifies the step size to be used for the adjustment of the uplink transmission timing	REL-4
>>>Uplink synchronisation frequency	MP		Integer(1..8)	This parameter specifies the frequency of the adjustment of the uplink transmission timing	REL-4

Condition	Explanation
IPDLs	This IE is present only if idle periods are applied

[...]

```
UplinkPhysicalChannelControl-r3-IEs ::= SEQUENCE {
    -- User equipment IEs
        rrc-TransactionIdentifier       RRC-TransactionIdentifier,
    -- Physical channel IEs
        ccTrCH-PowerControlInfo         CCTrCH-PowerControlInfo             OPTIONAL,
        timingAdvance                   UL-TimingAdvanceControl             OPTIONAL,
        alpha                           Alpha                               OPTIONAL,
        specialBurstScheduling          SpecialBurstScheduling              OPTIONAL,
        prach-ConstantValue             ConstantValueTdd                    OPTIONAL,
        pusch-ConstantValue             ConstantValueTdd                    OPTIONAL
}

UplinkPhysicalChannelControl-v4xyext-IEs ::= SEQUENCE {
    -- In case of TDD, openLoopPowerControl-IPDL-TDD is included instead of IE
    -- up-IPDL-Parameters in up-OTDOA-AssistanceData
    openLoopPowerControl-IPDL-TDD   OpenLoopPowerControl-IPDL-TDD-r4    OPTIONAL
}

UplinkPhysicalChannelControl-r4-IEs ::= SEQUENCE {
    -- Physical channel IEs
        ccTrCH-PowerControlInfo         CCTrCH-PowerControlInfo-r4          OPTIONAL,
        specialBurstScheduling          SpecialBurstScheduling              OPTIONAL,
        tddOption                       CHOICE {
            tdd384                          SEQUENCE {
                timingAdvance                   UL-TimingAdvanceControl-r4  OPTIONAL,
                alpha                           Alpha                       OPTIONAL,
                prach-ConstantValue             ConstantValueTdd            OPTIONAL,
                pusch-ConstantValue             ConstantValueTdd            OPTIONAL,
                openLoopPowerControl-IPDL-TDD   OpenLoopPowerControl-IPDL-TDD-r4    OPTIONAL
            },
            tdd128                          SEQUENCE {
                ul-SynchronisationParameters    UL-SynchronisationParameters-r4 OPTIONAL
            }
        }
}
```

3GPP TSG-RAN WG2 Meeting #32
Xi'an, China, 23rd – 27th September 2002

Tdoc ⌘R2-022690

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1704** ⌘ **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 [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction of measurement reporting event 6f for 1.28 Mcps TDD
Source:	⌘	Siemens AG
Work item code:	⌘	LCRTDD-L23
Date:	⌘	10/09/2002
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: ⌘

The current description of UE internal measurement reporting event 6f for 1.28 Mcps TDD does not completely describe the edge triggered behaviour of 6f events and the reporting functionality:

It is not clearly described the behaviour in presence of a time to trigger, which demands that the trigger condition should be kept for some time.

The expression "whenever changes more" for event evaluation does not cover an exact mathematical description and should changed to "if the absolute value of the difference is greater than"

Summary of change: ⌘

The current description of UE internal measurement reporting events (6f) is interpreted to have an edge triggered behaviour.

For this event, the variable TRIGGERED_6f_EVENT is modified to store the T_{ADV} which is used for event evaluation

The expression "whenever changes more" is changed to:

"if the absolute value of the difference is greater than"

Isolated impact analysis:

Affected Functionality: UE internal measurements reporting events

Correction to a function where specification was ambiguous/not sufficiently explicit/missing procedural text or rules/containing some contradiction. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

If the UE does not implement this CR:

The edge triggered behaviour might not be implemented correctly and there

		may be more or less reports than expected by UTRAN. If the UTRAN does not implement this CR: The edge triggered behaviour might not be assumed correctly and there may be more or less reports than expected. 34.108: The current specification contains no references to the concerned functions. 34.123: The current state of the specification reflects the behaviour according to the proposed description.
Consequences if not approved:	⌘	The evaluation of 6f event and reporting is not completely described for 1.28 Mcps TDD. The edge triggered behaviour might not be implemented correctly and there may be more or less reports than expected by UTRAN.

Clauses affected:	⌘	13.4.27f, 14.6.2.6a			
Other specs affected:	⌘	**Y** / **N**			
			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.

13.4.27f19 TRIGGERED_6F_EVENT

This variable contains information about a 6f event that has been configured in the UE. There is one such variable per 6f event configured in the UE.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE mode				
> FDD				
>> Event triggered_RL	OP	<maxRL>	Boolean	
> 1.28 Mcps TDD				
>> T_{ADV}	MP		TADV info 10.3.7.112	

14.6.2.6a Reporting event 6F (1.28 Mcps TDD): The time difference indicated by T_{ADV} becomes larger than an absolute threshold

~~When this event is ordered by UTRAN in a MEASUREMENT CONTROL message, the UE shall send a MEASUREMENT REPORT message whenever the T_{ADV} changes compared to the last reported value more than a predefined threshold as configured with IE " T_{ADV} Threshold".~~

~~The UE shall set the IE "T_{ADV}" to the measured value and the IE "SFN" to the SFN during which the measurement was performed in the IE "T_{ADV} Info".~~

When an UE internal measurement configuring event 6f is set up, the UE shall:

1> create a variable TRIGGERED_6F_EVENT related to that measurement, which shall initially be set to the currently measured T_{ADV};

1> delete this variable when the measurement is released.

When this event is ordered by UTRAN in a measurement control message, the UE shall:

1> if the absolute value of the difference between the measured T_{ADV} and the T_{ADV} stored in variable TRIGGERED_6F_EVENT is greater than the predefined threshold configured with IE "T_{ADV} Threshold" for this event in the variable MEASUREMENT_IDENTITY for a time period indicated by the IE "time_to_trigger":

2> set the variable TRIGGERED_6F_EVENT to the currently measured T_{ADV};

2> send a measurement report with IEs set as below:

3> set the IE "T_{ADV}" to the measured value and the IE "SFN" to the SFN during which the latest measurement was performed in the IE "T_{ADV} Info";

3> set the IE "measured results" and the IE "additional measured results" according to 8.4.2.

3GPP TSG-RAN WG2 Meeting #32
Xi'an, China, 23rd – 27th September 2002

Tdoc ⌘R2-022691

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1705** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*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 measurement reporting event 6f for 1.28 Mcps TDD
Source:	⌘	Siemens AG
Work item code:	⌘	LCRTDD-L23
Date:	⌘	10/09/2002
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)*
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: ⌘

The current description of UE internal measurement reporting event 6f for 1.28 Mcps TDD does not completely describe the edge triggered behaviour of 6f events and the reporting functionality:

It is not clearly described the behaviour in presence of a time to trigger, which demands that the trigger condition should be kept for some time.

The expression "whenever changes more" for event evaluation does not cover an exact mathematical description and should changed to "if the absolute value of the difference is greater than"

Summary of change: ⌘

The current description of UE internal measurement reporting events (6f) is interpreted to have an edge triggered behaviour.

For this event, the variable TRIGGERED_6f_EVENT is modified to store the T_{ADV} which is used for event evaluation

The expression "whenever changes more" is changed to:

"if the absolute value of the difference is greater than"

Isolated impact analysis:

Affected Functionality: UE internal measurements reporting events

Correction to a function where specification was ambiguous/not sufficiently explicit/missing procedural text or rules/containing some contradiction. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

If the UE does not implement this CR:

The edge triggered behaviour might not be implemented correctly and there

		may be more or less reports than expected by UTRAN. If the UTRAN does not implement this CR: The edge triggered behaviour might not be assumed correctly and there may be more or less reports than expected. 34.108: The current specification contains no references to the concerned functions. 34.123: The current state of the specification reflects the behaviour according to the proposed description.
Consequences if not approved:	⌘	The evaluation of 6f event and reporting is not completely described for 1.28 Mcps TDD. The edge triggered behaviour might not be implemented correctly and there may be more or less reports than expected by UTRAN.

Clauses affected:	⌘	13.4.27f, 14.6.2.6a			
Other specs affected:	⌘	**Y** / **N**			
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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13.4.27f19 TRIGGERED_6F_EVENT

This variable contains information about a 6f event that has been configured in the UE. There is one such variable per 6f event configured in the UE.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE mode				
> FDD				
>> Event triggered_RL	OP	<maxRL>	Boolean	
> 1.28 Mcps TDD				
>> T_{ADV}	MP		TADV info 10.3.7.112	

14.6.2.6a Reporting event 6F (1.28 Mcps TDD): The time difference indicated by T_{ADV} becomes larger than an absolute threshold

~~When this event is ordered by UTRAN in a MEASUREMENT CONTROL message, the UE shall send a MEASUREMENT REPORT message whenever the T_{ADV} changes compared to the last reported value more than a predefined threshold as configured with IE " T_{ADV} Threshold".~~

~~The UE shall set the IE "T_{ADV}" to the measured value and the IE "SFN" to the SFN during which the measurement was performed in the IE "T_{ADV} Info".~~

When an UE internal measurement configuring event 6f is set up, the UE shall:

1> create a variable TRIGGERED_6F_EVENT related to that measurement, which shall initially be set to the currently measured T_{ADV};

1> delete this variable when the measurement is released.

When this event is ordered by UTRAN in a measurement control message, the UE shall:

1> if the absolute value of the difference between the measured T_{ADV} and the T_{ADV} stored in variable TRIGGERED_6F_EVENT is greater than the predefined threshold configured with IE "T_{ADV} Threshold" for this event in the variable MEASUREMENT_IDENTITY for a time period indicated by the IE "time_to_trigger":

2> set the variable TRIGGERED_6F_EVENT to the currently measured T_{ADV};

2> send a measurement report with IEs set as below:

3> set the IE "T_{ADV}" to the measured value and the IE "SFN" to the SFN during which the latest measurement was performed in the IE "T_{ADV} Info";

3> set the IE "measured results" and the IE "additional measured results" according to 8.4.2.

3GPP TSG-RAN2 Meeting #33
Sophia Antipolis, France, 12th-15th November 2002

Tdoc R2-023168

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1780** ⌘ **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 [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Ciphering during SRNS relocation without reuse of COUNT-C
Source:	⌘	Nortel Networks
Work item code:	⌘	TEI
Date:	⌘	12 Nov 2002
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: ⌘

During RAN2#32, Nortel proposed, for Rel-4, an alternative handling of ciphering of RB using RLC-TM during SRNS relocation in order to avoid the reused of COUNT-C values (R2-022550). It was decided to send an LS to SA3 asking their view on this (R2-022684).

In their reply to RAN2, SA3 affirms that 'reuse of the COUNT-C values in this situation is a security problem that needs correction in releases beyond R99'. SA3 has also indicated the proposal in R2-022550 was solving the problem and in line with their principles.

Therefore this CR is based on the on proposal presented during RAN2#32:

> If it wants to avoid the reused of an old START value during the gap, the Target RNC should include the IE "MAC-d HFN initial value" in the message that will trigger the handover. The UE shall then use this value to initialised the COUNT-C for the TM RB similarly to R99. The HFN shall not be incremented during the gap.
>
> The Target RNC should chose the "MAC-d HFN initial valu"' by evaluating the current COUNT-C of the TM bearers included in the Source to Target "SRNS RELOCATION INFO" and taking some margin to prevent for possible CFN wrap around, i.e. (24 MSB of the COUNT-C) +x.

Summary of change: ⌘

An optional IE "MAC-d HFN initial value" has been added in the IE "Downlink DPCH info common for all RL".

If the Target RNC want to use the new method, it shall include it in the message that will trigger the handover.

Rel-4 UE have to support the new method. They will know which method the UTRAN wants to used by the presence or absence of the IE "MAC-d HFN initial value".

Consequences if not approved:	⌘	COUNT-C of RB using RLC-TM will be reused during SRNS relocation in Rel-4, which is contradictory with SA3 principles.

Clauses affected:	⌘	8.6.6.28, 10.3.6.18, 11.3			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	
			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.

8.6.6.28 Downlink DPCH info common for all radio links

If the IE "Downlink DPCH info common for all RL" is included the UE shall:

1> if the IE "Downlink DPCH info common for all RL" is included in a message used to perform a hard handover:

2> perform actions for the IE "Timing indication" as specified in subclause 8.5.15.2, and subclause 8.3.5.1 or 8.3.5.2.

1> ignore the value received in IE "CFN-targetSFN frame offset";

1> if the IE "Downlink DPCH power control information" is included:

2> perform actions for the IE "DPC Mode" according to [29].

1> if the IE choice "mode" is set to 'FDD':

2> if the IE "Downlink rate matching restriction information" is included:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> perform actions for the IE "spreading factor";

2> perform actions for the IE "Fixed or Flexible position";

2> perform actions for the IE "TFCI existence";

2> if the IE choice "SF" is set to 256:

3> store the value of the IE "Number of bits for pilot bits".

2> if the IE choice "SF" set to 128:

3> store the value of the IE "Number of bits for pilot bits".

1> if the IE choice "mode" is set to 'TDD':

2> perform actions for the IE "Common timeslot info".

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell_DCH to Cell_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

1> if the IE "MAC-d HFN initial value" is included in the IE "Downlink DPCH info common for all RL":

2> set the HFN component of COUNT-C for TM-RLC to the value of the IE "MAC-d HFN initial value", while not incrementing the value of the HFN component of COUNT-C at each CFN cycle;

NOTE: The UTRAN should choose a value for the IE "MAC-d HFN initial value" using the COUNT-C value of the RBs using RLC-TM indicated by the Source RNC to the Target RNC in the IE “SRNS Relocation Info” and taking some margin in such a way that no values of COUNT-C are repeated after the handover.

1> else:

2~~1~~> set the 20 MSB of the HFN component of COUNT-C for TM-RLC to the value of the latest transmitted IE "START" or "START List" for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and

2~~1~~> set the remaining LSBs of the HFN component of COUNT-C to zero;

1> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN;

1> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now" for this IE;

1> calculate the START value according to subclause 8.5.9;

1> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;

1> at the CFN value as indicated in the response message in the IE "COUNT-C activation time":

2> set the 20 MSB of the HFN component of the COUNT-C variable common for all transparent mode radio bearers of this CN domain to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and

2> set the remaining LSBs of the HFN component of COUNT-C to zero;

2> increment the HFN component of the COUNT-C variable by one;

2> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;

2> step the COUNT-C variable, as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

10.3.6.18 Downlink DPCH info common for all RL

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Timing Indication	MP		Enumerated(Initialise, Maintain)	NOTE	
CFN-targetSFN frame offset	CV-*TimInd*		Integer(0..255)	In frame	
Downlink DPCH power control information	OP		Downlink DPCH power control information 10.3.6.23		
MAC-d HFN initial value	~~OP~~CV-*Message*		Bit string(24)		REL-4
CHOICE *mode*	MP				
>FDD					
>>Power offset $P_{Pilot-DPDCH}$	MP		Integer(0..24)	Power offset equals $P_{Pilot} - P_{DPDCH}$, range 0..6 dB, in steps of 0.25 dB	
>>Downlink rate matching restriction information	OP		Downlink rate matching restriction information 10.3.6.31	If this IE is set to "absent", no Transport CH is restricted in TFI.	
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256, 512)		
>>Fixed or Flexible Position	MP		Enumerated (Fixed, Flexible)		
>>TFCI existence	MP		Boolean	TRUE indicates that TFCI is used. When spreading factor is less	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
				than or equal to 64, FALSE indicates that TFCI is not used and therefore DTX is used in the TFCI field.	
>>CHOICE *SF*	MP				
>>>SF = 256					
>>>>Number of bits for Pilot bits	MP		Integer (2,4,8)	In bits	
>>>SF = 128					
>>>>Number of bits for Pilot bits	MP		Integer(4, 8)	In bits	
>>>Otherwise				(no data). In ASN.1 choice "Otherwise" is not explicitly available as all values are available, it is implied by the use of any value other than 128 or 256.	
>TDD				(no data)	

CHOICE *SF*	Condition under which the given *SF* is chosen
SF=128	"Spreading factor" is set to 128
SF=256	"Spreading factor" is set to 256
Otherwise	"Spreading factor" is set to a value distinct from 128 and 256

Condition	Explanation
TimInd	This IE is optional if the IE "Timing Indication" is set to "Initialise". Otherwise it is not needed.
Message	This IE is not needed if the IE "Downlink DPCH info common for all RL" is included in RRC CONNECTION SETUP or HANDOVER TO UTRAN COMMAND messages. Otherwise it is optional.

NOTE: Within the HANDOVER TO UTRAN COMMAND message, only value "initialise" is applicable.

11.3 Information element definitions

```
...

-- **************************************************
--
--     RADIO BEARER INFORMATION ELEMENTS (10.3.4)
--
-- **************************************************
…

LogicalChannelIdentity ::=          INTEGER (1..15)

LosslessSRNS-RelocSupport ::=       CHOICE {
    supported                           MaxPDCP-SN-WindowSize,
    notSupported                        NULL
}

MAC-d-HFN-initial-value::=          BIT STRING (SIZE (24))

MAC-LogicalChannelPriority ::=      INTEGER (1..8)

MaxDAT ::=                          ENUMERATED {
                                        dat1, dat2, dat3, dat4, dat5, dat6,
                                        dat7, dat8, dat9, dat10, dat15, dat20,
                                        dat25, dat30, dat35, dat40 }


...

-- **************************************************
--
--     PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
--
-- **************************************************



DL-CommonInformation-r4 ::=         SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommon-r4           OPTIONAL,
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueFDD  OPTIONAL,
            dpch-CompressedModeInfo             DPCH-CompressedModeInfo     OPTIONAL,
            tx-DiversityMode                    TX-DiversityMode            OPTIONAL,
            ssdt-Information                    SSDT-Information-r4         OPTIONAL
        },
        tdd                                 SEQUENCE {
            tddOption                           CHOICE {
                tdd384                              NULL,
                tdd128                              SEQUENCE {
                    tstd-Indicator                      BOOLEAN
                }
            },
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueTDD  OPTIONAL
        }
    }
}

...

DL-DPCH-InfoCommon ::=              SEQUENCE {
    cfnHandling                         CHOICE {
        maintain                            NULL,
        initialise                          SEQUENCE {
            cfntargetsfnframeoffset             Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL,
            powerOffsetPilot-pdpdch             PowerOffsetPilot-pdpdch,
            dl-rate-matching-restriction        Dl-rate-matching-restriction        OPTIONAL,
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
```

```
            spreadingFactorAndPilot             SF512-AndPilot,
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL
        }
    }
}


DL-DPCH-InfoCommon-r4 ::=               SEQUENCE {
    cfnHandling                         CHOICE {
        maintain                            NULL,
        initialise                          SEQUENCE {
            cfntargetsfnframeoffset             Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL,
            powerOffsetPilot-pdpdch             PowerOffsetPilot-pdpdch,
            dl-rate-matching-restriction        Dl-rate-matching-restriction        OPTIONAL,
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot             SF512-AndPilot,
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL
        }
    }
-- The IE mac-d-HFN-initial-value should be absent in the RRCConnectionSetup-r4-IEs or
-- HandoverToUTRANCommand-r4-IEs and if the IE is included, the general error handling for
-- conditional IEs applies.
    mac-d-HFN-initial-value             MAC-d-HFN-initial-value             OPTIONAL
}
```

3GPP TSG-RAN2 Meeting #33
Sophia Antipolis, France, 12th-15th November 2002

Tdoc R2-023169

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1781** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*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:	⌘	Ciphering during SRNS relocation without reuse of COUNT-C
Source:	⌘	Nortel Networks
Work item code:	⌘	TEI
Date:	⌘	12 Nov 2002
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)*
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: ⌘

During RAN2#32, Nortel proposed, for Rel-4, an alternative handling of ciphering of RB using RLC-TM during SRNS relocation in order to avoid the reused of COUNT-C values (R2-022550). It was decided to send an LS to SA3 asking their view on this (R2-022684).

In their reply to RAN2, SA3 affirms that 'reuse of the COUNT-C values in this situation is a security problem that needs correction in releases beyond R99'. SA3 has also indicated the proposal in R2-022550 was solving the problem and in line with their principles.

Therefore this CR is based on the on proposal presented during RAN2#32:

> If it wants to avoid the reused of an old START value during the gap, the Target RNC should include the IE "MAC-d HFN initial value" in the message that will trigger the handover. The UE shall then use this value to initialised the COUNT-C for the TM RB similarly to R99. The HFN shall not be incremented during the gap.
>
> The Target RNC should chose the "MAC-d HFN initial valu"' by evaluating the current COUNT-C of the TM bearers included in the Source to Target "SRNS RELOCATION INFO" and taking some margin to prevent for possible CFN wrap around, i.e. (24 MSB of the COUNT-C) +x.

Summary of change: ⌘

An optional IE "MAC-d HFN initial value" has been added in the IE "Downlink DPCH info common for all RL".

If the Target RNC want to use the new method, it shall include it in the message that will trigger the handover.

Rel-4 UE have to support the new method. They will know which method the UTRAN wants to used by the presence or absence of the IE "MAC-d HFN initial value".

Consequences if not approved:	⌘	COUNT-C of RB using RLC-TM will be reused during SRNS relocation in Rel-4, which is contradictory with SA3 principles.

Clauses affected:	⌘	8.6.6.28, 10.3.6.18, 11.3			
Other specs affected:	⌘	**Y** / **N**	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.

8.6.6.28 Downlink DPCH info common for all radio links

If the IE "Downlink DPCH info common for all RL" is included the UE shall:

1> if the IE "Downlink DPCH info common for all RL" is included in a message used to perform a hard handover:

2> perform actions for the IE "Timing indication" as specified in subclause 8.5.15.2, and subclause 8.3.5.1 or 8.3.5.2.

1> ignore the value received in IE "CFN-targetSFN frame offset";

1> if the IE "Downlink DPCH power control information" is included:

2> perform actions for the IE "DPC Mode" according to [29].

1> if the IE choice "mode" is set to 'FDD':

2> if the IE "Downlink rate matching restriction information" is included:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> perform actions for the IE "spreading factor";

2> perform actions for the IE "Fixed or Flexible position";

2> perform actions for the IE "TFCI existence";

2> if the IE choice "SF" is set to 256:

3> store the value of the IE "Number of bits for pilot bits".

2> if the IE choice "SF" set to 128:

3> store the value of the IE "Number of bits for pilot bits".

1> if the IE choice "mode" is set to 'TDD':

2> perform actions for the IE "Common timeslot info".

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell_DCH to Cell_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

1> if the IE "MAC-d HFN initial value" is included in the IE "Downlink DPCH info common for all RL":

2> set the HFN component of COUNT-C for TM-RLC to the value of the IE "MAC-d HFN initial value", while not incrementing the value of the HFN component of COUNT-C at each CFN cycle;

NOTE: The UTRAN should choose a value for the IE "MAC-d HFN initial value" using the COUNT-C value of the RBs using RLC-TM indicated by the Source RNC to the Target RNC in the IE “SRNS Relocation Info” and taking some margin in such a way that no values of COUNT-C are repeated after the handover.

1> else:

2~~1~~> set the 20 MSB of the HFN component of COUNT-C for TM-RLC to the value of the latest transmitted IE "START" or "START List" for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and

2~~1~~> set the remaining LSBs of the HFN component of COUNT-C to zero;

1> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN;

1> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now" for this IE;

1> calculate the START value according to subclause 8.5.9;

1> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;

1> at the CFN value as indicated in the response message in the IE "COUNT-C activation time":

2> set the 20 MSB of the HFN component of the COUNT-C variable common for all transparent mode radio bearers of this CN domain to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and

2> set the remaining LSBs of the HFN component of COUNT-C to zero;

2> increment the HFN component of the COUNT-C variable by one;

2> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;

2> step the COUNT-C variable, as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

10.3.6.18 Downlink DPCH info common for all RL

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Timing Indication	MP		Enumerated(Initialise, Maintain)	NOTE	
CFN-targetSFN frame offset	CV-*TimInd*		Integer(0..255)	In frame	
Downlink DPCH power control information	OP		Downlink DPCH power control information 10.3.6.23		
MAC-d HFN initial value	~~OP~~CV-*Message*		Bit string(24)		REL-4
CHOICE *mode*	MP				
>FDD					
>>Power offset $P_{Pilot-DPDCH}$	MP		Integer(0..24)	Power offset equals $P_{Pilot} - P_{DPDCH}$, range 0..6 dB, in steps of 0.25 dB	
>>Downlink rate matching restriction information	OP		Downlink rate matching restriction information 10.3.6.31	If this IE is set to "absent", no Transport CH is restricted in TFI.	
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256, 512)		
>>Fixed or Flexible Position	MP		Enumerated (Fixed, Flexible)		
>>TFCI existence	MP		Boolean	TRUE indicates that TFCI is used. When spreading factor is less than or equal to 64, FALSE indicates that TFCI is not used and therefore DTX is used in the TFCI field.	
>>CHOICE *SF*	MP				
>>>SF = 256					
>>>>Number of bits for Pilot bits	MP		Integer (2,4,8)	In bits	
>>>SF = 128					
>>>>Number of bits for Pilot bits	MP		Integer(4, 8)	In bits	
>>>Otherwise				(no data). In ASN.1 choice "Otherwise" is not explicitly available as all values are available, it is implied by the use of any value other than 128 or 256.	
>TDD				(no data)	

CHOICE *SF*	Condition under which the given *SF* is chosen
SF=128	"Spreading factor" is set to 128
SF=256	"Spreading factor" is set to 256
Otherwise	"Spreading factor" is set to a value distinct from 128 and 256

Condition	Explanation
TimInd	This IE is optional if the IE "Timing Indication" is set to "Initialise". Otherwise it is not needed.
Message	This IE is not needed if the IE "Downlink DPCH info common for all RL" is included in RRC CONNECTION SETUP or HANDOVER TO UTRAN COMMAND messages. Otherwise it is optional.

NOTE: Within the HANDOVER TO UTRAN COMMAND message, only value "initialise" is applicable.

11.3 Information element definitions

```
...

-- **************************************************
--
--     RADIO BEARER INFORMATION ELEMENTS (10.3.4)
--
-- **************************************************
…

LogicalChannelIdentity ::=          INTEGER (1..15)

LosslessSRNS-RelocSupport ::=       CHOICE {
    supported                           MaxPDCP-SN-WindowSize,
    notSupported                        NULL
}

MAC-d-HFN-initial-value::=          BIT STRING (SIZE (24))

MAC-LogicalChannelPriority ::=      INTEGER (1..8)

MaxDAT ::=                          ENUMERATED {
                                        dat1, dat2, dat3, dat4, dat5, dat6,
                                        dat7, dat8, dat9, dat10, dat15, dat20,
                                        dat25, dat30, dat35, dat40 }



-- **************************************************
--
--     PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
--
-- **************************************************



DL-CommonInformation-r4 ::=         SEQUENCE {
    dl-DPCH-InfoCommon                  DL-DPCH-InfoCommon-r4           OPTIONAL,
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueFDD  OPTIONAL,
            dpch-CompressedModeInfo             DPCH-CompressedModeInfo     OPTIONAL,
            tx-DiversityMode                    TX-DiversityMode            OPTIONAL,
            ssdt-Information                    SSDT-Information-r4         OPTIONAL
        },
        tdd                                 SEQUENCE {
            tddOption                           CHOICE {
                tdd384                              NULL,
                tdd128                              SEQUENCE {
                    tstd-Indicator                      BOOLEAN
                }
            },
            defaultDPCH-OffsetValue             DefaultDPCH-OffsetValueTDD  OPTIONAL
        }
    }
}

...

DL-DPCH-InfoCommon ::=              SEQUENCE {
    cfnHandling                         CHOICE {
        maintain                            NULL,
        initialise                          SEQUENCE {
            cfntargetsfnframeoffset             Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL,
            powerOffsetPilot-pdpdch             PowerOffsetPilot-pdpdch,
            dl-rate-matching-restriction        Dl-rate-matching-restriction        OPTIONAL,
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot             SF512-AndPilot,
```

```
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL
        }
    }
}


DL-DPCH-InfoCommon-r4 ::=               SEQUENCE {
    cfnHandling                         CHOICE {
        maintain                            NULL,
        initialise                          SEQUENCE {
            cfntargetsfnframeoffset             Cfntargetsfnframeoffset             OPTIONAL
        }
    },
    modeSpecificInfo                    CHOICE {
        fdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL,
            powerOffsetPilot-pdpdch             PowerOffsetPilot-pdpdch,
            dl-rate-matching-restriction        Dl-rate-matching-restriction        OPTIONAL,
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot             SF512-AndPilot,
            positionFixedOrFlexible             PositionFixedOrFlexible,
            tfci-Existence                      BOOLEAN
        },
        tdd                                 SEQUENCE {
            dl-DPCH-PowerControlInfo            DL-DPCH-PowerControlInfo            OPTIONAL
        }
    }
-- The IE mac-d-HFN-initial-value should be absent in the RRCConnectionSetup-r4-IEs or
-- RRCConnectionSetup-r5-IEs or HandoverToUTRANCommand-r4-IEs or HandoverToUTRANCommand-r5-IEs and
-- if the IE is included, the general error handling for conditional IEs applies.
    mac-d-HFN-initial-value             MAC-d-HFN-initial-value             OPTIONAL

}
```

3GPP TSG-RAN WG2 Meeting #33 **Tdoc ⌘R2-023178**
Sophia Antipolis, France, November 12 – 15, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1782** ⌘ **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 [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction to IE "Intra Domain NAS Node Selector"
Source:	⌘	Siemens AG
Work item code:	⌘	TEI4
Date:	⌘	15/10/2002
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 the current version of specification, the IE "Intra Domain NAS Node Selector" contains a "CHOICE version" with choice between "R99" and "Later". For the CHOICE "Later" it is stated, that it shall not be used in this version of protocol. From this it cannot be concluded clearly how the contents of IE "Intra Domain NAS Node Selector" shall be sent in later than R99 versions of protocol.
Summary of change:	⌘	Since the "R99" branch of the CHOICE should also be used in this version of protocol, a note is added into the semantics description stating that this branch should also be used in this version of the protocol.
Consequences if not approved:	⌘	It is not defined how the contents of IE "Intra Domain NAS Node Selector" shall be sent in later than R99 versions of protocol.

Clauses affected:	⌘	10.3.1.6

Other specs affected: ⌘	Y	N		⌘
		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.

10.3.1.6 Intra Domain NAS Node Selector

This IE carries information to be used to route the establishment of a signalling connection to a CN node within a CN domain.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *version*	MP			
>R99				This choice shall also be used by mobiles that are compliant to this version of the protocol.
>>CHOICE *CN type*	MP			
>>>GSM-MAP				
>>>>CHOICE *Routing basis*	MP			
>>>>>local (P)TMSI				TMSI allocated in the current LA or PTMSI allocated in the current RA
>>>>>>Routing parameter	MP		Bit string (10)	The TMSI/ PTMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
>>>>>(P)TMSI of same PLMN, different (RA)LA				TMSI allocated in another LA of this PLMN or PTMSI allocated in another RA this PLMN
>>>>>>Routing parameter	MP		Bit string (10)	The TMSI/ PTMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
>>>>>(P)TMSI of different PLMN				TMSI or a PTMSI allocated in another PLMN
>>>>>>Routing parameter	MP		Bit string (10)	The TMSI/ PTMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
>>>>>IMSI(response to IMSI paging)				NAS identity is IMSI
>>>>>>Routing parameter	MP		Bit string (10)	The "Routing parameter" bit string consists of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
>>>>>IMSI(cause UE initiated event)				NAS identity is IMSI

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>>>>>Routing parameter	MP		Bit string (10)	The "Routing parameter" bit string consists of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
>>>>>IMEI				NAS parameter is IMEI
>>>>>>Routing parameter	MP		Bit string (10)	The "Routing parameter" bit string consists of DecimalToBinary [(IMEI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
>>>>>Spare 1			Bit string (10)	This choice shall not be used in this version
>>>>>Spare 2			Bit string (10)	This choice shall not be used in this version
>>>>Entered parameter	MP		Boolean	Entered parameter shall be set to TRUE if the most significant byte of the current LAI/RAI is different compared to the most significant byte of the LAI/RAI stored on the SIM; Entered parameter shall be set to FALSE otherwise
>>>ANSI-41			Bit string (14)	All bits shall be set to 0
>Later			Bit string(15)	This bit string shall not be sent by mobiles that are compliant to this version of the protocol.

3GPP TSG-RAN WG2 Meeting #33 **Tdoc ⌘R2-023179**
Sophia Antipolis, France, November 12 – 15, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1783** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*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 to IE "Intra Domain NAS Node Selector"
Source:	⌘	Siemens AG
Work item code:	⌘	TEI5
Date:	⌘	15/10/2002
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)*
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 the current version of specification, the IE "Intra Domain NAS Node Selector" contains a "CHOICE version" with choice between "R99" and "Later". For the CHOICE "Later" it is stated, that it shall not be used in this version of protocol. From this it cannot be concluded clearly how the contents of IE "Intra Domain NAS Node Selector" shall be sent in later than R99 versions of protocol.
Summary of change:	⌘	Since the "R99" branch of the CHOICE should also be used in this version of protocol, a note is added into the semantics description stating that this branch should also be used in this version of the protocol.
Consequences if not approved:	⌘	It is not defined how the contents of IE "Intra Domain NAS Node Selector" shall be sent in later than R99 versions of protocol.

Clauses affected:	⌘	10.3.1.6

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

Other comments: ⌘

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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.

10.3.1.6 Intra Domain NAS Node Selector

This IE carries information to be used to route the establishment of a signalling connection to a CN node within a CN domain.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *version*	MP			
>R99				This choice shall also be used by mobiles that are compliant to this version of the protocol.
>>CHOICE *CN type*	MP			
>>>GSM-MAP				
>>>>CHOICE *Routing basis*	MP			
>>>>>local (P)TMSI				TMSI allocated in the current LA or PTMSI allocated in the current RA
>>>>>>Routing parameter	MP		Bit string (10)	The TMSI/ PTMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
>>>>>(P)TMSI of same PLMN, different (RA)LA				TMSI allocated in another LA of this PLMN or PTMSI allocated in another RA this PLMN
>>>>>>Routing parameter	MP		Bit string (10)	The TMSI/ PTMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
>>>>>(P)TMSI of different PLMN				TMSI or a PTMSI allocated in another PLMN
>>>>>>Routing parameter	MP		Bit string (10)	The TMSI/ PTMSI consists of 4 octets (32bits). The bits are numbered from b0 to b31, with bit b0 being the least significant The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI where bit b14 is the least significant.
>>>>>IMSI(response to IMSI paging)				NAS identity is IMSI
>>>>>>Routing parameter	MP		Bit string (10)	The "Routing parameter" bit string consists of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
>>>>>IMSI(cause UE initiated event)				NAS identity is IMSI

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>>>>>Routing parameter	MP		Bit string (10)	The "Routing parameter" bit string consists of DecimalToBinary [(IMSI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
>>>>>IMEI				NAS parameter is IMEI
>>>>>>Routing parameter	MP		Bit string (10)	The "Routing parameter" bit string consists of DecimalToBinary [(IMEI div 10) mod 1000]. The bits of the result are numbered from b0 to b9, with bit b0 being the least significant.
>>>>>Spare 1			Bit string (10)	This choice shall not be used in this version
>>>>>Spare 2			Bit string (10)	This choice shall not be used in this version
>>>>Entered parameter	MP		Boolean	Entered parameter shall be set to TRUE if the most significant byte of the current LAI/RAI is different compared to the most significant byte of the LAI/RAI stored on the SIM; Entered parameter shall be set to FALSE otherwise
>>>ANSI-41			Bit string (14)	All bits shall be set to 0
>Later			Bit string(15)	This bit string shall not be sent by mobiles that are compliant to this version of the protocol.

3GPP TSG-RAN2 Meeting #33
Sophia Antipolis, France, November 12 – 15, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1784** ⌘ **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 [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Correction to PRACH selection
Source:	⌘	Siemens AG
Work item code:	⌘	TEI4
Date:	⌘	14/10/2002
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 RAN2#31 a CR containing these changes should have been merged into the CR 1618 for R99, CR 1619 for Rel-4 and CR 1620 for Rel-5. At merging, these changes were omitted for Rel-4 and Rel-5 and thus only changes for R99 were agreed on RAN#17. This CR intends to correct this omission. The following sentence states the original reason for change: "Wrong range for rand function in Random access procedure (if the rand value is 1, Index of selected PRACH is out of range)".
Summary of change:	⌘	• Correction of the rand function range in the chapter 8.5.17 Impact analysis: Affected feature: UE behaviour for RACH selection A UE should comply to the specified behaviour already in R99. However, the change concerns a detail that is likely to be correctly implemented. UEs not complying with the CR do not work in this detail.
Consequences if not approved:	⌘	Undefined UE behaviour if random function returns value 1, inconsistency with R99 specification

Clauses affected:	⌘	8.5.17
Other specs affected:	⌘	Y / N [ ] [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.

8.5.17 PRACH selection

For this version of the specification, when a UE selects a cell, the uplink frequency to be used for the initial PRACH transmission shall have a default duplex frequency spacing offset from the downlink frequency that the cell was selected on. The default duplex frequency separation to be used by the UE is specified in [35] (for FDD only).

The UE shall select a "PRACH system information" according to the following rule. The UE shall:

1> select a default "PRACH system information" from the ones indicated in the IE "PRACH system information list" in System Information Block type 5 (applicable in Idle Mode and Connected Mode) or System Information Block type 6 (applicable in Connected Mode only), as follows:

2> if in connected mode and System Information Block type 6 is defined and includes PRACH info:

3> compile a list of candidate PRACHs that consists of the PRACH system information(s) listed in SIB 6, in the order of appearance as in SIB 6.

2>otherwise:

3> compile a list of candidate PRACHs that consists of the PRACH system information(s) listed in SIB 5, in the order of appearance as in SIB 5.

2> in FDD:

3> if both RACH with 10 ms and 20 ms TTI are included in the list of candidate PRACH(s):

4> select the appropriate TTI based on power requirements, as specified in subclause 8.5.18;

4> remove PRACHs system information(s) from the list of candidate PRACHs that have a TTI different from the selected value.

2> in 1.28 Mcps TDD:

3> if RACH with 5 ms, 10 ms and 20 ms TTI are included in the list of candidate PRACH(s):

4> select the TTI according to 8.5.18.2;

4> remove PRACHs system information(s) from the list of candidate PRACHs that have a TTI different from the selected value.

2> select a PRACH randomly from the list of candidate PRACH(s) as follows:

"Index of selected PRACH" = floor (rand * K)

where K is equal to the number of candidate PRACH system informations, "rand" is a random number uniformly distributed in the range $0 \leq rand < 1$~~0,...,1~~, and "floor" refers to rounding down to nearest integer. The candidate PRACH system informations shall be indexed from 0 to K-1. The random number generator is left to implementation. The scheme shall be implemented such that one of the available PRACH system informations is randomly selected with uniform probability. At start-up of the random number generator in the UE the seed shall be dependent on the IMSI of the UE or time, thereby avoiding that all UEs select the same RACH;

2> reselect the default PRACH system information when a new cell is selected. RACH reselection may also be performed after each transmission of a Transport Block Set on RACH.

1> for emergency call, the UE is allowed to select any of the available PRACH system informations.

After selecting a PRACH system information, the RRC in the UE shall configure the MAC and the physical layer for the RACH access according to the parameters included in the selected "PRACH system information" IE.

3GPP TSG-RAN2 Meeting #33 **Tdoc ⌘R2-023181**
Sophia Antipolis, France, November 12 – 15, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1785** ⌘ **rev** **-** ⌘ Current version: **5.2.0** ⌘

*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 [ ] Core Network [ ]

Title:	⌘	Correction to PRACH selection
Source:	⌘	Siemens AG
Work item code:	⌘	TEI4
Date:	⌘	14/10/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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Clauses affected:	⌘	8.5.17

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

Other comments: ⌘

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