TSG-RAN Meeting #18 *New-Orleans, USA, 0*3 - 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"	А	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	А	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	Α	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	Α	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"	Α	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	А	5.2.0	5.3.0

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		be found in	3GPP	<u>TR 21.900</u> .					Rel	-5 (Re	lease 5)	
									Rel	-6 (Re	lease 6)	

Reason for change: ೫	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: ೫	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	ж	Rel-4 UTRAN will not be able to select particular cells from the Inter-frequency
not approved:		cell info list for inter-frequency measurements.
not approved.		
Clauses affected:	ж	11.3
	Г	
	-	YN
Other specs	ж	X Other core specifications #
affected:		X Test specifications
unootou.	-	
		X O&M Specifications
Other comments:	ж	

How to create CRs using this form:

- 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 <u>ftp://ftp.3gpp.org/specs/</u> 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 <maxcellm eas></maxcellm 		
>>>Inter-frequency cell id	MP		Integer(0 <maxcellme as>-1)</maxcellme 	
>No inter-frequency cells removed				No data
New inter-frequency cells	OP	1 to <maxcellm eas></maxcellm 		
>Inter-frequency cell id	MD		Integer(0 <maxcellme as>-1)</maxcellme 	
>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 <maxcellm eas></maxcellm 		
>Inter-frequency cell id	MP		Integer(0 <maxcellme as>-1)</maxcellme 	

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

[...]

<pre>InterFreqCellInfoList ::= removedInterFreqCellList newInterFreqCellList cellsForInterFreqMeasList }</pre>	SEQUENCE { RemovedInterFreqCellList NewInterFreqCellList CellsForInterFreqMeasList	OPTIONAL, OPTIONAL, OPTIONAL
<pre>InterFreqCellInfoList-r4 ::= removedInterFreqCellList newInterFreqCellList cellsForInterFreqMeasList }</pre>	SEQUENCE { RemovedInterFreqCellList NewInterFreqCellList-r4 CellsForInterFreqMeasList	OPTIONAL, OPTIONAL <u>,</u> OPTIONAL
<pre>InterFreqCellInfoSI-List-RSCP ::= removedInterFreqCellList newInterFreqCellList }</pre>	SEQUENCE { RemovedInterFreqCellList NewInterFreqCellSI-List-RSCP	OPTIONAL, OPTIONAL

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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	ж	Rel-4 UTRAN will not be able to select particular cells from the Inter-frequency
not approved:		cell info list for inter-frequency measurements.
not approved.		
Clauses affected:	ж	11.3
	Г	
	_	YN
Other specs	ж	X Other core specifications #
affected:		X Test specifications
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		X O&M Specifications
Other comments:	ж	

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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.

10.3.7.13 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 <maxcellm eas></maxcellm 		
>>>Inter-frequency cell id	MP		Integer(0 <maxcellme as>-1)</maxcellme 	
>No inter-frequency cells removed				No data
New inter-frequency cells	OP	1 to <maxcellm eas></maxcellm 		
>Inter-frequency cell id	MD		Integer(0 <maxcellme as>-1)</maxcellme 	
>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 <maxcellm eas></maxcellm 		
>Inter-frequency cell id	MP		Integer(0 <maxcellme as>-1)</maxcellme 	

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

[...]

<pre>InterFreqCellInfoList ::= removedInterFreqCellList newInterFreqCellList cellsForInterFreqMeasList }</pre>	SEQUENCE { RemovedInterFreqCellList NewInterFreqCellList CellsForInterFreqMeasList	OPTIONAL, OPTIONAL, OPTIONAL
<pre>InterFreqCellInfoList-r4 ::= removedInterFreqCellList newInterFreqCellList cellsForInterFreqMeasList }</pre>	SEQUENCE { RemovedInterFreqCellList NewInterFreqCellList-r4 CellsForInterFreqMeasList	OPTIONAL, OPTIONAL <u>,</u> OPTIONAL
<pre>InterFreqCellInfoSI-List-RSCP ::= removedInterFreqCellList newInterFreqCellList }</pre>	SEQUENCE { RemovedInterFreqCellList NewInterFreqCellSI-List-RSCP	OPTIONAL, OPTIONAL

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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: ೫	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
	YN
Other specs #	X Other core specifications X
affected:	X Test specifications X O&M Specifications
Other comments: ೫	

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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 \rightarrow UE

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
Message Type	MP		Message	•	
			Туре		
UE information elements			550		
RRC transaction identifier	MP		RRC		
			transaction		
			identifier		
	05		10.3.3.36		
Integrity check info	OP		Integrity		
			check info		
PhyCH information alamanta			10.3.3.16		
PhyCH information elements CCTrCH power control info	OP		CCTrCH	Power control	
CCTICH power control into	OP		power	information for	
			control info	one CCTrCH	
			10.3.6.8		
Special Burst Scheduling	OP		Special	UL Special Burst	
opeoial Balot Confedanting	<u></u>		Burst	generation period	
			Scheduling	in radio frames	
			10.3.6.75a		
CHOICE TDD option	MP		<u></u>		REL-4
>3.84 Mcps TDD					REL-4
>>Alpha	OP		Alpha		
•			10.3.6.5		
>Special Burst Scheduling	OP		Special	UL Special Burst	
			Burst	generation period	
			Scheduling	in radio frames	
			10.3.6.75a		
>>Timing Advance Control	OP		UL Timing		
			Advance		
			Control		
			10.3.6.96		
>>PRACH Constant Value	OP		Constant	Operator	
			value TDD	controlled PRACH	
DUOQUI Osestant Malus			10.3.6.11a	Margin	
>>PUSCH Constant Value	OP		Constant	Operator	
			value TDD	controlled PUSCH	
>>UE positioning related	CV-IPDLs		10.3.6.11a	Margin	REL-4
parameters	GV-IPDLS				REL-4
>>>IPDL-Alpha	MP		Alpha		REL-4
	IVIT		10.3.6.5		
>>>Max power increase	MP		Integer (03)	In dB	REL-4
>1.28 Mcps TDD	1 1				REL-4
>>Uplink synchronisation	MD			Default: Uplink	REL-4
parameters				synchronisation	!
F				step size 1.	
				Uplink	
				synchronisation	

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
				frequency 1.	
>>>Uplink synchronisation step size	MP		Integer(18)	This parameter specifies the step size to be used for the adjustment of the uplink transmission timing	REL-4
>>>Uplink synchronisation frequency	MP		Integer(18)	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

[...]

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UplinkPhysicalChannelControl-r3-IEs ::= User equipment IEs	= SEQUENCE {	
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-IF	Es ::= SEOUENCE {	
	ntrol-IPDL-TDD is included instead of	IE
up-IPDL-Parameters in up-OTDOA-A		
openLoopPowerControl-IPDL-TDD Ope		IONAL
}	-	
UplinkPhysicalChannelControl-r4-IEs ::=	= SEQUENCE {	
Physical channel IEs		
ccTrCH-PowerControlInfo		0.000000
	CCTrCH-PowerControlInfo-r4	OPTIONAL,
specialBurstScheduling	SpecialBurstScheduling	OPTIONAL, OPTIONAL,
tddOption	SpecialBurstScheduling CHOICE {	
tddOption tdd384	SpecialBurstScheduling CHOICE { SEQUENCE {	OPTIONAL,
tddOption tdd384 timingAdvance	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4	OPTIONAL,
tddOption tdd384 timingAdvance alpha	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha	OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IF },	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH }, tdd128	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH }, tdd128	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH }, tdd128	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL

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		CR-Form-v7					
	CHANGE REQUEST						
ж	25.331 CR 1703 # rev - ^{# Cl}	urrent version: 5.2.0 [#]					
For <u>HELP</u> on u	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.						
Proposed change a	affects: UICC apps# ME X Radio Acce	ess Network X Core Network					
Title: ж	Correction of Special Burst Scheduling for	TDD					
Source: ೫							
Work item code: Ж	TEI4	<i>Date:</i>					
Category: ₩		Release: %Rel-5Use one 2of the following releases: 22(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 Summary of chang	25.224 clause 4.5 and 5.4). A Special Burst Pe parameter is used for this and is signalled to UB channel control" message. From the tabular of the current specification, it i parameter for 3.84 Mcps TDD and in the Rel-4 parameter is missing at all. Therefor it is not po correctly.	riod Scheduling/Generation E within the "Uplink physical is only possible to signal this ASN1 implementation this ssible to signal this parameter					
	ASN1 Implementation: The IE "specialBurstScheduling" is inserted into UplinkPhysicalChannelControl-r4-IEs according 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
	YN
Other specs #	X Other core specifications X
affected:	X Test specifications X O&M Specifications
Other comments: ೫	

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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

10.2.59 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 \rightarrow UE

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
Message Type	MP		Message	•	
			Туре		
UE information elements			550		
RRC transaction identifier	MP		RRC		
			transaction		
			identifier		
	05		10.3.3.36		
Integrity check info	OP		Integrity		
			check info		
PhyCH information alamanta			10.3.3.16		
PhyCH information elements CCTrCH power control info	OP		CCTrCH	Power control	
CCTICH power control into	OP		power	information for	
			control info	one CCTrCH	
			10.3.6.8		
Special Burst Scheduling	OP		Special	UL Special Burst	
opeoial Balot Confedanting	<u></u>		Burst	generation period	
			Scheduling	in radio frames	
			10.3.6.75a		
CHOICE TDD option	MP		<u></u>		REL-4
>3.84 Mcps TDD					REL-4
>>Alpha	OP		Alpha		
•			10.3.6.5		
>Special Burst Scheduling	OP		Special	UL Special Burst	
			Burst	generation period	
			Scheduling	in radio frames	
			10.3.6.75a		
>>Timing Advance Control	OP		UL Timing		
			Advance		
			Control		
			10.3.6.96		
>>PRACH Constant Value	OP		Constant	Operator	
			value TDD	controlled PRACH	
DUOQUI Osestant Malus			10.3.6.11a	Margin	
>>PUSCH Constant Value	OP		Constant	Operator	
			value TDD	controlled PUSCH	
>>UE positioning related	CV-IPDLs		10.3.6.11a	Margin	REL-4
parameters	GV-IPDLS				REL-4
>>>IPDL-Alpha	MP		Alpha		REL-4
	IVIT		10.3.6.5		
>>>Max power increase	MP		Integer (03)	In dB	REL-4
>1.28 Mcps TDD	1 1				REL-4
>>Uplink synchronisation	MD			Default: Uplink	REL-4
parameters				synchronisation	!
F				step size 1.	
				Uplink	
				synchronisation	

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	Version
				frequency 1.	
>>>Uplink synchronisation step size	MP		Integer(18)	This parameter specifies the step size to be used for the adjustment of the uplink transmission timing	REL-4
>>>Uplink synchronisation frequency	MP		Integer(18)	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

[...]

l

UplinkPhysicalChannelControl-r3-IEs ::= User equipment IEs	= SEQUENCE {	
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-IF	Es ::= SEOUENCE {	
	ntrol-IPDL-TDD is included instead of	IE
up-IPDL-Parameters in up-OTDOA-A		
openLoopPowerControl-IPDL-TDD Ope		IONAL
}	-	
UplinkPhysicalChannelControl-r4-IEs ::=	= SEQUENCE {	
Physical channel IEs		
ccTrCH-PowerControlInfo		0.000000
	CCTrCH-PowerControlInfo-r4	OPTIONAL,
specialBurstScheduling	SpecialBurstScheduling	OPTIONAL, OPTIONAL,
tddOption	SpecialBurstScheduling CHOICE {	
tddOption tdd384	SpecialBurstScheduling CHOICE { SEQUENCE {	OPTIONAL,
tddOption tdd384 timingAdvance	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4	OPTIONAL,
tddOption tdd384 timingAdvance alpha	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha	OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IF },	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH }, tdd128	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH }, tdd128	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL
tddOption tdd384 timingAdvance alpha prach-ConstantValue pusch-ConstantValue openLoopPowerControl-IH }, tdd128	SpecialBurstScheduling CHOICE { SEQUENCE { UL-TimingAdvanceControl-r4 Alpha ConstantValueTdd ConstantValueTdd PDL-TDD OpenLoopPowerControl-IPDL-T SEQUENCE {	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, DD-r4 OPTIONAL

Tdoc # R2-022690

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

	C	CHANGE R	EQUES	т	CR-Form-v7
^ж 25	<mark>.331</mark> CR	<mark>1704</mark> жг	ev - [#]	Current vers	sion: 4.7.0 [#]
For <u>HELP</u> on using	this form. see	bottom of this pa	ge or look at i	the pop-up text	tover the # symbols.
<u></u>	,		,		
Proposed change affec	<i>ts:</i> UICC a	pps# 📃 🛛 N	1E <mark>X</mark> Radio	Access Netwo	rk X Core Network
Title: [#] Co	orrection of	measurement I	reporting ev	vent 6f for 1.	28 Mcps TDD
Source: ^{# Sie}	mens AG				
	RTDD-L23			<i>Date:</i>	10/09/2002
Use	 F (correction) A (correspond B (addition of C (functional n D (editorial mediation) 	<i>modification of featu</i> o <i>dification)</i> ns of the above cate	re)	2	the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)
Reason for change: #	Mcps TDD events and	does not complete the reporting func	ely describe th tionality:	ne edge trigger	rting event 6f for 1.28 ed behaviour of 6f
		early described th that the trigger co			a time to trigger, which ome time.
	an exact		cription and s	hould changed	aluation does not cover I to "if the absolute
Summary of change: #		description of UE to have an edge to			rting events (6f) is
		ent, the variable The difference of the second s		6f_EVENT is m	nodified to store the T_{ADV}
	The expre	ession "whenever	changes mor	e" is changed	to:
	"if the	absolute value of	the difference	e is greater tha	n"
	Isolated im	pact analysis:			
	Affected F	unctionality: UE i	nternal meas	urements repo	rting events
	explicit/miss affect imple		xt or rules/con ing like indica	ntaining some of ated in the CR,	
	If the UE do	es not implement	this CR:		
	The edge	triggered behavi	our might not	be implemente	ed 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									
	YN									
Other specs #										
affected:	X Test specifications X O&M Specifications									
Other comments: #										

How to create CRs using this form:

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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.

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></maxrl>	Boolean	
> 1.28 Mcps TDD				
$\geq T_{ADV}$	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:

<u>1> create a variable TRIGGERED</u> 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:

 $\frac{1 > \text{ if the absolute value of the difference between the measured } T_{ADV} \text{ and the } T_{ADV} \text{ stored in variable}}{TRIGGERED 6F EVENT is greater than the predefined threshold configured with IE "T_{ADV} Threshold" for this event in the variable MEASUREMENT IDENTITY for a time period indicated by the IE "time_to_trigger":$

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

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

<u>3> set the IE "T_{ADV}" to the measured value and the IE "SFN" to the SFN during which the latest</u> 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.

Tdoc **# R2-022691**

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

			(CHAN	GE	REQ	UE	ST				CR-Form-v7
ж	25	.331	CR	1705	9	rev ،	-	ж	Current v	rersion	5.2.0	ж
For <u>HELP</u> on u	sing	this for	m, see	bottom c	of this p	bage or	look	at the	e pop-up t	ext ove	er the X syr	nbols.
Proposed change	affec	<i>ts:</i> ા	JICC a	ipps#		ME X	Rac	dio A	ccess Net	work	Core Ne	etwork
Title: #	Co	rrecti	<mark>on of</mark>	measur	emen	it repo	rting	eve	nt 6f for	1.28	<mark>Mcps TDI</mark>	D
Source: भ	Sie	mens .	AG									
Work item code: %	LC	RTDD-	-L23						Date	: ೫ <mark>1</mark>	0/09/2002	
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Reason for change	ə: X	Мсря	s TDD		comple	etely de	scrib				g event 6f fo pehaviour o	
									presence be kept fo		ne to trigger time.	r, which
		an	exact		tical de	escriptio	on an	d sho			ation does n 'if the absol	
Summary of chang	уе: Ж			t descripti to have a						porting	g events (6f) is
For this event, the variable TRIGGERED_6f_EVENT is modified to store the T which is used for event evaluation								the T _{ADV}				
		Th					-		is change			
		Isola		absolute		of the d	iffere	nce i	s greater t	han"		
				-		E intern	al me	easur	ements re	porting	g events	
		Corre expli affec	ection t cit/mis t imple	to a functi sing proce mentation	ion wh edural ns beh	ere spe text or l aving lil	cifica rules/ ke inc	tion v conta	was ambig	juous/r ne cont R, woi	not sufficien tradiction. V uld affect	

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:									
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	The current specification contains no references to the concerned functions.									
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	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									
	YN									
Other specs #										
affected:	X Test specifications X O&M Specifications									
Other comments: #										

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Information Element/Group name	Need	Multi	Type and reference	Semantics description
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>> Event triggered_RL	OP	<maxrl></maxrl>	Boolean	
> 1.28 Mcps TDD				
$\geq T_{ADV}$	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:

<u>1> create a variable TRIGGERED</u> 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:

 $\frac{1 > \text{ if the absolute value of the difference between the measured } T_{ADV} \text{ and the } T_{ADV} \text{ stored in variable}}{TRIGGERED 6F EVENT is greater than the predefined threshold configured with IE "T_{ADV} Threshold" for this event in the variable MEASUREMENT IDENTITY for a time period indicated by the IE "time_to_trigger":$

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

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

<u>3> set the IE "T_{ADV}" to the measured value and the IE "SFN" to the SFN during which the latest</u> 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

CHANGE REQUEST										
æ		<mark>25.331</mark> CI	R <mark>1780</mark>	жrev	-	ж	Current vers	ion: <mark>4</mark>	.7.0	ж
For <u>HELP</u> or	n usi	ing this form, s	see bottom of this	s page or	look	at the	e pop-up text	over the	эж syn	nbols.
Proposed chang	ie af	fects: UICO	C apps೫	MEX	Rac	dio A	ccess Networ	k <mark>X</mark> (Core Ne	twork
Title:	ж	Ciphering dur	ing SRNS reloca	ation witho	out re	use o	of COUNT-C			
Source:	ж	Nortel Netwo	rks							
Work item code:	æ	TEI					<i>Date:</i>	12 No	v 2002	
Category:	ι [F (correction A (corresp B (addition C (function D (editorial	onds to a correction of feature), nal modification of f I modification) ations of the above	on in an eai feature)			Release: % Use <u>one</u> of 2 9) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	-	hase 2) e 1996) e 1997) e 1998) e 1999) e 1999) e 4) e 5)	pases:

Reason for change: ೫	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
Caninary or change. ••	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 X Other core specifications % X Test specifications % X O&M Specifications %
Other comments:	X Oaivi Specifications %

How to create CRs using this form:

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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.
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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;

<u>NOTE:</u> 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:

- 24> 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
- 21> 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.

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Timing Indication	MP		Enumerat ed(Initialis e, Maintain)	NOTE	
CFN-targetSFN frame offset	CV- TimInd		Integer(0 255)	In frame	
Downlink DPCH power control information	OP		Downlink DPCH power control informatio n 10.3.6.23		
MAC-d HFN initial value	OPCV- Messag e		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 06 dB, in steps of 0.25 dB	
>>Downlink rate matching restriction information	OP		Downlink rate matching restriction informatio n 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		Enumerat ed (Fixed, Flexible)		
>>TFCI existence	MP		Boolean	TRUE indicates that TFCI is used. When spreading factor is less	

10.3.6.18 Downlink DPCH info common for all RL

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.
<u>Message</u>	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 {
                                      MaxPDCP-SN-WindowSize,
   supported
    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<u>-r4</u> OPTIONAL,

modeSpecificInfo CHOICE {

fdd SEQUENCE {
            cificInfo CHUICE {
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,
                                                         SEQUENCE {
                 tdd128
                     tstd-Indicator
                                                             BOOLEAN
                 }
             }.
             defaultDPCH-OffsetValue DefaultDPCH-OffsetValueTDD OPTIONAL
        }
    }
}
DL-DPCH-InfoCommon ::=
                                       SEQUENCE {
    cfnHandling
                                           CHOICE {
                                            NULL,
        maintain
         initialise
                                              SEQUENCE {
                                                    Cfntargetsfnframeoffset OPTIONAL
             cfntargetsfnframeoffset
         }
    },
                                           CHOICE {
    modeSpecificInfo

    dl-DPCH-PowerControlInfo
    DL-DPCH-PowerControlInfo
    OPTIONAL,

    powerOffsetPilot-pdpdch
    PowerOffsetPilot-pdpdch,
    OPTIONAL,

    dl-rate-matching-restriction
    Dl-rate-matching-restriction
    OPTIONAL,

        fdd
             -- TABULAR: The number of pilot bits is nested inside the spreading factor.
```

```
Error! No text of specified style in document.
                                                  7
                                                                 Error! No text of specified style in document.
            spreadingFactorAndPilot
                                                 SF512-AndPilot,
            positionFixedOrFlexible
                                                 PositionFixedOrFlexible,
            tfci-Existence
                                                 BOOLEAN
        },
        tdd
                                             SEQUENCE {
            dl-DPCH-PowerControlInfo
                                                 DL-DPCH-PowerControlInfo
                                                                                      OPTIONAL
        }
    }
}
                                         SEQUENCE {
DL-DPCH-InfoCommon-r4 ::=
                                         CHOICE {
    cfnHandling
                                             NULL,
        maintain
        initialise
                                             SEQUENCE {
            cfntargetsfnframeoffset
                                                 Cfntargetsfnframeoffset
                                                                                      OPTIONAL
    },
   modeSpecificInfo
                                         CHOICE {
                                             SEQUENCE {
        fdd
            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.
                                                 SF<u>512-AndPilot</u>,
            spreadingFactorAndPilot
            positionFixedOrFlexible
                                                 PositionFixedOrFlexible,
            tfci-Existence
                                                 BOOLEAN
        },
                                             SEQUENCE {
        tdd
            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

			(CHANGE	EREC	QUE	ST				CR-Form-v7
ж	2	<mark>5.331</mark>	CR	1781	ж rev	-	ж (Current vers	ion:	5.2.0	ж
For <u>HELP</u> on	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.							nbols.			
Proposed chang	e affe	ects: l	JICC a	pps#	ME	K Rad	dio Aco	cess Networ	rk <mark>X</mark>	Core Ne	twork
Title:	ж <mark>С</mark>	<mark>iphering</mark>	during	SRNS reloca	ation with	out re	<mark>use of</mark>	COUNT-C			
Source:	ж <mark>N</mark>	<mark>ortel Ne</mark>	<mark>tworks</mark>								
Work item code:	ж <mark>т</mark>	EI						Date: ೫	12	Nov 2002	
Category:	De	e <u>one</u> of F (con A (cor B (add C (fun D (edi tailed exp	rection) respond lition of ctional torial m planatio	owing categorie ds to a correctio feature), modification of odification) ns of the above FR 21.900.	on in an e feature)			Release: % Use <u>one</u> of 2 R96 R97 R98 R99 Rel-4 Rel-5	the foi (GSM (Relea (Relea (Relea (Relea (Relea	-	eases:

Rel-6

(Release 6)

Reason for change: 第	 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
Summary of change: ೫	around, i.e. (24 MSB of the COUNT-C) +x. 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 X Other core specifications % X Test specifications % X O&M Specifications %					
Other comments:	%					

How to create CRs using this form:

ж

- 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

<u>1> else:</u>

- 24> 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
- 24> 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.

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Timing Indication	MP		Enumerat ed(Initialis	NOTE	
			e, ` Maintain)		
CFN-targetSFN frame offset	CV- TimInd		Integer(0 255)	In frame	
Downlink DPCH power control information	OP		Downlink DPCH power		
			control informatio n 10.3.6.23		
MAC-d HFN initial value	<u>OPCV-</u> <u>Messag</u> <u>e</u>		Bit string(24)		REL-4
CHOICE mode >FDD	MP				
>>Power offset P _{Pilot-} DPDCH	MP		Integer(0 24)	Power offset equals P _{Pilot} - P _{DPDCH} , range 06 dB, in steps of 0.25 dB	
>>Downlink rate matching restriction information	OP		Downlink rate matching restriction informatio n 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		Enumerat ed (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	
>TDD				other than 128 or 256. (no data)	

10.3.6.18 Downlink DPCH info common for all RL

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 {
                                      MaxPDCP-SN-WindowSize,
    supported
    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)
_ _
SEQUENCE {
DL-CommonInformation-r4 ::=
                                   DL-DPCH-InfoCommon<u>-r4</u> OPTIONAL,
   dl-DPCH-InfoCommon
           defaultDPCH-OffsetValue
dpch-CompressedModeInfo
tx-DiversityMode
ssdt-Information
dpch-CompressedModeInfo
dpch-CompressedModeInfo
SSDT-Information-r4
    modeSpecificInfo
        fdd
        },
                                           SEQUENCE {
        t.dd
            tddOption
                                               CHOICE {
                tdd384
                                                     NULL,
                                                     SEQUENCE {
                tdd128
                    tstd-Indicator
                                                         BOOLEAN
                }
            }.
            defaultDPCH-OffsetValue DefaultDPCH-OffsetValueTDD OPTIONAL
        }
    }
}
...
DL-DPCH-InfoCommon ::=
                                   SEQUENCE {
    cfnHandling
                                        CHOICE {
        maintain
                                             NULL,
                                             SEQUENCE {
        initialise
                                               Cfntargetsfnframeoffset
            cfntargetsfnframeoffset
                                                                                     OPTIONAL
        }
    },
                             CHOICE {
    modeSpecificInfo

      Cliffend
      SEQUENCE {

      dl-DPCH-PowerControlInfo
      DL-DPCH-PowerControlInfo
      OPTIONAL,

      powerOffsetPilot-pdpdch
      PowerOffsetPilot-pdpdch,
      OPTIONAL,

      dl-rate-matching-restriction
      Dl-rate-matching-restriction
      OPTIONAL,

        fdd
            -- TABULAR: The number of pilot bits is nested inside the spreading factor.
            spreadingFactorAndPilot
                                                 SF512-AndPilot,
```

8

positionFixedOrFlexible PositionFixedOrFlexible, tfci-Existence BOOLEAN }, tdd SEQUENCE { dl-DPCH-PowerControlInfo DL-DPCH-PowerControlInfo OPTIONAL } } } DL-DPCH-InfoCommon-r4 ::= SEQUENCE { cfnHandling CHOICE { NULL, maintain initialise SEQUENCE { cfntargetsfnframeoffset Cfntargetsfnframeoffset OPTIONAL }, CHOICE { modeSpecificInfo fdd SEQUENCE { dl-DPCH-PowerControlInfo DL-DPCH-PowerControlInfo OPTIONAL, powerOffsetPilot-pdpdch PowerOffsetPilot-pdpdch, OPTIONAL, dl-rate-matching-restriction Dl-rate-matching-restriction -- TABULAR: The number of pilot bits is nested inside the spreading factor. spreadingFactorAndPilot SF512-AndPilot, positionFixedOrFlexible PositionFixedOrFlexible, BOOLEAN tfci-Existence }, 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 OPTIO OPTIONAL

}

3GPP TSG-RAN WG2 Meeting #33 Sophia Antipolis, France, November 12 – 15, 2002

Tdoc # R2-023178

			(CHANGE	REC	QUE	ST				CR-Form-v7
ж		25.331	CR	1782	жrev	-	ж	Current vers	ion:	4.7.0	ж
For <u>HELP</u> or	For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.										
Proposed chang	e a	affects:	JICC a	apps#	ME	K Rad	dio A	ccess Networ	k X	Core Ne	twork
Title:	Ж	Correction	n to IE	"Intra Domain	NAS No	ode Se	electo	or"			
Source:	ж	Siemens	AG								
Work item code:	Ж	TEI4						Date: ೫	15/1	10/2002	
Category:	Ħ	Use <u>one</u> of F (con A (cor B (add C (fun D (edi	rection) respon dition of ctional torial m planatic	ds to a correction feature), modification of t odification) ons of the above	on in an ea feature)			Release: # Use <u>one</u> of 2 9) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	(GSM (Relea (Relea (Relea (Relea (Relea	llowing rele 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4)	eases:

Reason for change: ೫	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: ℜ	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.						
0	It is not defined how the contents of IE "later Demois NAC Node Colortar" shall						
	It is not defined how the contents of IE "Intra Domain NAS Node Selector" shall						
not approved:	be sent in later than R99 versions of protocol.						
Clauses affected: #	10.3.1.6						
Other specs # affected:	YNXOther core specifications#XTest specificationsXO&M Specifications						
Other comments: #							

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <u>http://www.3gpp.org/specs/CR.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> 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 Sophia Antipolis, France, November 12 – 15, 2002

Tdoc #R2-023179

							CR-Form-v					
ж		25.331	CR	1783	жrе	ev	-	ж	Current vers	sion:	5.2.0	ж
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the # symbols.												
Proposed chang	e a	affects:	JICC a	ıpps ₩	ME	= <mark>X</mark>	Rad	io Ad	ccess Netwo	rk X	Core Ne	etwork
Title:	ж	Correction	n to IE	"Intra Domain	NAS	Nod	<mark>e Sel</mark>	ecto	r"			
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Reason for change: ೫	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.
	It is not defined how the contents of IE "Intra Domain NAS Node Selector" shall
not approved:	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 <u>http://www.3gpp.org/specs/CR.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> 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

			(CHANGE	REQ	UE	ST				CR-Form-v7
¥		25.331	CR	1784	ж геv	-	ж	Current vers	ion:	4.7.0	ж
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Proposed chang	je a	affects: l	JICC a	pps#	ME X	Rad	dio A	ccess Networ	'k 📃	Core Ne	etwork
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Source:	Ж	Siemens	AG								
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Reason for change: ೫	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 #	Undefined UE behaviour if random function returns value 1, inconsistency with
Consequences if % not approved:	R99 specification
Clauses affected: अ	8.5.17
	YN
Other specs % affected:	XOther core specifications#XTest specificationsXO&M Specifications
Other comments: ೫	

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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.

8.5.17 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 $0 \le \text{rand} < 10,...,1$, 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 Sophia Antipolis, France, November 12 – 15, 2002

Tdoc **#***R2-023181*

CHANGE REQUEST								CR-Form-v7			
æ		25.331	CR 1785	ж	rev	-	ж	Current vers	ion:	5.2.0	ж
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Title:	ж	Correction	n to PRACH s	election							
Source:	ж	Siemens	AG								
Work item code:	ж	TEI4						Date: ೫	14/	10/2002	
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not approved:	R99 specification
Clauses affected: #	8.5.17
	YN
Other specs ೫	X Other core specifications #
affected:	X Test specifications
	X O&M Specifications
Other comments: ೫	

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