TSG-RAN Meeting #17 ***RP-020546***
Biarritz, France, 3 - 6 September 2002

Title: **Agreed CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.331**

Source: **TSG-RAN WG2**

Agenda item: **7.2.3**

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Versio	Versio
R2-022283	agreed	25.331	1603		R99	Correction of RNTI used in PUSCH capacity request and physical shared channel allocation request	F	3.11.0	3.12.0
R2-022284	agreed	25.331	1604		Rel-4	Correction of RNTI used in PUSCH capacity request and physical shared channel allocation request	A	4.5.0	4.6.0
R2-022285	agreed	25.331	1605		Rel-5	Correction of RNTI used in PUSCH capacity request and physical shared channel allocation request	A	5.1.0	5.2.0
R2-022286	agreed	25.331	1606		R99	Correction to allowed logical channel list choice for RACH transport channels	F	3.11.0	3.12.0
R2-022287	agreed	25.331	1607		Rel-4	Correction to allowed logical channel list choice for RACH transport channels	A	4.5.0	4.6.0
R2-022288	agreed	25.331	1608		Rel-5	Correction to allowed logical channel list choice for RACH transport channels	A	5.1.0	5.2.0
R2-022289	agreed	25.331	1609		R99	SRNS relocation containers corrections	F	3.11.0	3.12.0
R2-022290	agreed	25.331	1610		Rel-4	SRNS relocation containers corrections	A	4.5.0	4.6.0
R2-022291	agreed	25.331	1611		Rel-5	SRNS relocation containers corrections	A	5.1.0	5.2.0
R2-022292	agreed	25.331	1612		R99	DCH quality target	F	3.11.0	3.12.0
R2-022293	agreed	25.331	1613		Rel-4	DCH quality target	A	4.5.0	4.6.0
R2-022294	agreed	25.331	1614		Rel-5	DCH quality target	A	5.1.0	5.2.0
R2-022295	agreed	25.331	1615		R99	Handling of variables CELL_INFO_LIST and MEASUREMENT_IDENTITY(2)	F	3.11.0	3.12.0
R2-022296	agreed	25.331	1616		Rel-4	Handling of variables CELL_INFO_LIST and MEASUREMENT_IDENTITY(2)	A	4.5.0	4.6.0
R2-022297	agreed	25.331	1617		Rel-5	Handling of variables CELL_INFO_LIST and MEASUREMENT_IDENTITY(2)	A	5.1.0	5.2.0
R2-022389	agreed	25.331	1618	1	R99	Correction of secondary CCPCH selection and PRACH selection	F	3.11.0	3.12.0
R2-022390	agreed	25.331	1619	1	Rel-4	Correction of secondary CCPCH selection and PRACH selection	A	4.5.0	4.6.0
R2-022391	agreed	25.331	1620	1	Rel-5	Correction of secondary CCPCH selection and PRACH selection	A	5.1.0	5.2.0

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19-23 August 2002

R2-022283

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1603** ⌘ **rev** **-** ⌘ Current version: **3.11.0** ⌘

*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 RNTI used in PUSCH capacity request and physical shared channel allocation
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	13/08/2002
Category:	⌘	**F**
Release:	⌘	R99

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 DSCH-RNTI is used in the PUSCH capacity request and physical channel allocation messages to identify the UE. However in sections 8.2.7 and 8.2.8 there is still reference to C-RNTI.
Summary of change:	⌘	C-RNTI is replaced with DSCH-RNTI in sections 8.2.7.2 and 8.2.8.3
Consequences if not approved:	⌘	There is potential for confusion and wrong implementation as the ASN.1 indicates that the DSCH-RNTI is used in PUSCH capacity request and physical shared channel allocation whereas the procedural description refers to the C-RNTI in some cases. **Impact analysis:** This CR is considered to have isolated impact since it only affects TDD mode. It only corrects discrepancies in the procedural text.

Clauses affected:	⌘	8.2.7 and 8.2.8

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

Other comments:	⌘	

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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.

8.2.7 Physical Shared Channel Allocation [TDD only]

Figure 8.2.7-1: Physical Shared Channel Allocation

8.2.7.1 General

The purpose of this procedure is to allocate radio resources to USCH and/or DSCH transport channels in TDD mode, for use by a UE. This procedure can also be used to indicate to the UE, that a PUSCH allocation is pending, in order to prevent further capacity requests from the UE.

UEs are not required to receive FACH and DSCH simultaneously, i.e. if resources are allocated to DSCH the FACH reception may be suspended.

8.2.7.2 Initiation

To initiate the Physical Shared Channel Allocation procedure, the UTRAN sends the "PHYSICAL SHARED CHANNEL ALLOCATION" message on the downlink SHCCH or on the downlink DCCH using UM RLC. The ~~C-RNTI~~ DSCH-RNTI shall be included for UE identification, if the message is sent on the SHCCH.

8.2.7.3 Reception of a PHYSICAL SHARED CHANNEL ALLOCATION message by the UE

Upon reception of a "PHYSICAL SHARED CHANNEL ALLOCATION" message, if the message is received on the downlink SHCCH the UE shall:

1> check the DSCH-RNTI to see if the UE is addressed by the message;

1> if the UE is addressed by the message, or if the message is received on the downlink DCCH:

2> perform the following actions.

1> otherwise:

2> ignore the message.

1> act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

1> if the IE "ISCP Timeslot list" is included:

2> store the timeslot numbers given there for future Timeslot ISCP measurements and reports in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the IE "PDSCH capacity allocation info" is included:

2> configure the physical resources used for the downlink CCTrCH given by the IE "TFCS ID" according to the following:

3> if the CHOICE "Configuration" has the value "Old configuration":

4> if the UE has stored a PDSCH configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION with the identity given by the IE "PDSCH Identity":

5> configure the physical resources according to that configuration.

4> otherwise:

5> ignore the IE "PDSCH capacity allocation info".

3> if the CHOICE "Configuration" has the value "New configuration":

4> configure the physical resources according to the information given in IE "PDSCH Info". If IE "Common timeslot info" or IE "PDSCH timeslots and codes" IE are not present in IE "PDSCH Info":

5> reuse the configuration stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION for this CCTrCH.

4> if the IE "PDSCH Identity" is included:

5> store the new configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION using that identity.

2> start using the new configuration at the CFN specified by the IE "Allocation activation time", and use that for the duration given by the IE "Allocation duration";

2> if the IE "Confirm request" has the value "Confirm PDSCH" and IE "PDSCH Identity" is included in IE "PDSCH capacity allocation info":

3> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8.

2> if the IE "PUSCH capacity allocation info" is included:

2> stop the timer T310, if running;

2> if the CHOICE "PUSCH allocation" has the value "PUSCH allocation pending":

3> start the timer T311.

2> if the CHOICE "PUSCH allocation" has the value "PUSCH allocation assignment":

3> stop the timer T311, if running;

3> configure the physical resources used for the uplink CCTrCH given by the IE "TFCS ID" according to the following:

4> if the CHOICE "Configuration" has the value "Old configuration":

5> if the UE has stored a PUSCH configuration with the identity given by the IE "PUSCH Identity" in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION:

5> configure the physical resources according to that configuration.

5> otherwise:

5> ignore the IE "PUSCH capacity allocation info".

4> if the CHOICE "Configuration" has the value "New configuration", the UE shall:

5> configure the physical resources according to the information given in IE "PUSCH Info". If IE "Common timeslot info" or IE "PUSCH timeslots and codes" is not present in IE "PUSCH Info":

6> reuse the configuration stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION for this CCTrCH.

5> if the IE "PUSCH Identity" is included:

5> store the new configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION using that identity.

3> start using the new configuration at the CFN specified by the IE "Allocation activation time", and use that for the duration given by the IE "Allocation duration";

3> if the IE "Traffic volume report request " is included:

4> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8 at the time indicated by the IE "Traffic volume report request".

3> if the IE "Confirm request" has the value "Confirm PUSCH" and IE "PUSCH Identity" is included in IE "PUSCH capacity allocation info":

4> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8.

1> determine the TFCS subset and hence the TFCI values which are possible given the PUSCH allocation for that CCTrCH;

1> configure the MAC-c/sh in the UE with this TFCS restriction if necessary;

1> transmit USCH Transport Block Sets as required, within the TFCS limits given by the PUSCH allocation.

NOTE: If the UE has just entered a new cell and System Information Block Type 6has not yet been scheduled, PUSCH/PDSCH information should be specified in the allocation message.

The UE shall:

1> clear the entry for the PHYSICAL SHARED CHANNEL ALLOCATION message in the table "Accepted transactions" in the variable TRANSACTIONS;

1> and the procedure ends.

8.2.7.4 Invalid PHYSICAL SHARED CHANNEL ALLOCATION message

If the UE receives a PHYSICAL SHARED CHANNEL ALLOCATION message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

1> ignore the invalid PHYSICAL SHARED CHANNEL ALLOCATION message;

1> submit the PUSCH CAPACITY REQUEST message for transmission on the uplink SHCCH, setting the information elements in the message as specified in subclause 8.2.8.3;

1> reset counter V310;

1> start timer T310;

1> proceed as described in subclause 8.2.8.

8.2.8 PUSCH capacity request [TDD only]

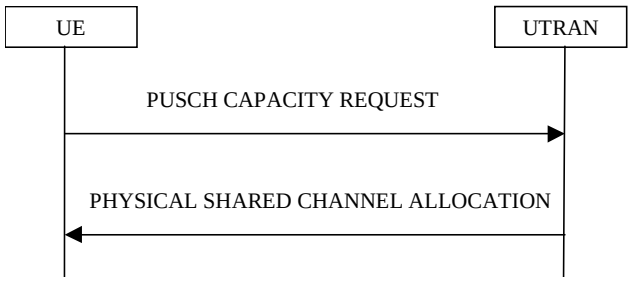

Figure 8.2.8-1: PUSCH Capacity request procedure

8.2.8.1 General

With this procedure, the UE transmits its request for PUSCH resources to the UTRAN. In the normal case, the UTRAN responds with a PHYSICAL SHARED CHANNEL ALLOCATION message, which either allocates the requested PUSCH resources, and/or allocates a PDSCH resource, or may just serve as an acknowledgement, indicating that PUSCH allocation is pending.

This procedure can also be used to acknowledge the reception of a PHYSICAL SHARED CHANNEL ALLOCATION message, or to indicate a protocol error in that message.

With the PUSCH CAPACITY REQUEST message, the UE can request capacity for one or more USCH.

8.2.8.2 Initiation

This procedure is initiated:

1> in the CELL_FACH or CELL_DCH state;

1> and when at least one RB using USCH has been established;

1> and when the UE sees the requirement to request physical resources (PUSCH) for an USCH channel or there is the need to reply to a PHYSICAL SHARED CHANNEL ALLOCATION message as described in clause 8.2.7 (i.e. to confirm the reception of a message, if requested to do so, or to indicate a protocol error).

The procedure can be initiated if:

- Timer T311 is not running.
- The timer T310 (capacity request repetition timer) is not running.

The UE shall:

1> set the IEs in the PUSCH CAPACITY REQUEST message according to subclause 8.2.8.3;

1> if the procedure is triggered to reply to a previous PHYSICAL SHARED CHANNEL ALLOCATION message by the IE "Confirm request" set to "Confirm PUSCH" and the IE "PUSCH capacity allocation info" is not present:

2> transmit the PUSCH CAPACITY REQUEST message on RACH.

1> else:

2> transmit the PUSCH CAPACITY REQUEST message on the uplink SHCCH.

1> set counter V310 to 1;

1> start timer T310.

8.2.8.3 PUSCH CAPACITY REQUEST message contents to set

With one PUSCH CAPACITY REQUEST message, capacity for one or more USCH can be requested. It shall include these information elements:

1> ~~C-RNTI~~ DSCH-RNTI to be used as UE identity if the message is sent on RACH;

1> Traffic volume measured results for each radio bearer satisfying the reporting criteria as specified in the MEASUREMENT CONTROL procedure (if no radio bearer satisfies the reporting criteria, traffic volume measured results shall not be included). These results shall include:

2> Radio Bearer ID of the Radio Bearer being reported;

2> RLC buffer payload for these radio bearers, as specified by the MEASUREMENT CONTROL procedure.

The UE shall:

1> if the initiation of the procedure is triggered by the IE "Traffic volume report request" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message:

2> report the traffic volume measurement result for the radio bearer mapped on USCH transport channel specified in the received message. These results shall include:

3> Radio Bearer ID of the Radio Bearer being reported;

3> RLC buffer payload for this radio bearer.

1> if the initiation of the procedure is triggered by the IE "Confirm request" set to "Confirm PDSCH" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message and the IE "PUSCH capacity allocation info" is present in this message:

2> set the CHOICE "Allocation confirmation" to "PDSCH Confirmation" with the value given in the IE "PDSCH Identity" stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the initiation of the procedure is triggered by the IE "Confirm request" set to "Confirm PUSCH" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message:

2> set the CHOICE "Allocation confirmation" to "PUSCH Confirmation" with the value given in the IE "PUSCH Identity" stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the variable PROTOCOL_ERROR_REJECT is set to TRUE:

2> include the IE "RRC transaction identifier" in the response message transmitted below; and

2> set it to the value of "RRC transaction identifier" in the entry for the PHYSICAL SHARED CHANNEL ALLOCATION message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "protocol error indicator" to TRUE;

2> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.

1> if the value of the variable PROTOCOL_ERROR_ REJECT is FALSE:

2> set the IE "Protocol error indicator" to FALSE.

As an option, the message may include IE "Timeslot ISCP" and IE "Primary CCPCH RSCP".

The timeslots for which "Timeslot ISCP" may be reported shall have been configured with a previous PHYSICAL SHARED CHANNEL ALLOCATION message and stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

"Primary CCPCH RSCP" is reported when requested with a previous PHYSICAL SHARED CHANNEL ALLOCATION message.

8.2.8.4 Reception of a PUSCH CAPACITY REQUEST message by the UTRAN

Upon receiving a PUSCH CAPACITY REQUEST message with traffic volume measurement included for at least one radio bearer, the UTRAN should initiate the PHYSICAL SHARED CHANNEL ALLOCATION procedure, either for allocating PUSCH or PDSCH resources as required, or just as an acknowledgement, indicating a pending PUSCH allocation, as described in subclause 8.2.7.

8.2.8.5 T310 expiry

Upon expiry of timer T310, the UE shall:

1> if V310 is smaller than N310:

2> transmit a new PUSCH CAPACITY REQUEST message on the Uplink SHCCH;

2> restart timer T310;

2> increment counter V310;

2> set the IEs in the PUSCH CAPACITY REQUEST message as specified in subclause 8.2.8.3.

1> if V310 is greater than or equal to N310:

2> the procedure ends.

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Stockholm, Sweden, 19-23 August 2002

R2-022284

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1604** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

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Work item code:	⌘	TEI
Date:	⌘	13/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-4

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Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The DSCH-RNTI is used in the PUSCH capacity request and physical channel allocation messages to identify the UE. However in sections 8.2.7 and 8.2.8 there is still reference to C-RNTI.
Summary of change:	⌘	C-RNTI is replaced with DSCH-RNTI in sections 8.2.7.2 and 8.2.8.3
Consequences if not approved:	⌘	There is potential for confusion and wrong implementation as the ASN.1 indicates that the DSCH-RNTI is used in PUSCH capacity request and physical shared channel allocation whereas the procedural description refers to the C-RNTI in some cases. **Impact analysis:** This CR is considered to have isolated impact since it only affects TDD mode. It only corrects discrepancies in the procedural text.

Clauses affected:	⌘	8.2.7 and 8.2.8

Other specs affected: ⌘

Y	N	
	X	Other core specifications
	X	Test specifications
	X	O&M Specifications

⌘

Other comments: ⌘

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8.2.7 Physical Shared Channel Allocation [TDD only]

Figure 8.2.7-1: Physical Shared Channel Allocation

8.2.7.1 General

The purpose of this procedure is to allocate radio resources to USCH and/or DSCH transport channels in TDD mode, for use by a UE. This procedure can also be used to indicate to the UE, that a PUSCH allocation is pending, in order to prevent further capacity requests from the UE.

UEs are not required to receive FACH and DSCH simultaneously, i.e. if resources are allocated to DSCH the FACH reception may be suspended.

8.2.7.2 Initiation

To initiate the Physical Shared Channel Allocation procedure, the UTRAN sends the "PHYSICAL SHARED CHANNEL ALLOCATION" message on the downlink SHCCH or on the downlink DCCH using UM RLC. The ~~C-RNTI~~ DSCH-RNTI shall be included for UE identification, if the message is sent on the SHCCH.

8.2.7.3 Reception of a PHYSICAL SHARED CHANNEL ALLOCATION message by the UE

Upon reception of a "PHYSICAL SHARED CHANNEL ALLOCATION" message, if the message is received on the downlink SHCCH the UE shall:

1> check the DSCH-RNTI to see if the UE is addressed by the message;

1> if the UE is addressed by the message, or if the message is received on the downlink DCCH:

2> perform the following actions.

1> otherwise:

2> ignore the message.

1> act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

1> if the IE "ISCP Timeslot list" is included:

2> store the timeslot numbers given there for future Timeslot ISCP measurements and reports in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the IE "PDSCH capacity allocation info" is included:

2> configure the physical resources used for the downlink CCTrCH given by the IE "TFCS ID" according to the following:

3> if the CHOICE "Configuration" has the value "Old configuration":

4> if the UE has stored a PDSCH configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION with the identity given by the IE "PDSCH Identity":

5> configure the physical resources according to that configuration.

4> otherwise:

5> ignore the IE "PDSCH capacity allocation info".

3> if the CHOICE "Configuration" has the value "New configuration":

4> configure the physical resources according to the information given in IE "PDSCH Info". If IE "Common timeslot info" or IE "PDSCH timeslots and codes" IE are not present in IE "PDSCH Info":

5> reuse the configuration stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION for this CCTrCH.

4> if the IE "PDSCH Identity" is included:

5> store the new configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION using that identity.

2> start using the new configuration at the CFN specified by the IE "Allocation activation time", and use that for the duration given by the IE "Allocation duration";

2> if the IE "Confirm request" has the value "Confirm PDSCH" and IE "PDSCH Identity" is included in IE "PDSCH capacity allocation info":

3> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8.

2> if the IE "PUSCH capacity allocation info" is included:

2> stop the timer T310, if running;

2> if the CHOICE "PUSCH allocation" has the value "PUSCH allocation pending":

3> start the timer T311.

2> if the CHOICE "PUSCH allocation" has the value "PUSCH allocation assignment":

3> stop the timer T311, if running;

3> configure the physical resources used for the uplink CCTrCH given by the IE "TFCS ID" according to the following:

4> if the CHOICE "Configuration" has the value "Old configuration":

5> if the UE has stored a PUSCH configuration with the identity given by the IE "PUSCH Identity" in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION:

5> configure the physical resources according to that configuration.

5> otherwise:

5> ignore the IE "PUSCH capacity allocation info".

4> if the CHOICE "Configuration" has the value "New configuration", the UE shall:

5> configure the physical resources according to the information given in IE "PUSCH Info". If IE "Common timeslot info" or IE "PUSCH timeslots and codes" is not present in IE "PUSCH Info":

6> reuse the configuration stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION for this CCTrCH.

5> if the IE "PUSCH Identity" is included:

5> store the new configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION using that identity.

3> start using the new configuration at the CFN specified by the IE "Allocation activation time", and use that for the duration given by the IE "Allocation duration";

3> if the IE "Traffic volume report request " is included:

4> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8 at the time indicated by the IE "Traffic volume report request".

3> if the IE "Confirm request" has the value "Confirm PUSCH" and IE "PUSCH Identity" is included in IE "PUSCH capacity allocation info":

4> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8.

1> determine the TFCS subset and hence the TFCI values which are possible given the PUSCH allocation for that CCTrCH;

1> configure the MAC-c/sh in the UE with this TFCS restriction if necessary;

1> transmit USCH Transport Block Sets as required, within the TFCS limits given by the PUSCH allocation.

NOTE: If the UE has just entered a new cell and System Information Block Type 6has not yet been scheduled, PUSCH/PDSCH information should be specified in the allocation message.

The UE shall:

1> clear the entry for the PHYSICAL SHARED CHANNEL ALLOCATION message in the table "Accepted transactions" in the variable TRANSACTIONS;

1> and the procedure ends.

8.2.7.4 Invalid PHYSICAL SHARED CHANNEL ALLOCATION message

If the UE receives a PHYSICAL SHARED CHANNEL ALLOCATION message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

1> ignore the invalid PHYSICAL SHARED CHANNEL ALLOCATION message;

1> submit the PUSCH CAPACITY REQUEST message for transmission on the uplink SHCCH, setting the information elements in the message as specified in subclause 8.2.8.3;

1> reset counter V310;

1> start timer T310;

1> proceed as described in subclause 8.2.8.

8.2.8 PUSCH capacity request [TDD only]

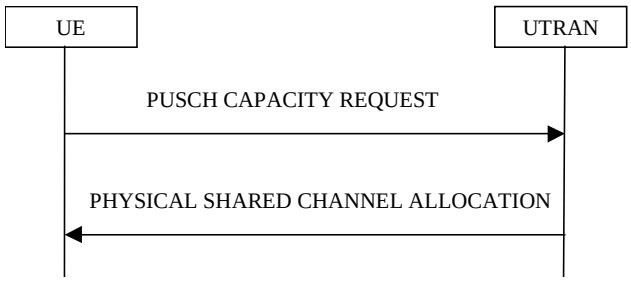

Figure 8.2.8-1: PUSCH Capacity request procedure

8.2.8.1 General

With this procedure, the UE transmits its request for PUSCH resources to the UTRAN. In the normal case, the UTRAN responds with a PHYSICAL SHARED CHANNEL ALLOCATION message, which either allocates the requested PUSCH resources, and/or allocates a PDSCH resource, or may just serve as an acknowledgement, indicating that PUSCH allocation is pending.

This procedure can also be used to acknowledge the reception of a PHYSICAL SHARED CHANNEL ALLOCATION message, or to indicate a protocol error in that message.

With the PUSCH CAPACITY REQUEST message, the UE can request capacity for one or more USCH.

8.2.8.2 Initiation

This procedure is initiated:

1> in the CELL_FACH or CELL_DCH state;

1> and when at least one RB using USCH has been established;

1> and when the UE sees the requirement to request physical resources (PUSCH) for an USCH channel or there is the need to reply to a PHYSICAL SHARED CHANNEL ALLOCATION message as described in clause 8.2.7 (i.e. to confirm the reception of a message, if requested to do so, or to indicate a protocol error).

The procedure can be initiated if:

- Timer T311 is not running.
- The timer T310 (capacity request repetition timer) is not running.

The UE shall:

1> set the IEs in the PUSCH CAPACITY REQUEST message according to subclause 8.2.8.3;

1> if the procedure is triggered to reply to a previous PHYSICAL SHARED CHANNEL ALLOCATION message by the IE "Confirm request" set to "Confirm PUSCH" and the IE "PUSCH capacity allocation info" is not present:

2> transmit the PUSCH CAPACITY REQUEST message on RACH.

1> else:

2> transmit the PUSCH CAPACITY REQUEST message on the uplink SHCCH.

1> set counter V310 to 1;

1> start timer T310.

8.2.8.3 PUSCH CAPACITY REQUEST message contents to set

With one PUSCH CAPACITY REQUEST message, capacity for one or more USCH can be requested. It shall include these information elements:

1> ~~C-RNTI~~ DSCH-RNTI to be used as UE identity if the message is sent on RACH;

1> Traffic volume measured results for each radio bearer satisfying the reporting criteria as specified in the MEASUREMENT CONTROL procedure (if no radio bearer satisfies the reporting criteria, traffic volume measured results shall not be included). These results shall include:

2> Radio Bearer ID of the Radio Bearer being reported;

2> RLC buffer payload for these radio bearers, as specified by the MEASUREMENT CONTROL procedure.

The UE shall:

1> if the initiation of the procedure is triggered by the IE "Traffic volume report request" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message:

2> report the traffic volume measurement result for the radio bearer mapped on USCH transport channel specified in the received message. These results shall include:

3> Radio Bearer ID of the Radio Bearer being reported;

3> RLC buffer payload for this radio bearer.

1> if the initiation of the procedure is triggered by the IE "Confirm request" set to "Confirm PDSCH" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message and the IE "PUSCH capacity allocation info" is present in this message:

2> set the CHOICE "Allocation confirmation" to "PDSCH Confirmation" with the value given in the IE "PDSCH Identity" stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the initiation of the procedure is triggered by the IE "Confirm request" set to "Confirm PUSCH" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message:

2> set the CHOICE "Allocation confirmation" to "PUSCH Confirmation" with the value given in the IE "PUSCH Identity" stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the variable PROTOCOL_ERROR_REJECT is set to TRUE:

2> include the IE "RRC transaction identifier" in the response message transmitted below; and

2> set it to the value of "RRC transaction identifier" in the entry for the PHYSICAL SHARED CHANNEL ALLOCATION message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "protocol error indicator" to TRUE;

2> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.

1> if the value of the variable PROTOCOL_ERROR_ REJECT is FALSE:

2> set the IE "Protocol error indicator" to FALSE.

As an option, the message may include IE "Timeslot ISCP" and IE "Primary CCPCH RSCP".

The timeslots for which "Timeslot ISCP" may be reported shall have been configured with a previous PHYSICAL SHARED CHANNEL ALLOCATION message and stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

"Primary CCPCH RSCP" is reported when requested with a previous PHYSICAL SHARED CHANNEL ALLOCATION message.

8.2.8.4 Reception of a PUSCH CAPACITY REQUEST message by the UTRAN

Upon receiving a PUSCH CAPACITY REQUEST message with traffic volume measurement included for at least one radio bearer, the UTRAN should initiate the PHYSICAL SHARED CHANNEL ALLOCATION procedure, either for allocating PUSCH or PDSCH resources as required, or just as an acknowledgement, indicating a pending PUSCH allocation, as described in subclause 8.2.7.

8.2.8.5 T310 expiry

Upon expiry of timer T310, the UE shall:

1> if V310 is smaller than N310:

2> transmit a new PUSCH CAPACITY REQUEST message on the Uplink SHCCH;

2> restart timer T310;

2> increment counter V310;

2> set the IEs in the PUSCH CAPACITY REQUEST message as specified in subclause 8.2.8.3.

1> if V310 is greater than or equal to N310:

2> the procedure ends.

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19-23 August 2002

R2-022285

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1605** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*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 RNTI used in PUSCH capacity request and physical shared channel allocation
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	13/08/2002
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 DSCH-RNTI is used in the PUSCH capacity request and physical channel allocation messages to identify the UE. However in sections 8.2.7 and 8.2.8 there is still reference to C-RNTI.
Summary of change:	⌘	C-RNTI is replaced with DSCH-RNTI in sections 8.2.7.2 and 8.2.8.3
Consequences if not approved:	⌘	There is potential for confusion and wrong implementation as the ASN.1 indicates that the DSCH-RNTI is used in PUSCH capacity request and physical shared channel allocation whereas the procedural description refers to the C-RNTI in some cases. **Impact analysis:** This CR is considered to have isolated impact since it only affects TDD mode. It only corrects discrepancies in the procedural text.

Clauses affected:	⌘	8.2.7 and 8.2.8

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.

8.2.7 Physical Shared Channel Allocation [TDD only]

Figure 8.2.7-1: Physical Shared Channel Allocation

8.2.7.1 General

The purpose of this procedure is to allocate radio resources to USCH and/or DSCH transport channels in TDD mode, for use by a UE. This procedure can also be used to indicate to the UE, that a PUSCH allocation is pending, in order to prevent further capacity requests from the UE.

UEs are not required to receive FACH and DSCH simultaneously, i.e. if resources are allocated to DSCH the FACH reception may be suspended.

8.2.7.2 Initiation

To initiate the Physical Shared Channel Allocation procedure, the UTRAN sends the "PHYSICAL SHARED CHANNEL ALLOCATION" message on the downlink SHCCH or on the downlink DCCH using UM RLC. The ~~C-RNTI~~ DSCH-RNTI shall be included for UE identification, if the message is sent on the SHCCH.

8.2.7.3 Reception of a PHYSICAL SHARED CHANNEL ALLOCATION message by the UE

Upon reception of a "PHYSICAL SHARED CHANNEL ALLOCATION" message, if the message is received on the downlink SHCCH the UE shall:

1> check the DSCH-RNTI to see if the UE is addressed by the message;

1> if the UE is addressed by the message, or if the message is received on the downlink DCCH:

2> perform the following actions.

1> otherwise:

2> ignore the message.

1> act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:

1> if the IE "ISCP Timeslot list" is included:

2> store the timeslot numbers given there for future Timeslot ISCP measurements and reports in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the IE "PDSCH capacity allocation info" is included:

2> configure the physical resources used for the downlink CCTrCH given by the IE "TFCS ID" according to the following:

3> if the CHOICE "Configuration" has the value "Old configuration":

4> if the UE has stored a PDSCH configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION with the identity given by the IE "PDSCH Identity":

5> configure the physical resources according to that configuration.

4> otherwise:

5> ignore the IE "PDSCH capacity allocation info".

3> if the CHOICE "Configuration" has the value "New configuration":

4> configure the physical resources according to the information given in IE "PDSCH Info". If IE "Common timeslot info" or IE "PDSCH timeslots and codes" IE are not present in IE "PDSCH Info":

5> reuse the configuration stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION for this CCTrCH.

4> if the IE "PDSCH Identity" is included:

5> store the new configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION using that identity.

2> start using the new configuration at the CFN specified by the IE "Allocation activation time", and use that for the duration given by the IE "Allocation duration";

2> if the IE "Confirm request" has the value "Confirm PDSCH" and IE "PDSCH Identity" is included in IE "PDSCH capacity allocation info":

3> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8.

2> if the IE "PUSCH capacity allocation info" is included:

2> stop the timer T310, if running;

2> if the CHOICE "PUSCH allocation" has the value "PUSCH allocation pending":

3> start the timer T311.

2> if the CHOICE "PUSCH allocation" has the value "PUSCH allocation assignment":

3> stop the timer T311, if running;

3> configure the physical resources used for the uplink CCTrCH given by the IE "TFCS ID" according to the following:

4> if the CHOICE "Configuration" has the value "Old configuration":

5> if the UE has stored a PUSCH configuration with the identity given by the IE "PUSCH Identity" in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION:

5> configure the physical resources according to that configuration.

5> otherwise:

5> ignore the IE "PUSCH capacity allocation info".

4> if the CHOICE "Configuration" has the value "New configuration", the UE shall:

5> configure the physical resources according to the information given in IE "PUSCH Info". If IE "Common timeslot info" or IE "PUSCH timeslots and codes" is not present in IE "PUSCH Info":

6> reuse the configuration stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION for this CCTrCH.

5> if the IE "PUSCH Identity" is included:

5> store the new configuration in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION using that identity.

3> start using the new configuration at the CFN specified by the IE "Allocation activation time", and use that for the duration given by the IE "Allocation duration";

3> if the IE "Traffic volume report request " is included:

4> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8 at the time indicated by the IE "Traffic volume report request".

3> if the IE "Confirm request" has the value "Confirm PUSCH" and IE "PUSCH Identity" is included in IE "PUSCH capacity allocation info":

4> initiate the PUSCH CAPACITY REQUEST procedure as described in subclause 8.2.8.

1> determine the TFCS subset and hence the TFCI values which are possible given the PUSCH allocation for that CCTrCH;

1> configure the MAC-c/sh in the UE with this TFCS restriction if necessary;

1> transmit USCH Transport Block Sets as required, within the TFCS limits given by the PUSCH allocation.

NOTE: If the UE has just entered a new cell and System Information Block Type 6has not yet been scheduled, PUSCH/PDSCH information should be specified in the allocation message.

The UE shall:

1> clear the entry for the PHYSICAL SHARED CHANNEL ALLOCATION message in the table "Accepted transactions" in the variable TRANSACTIONS;

1> and the procedure ends.

8.2.7.4 Invalid PHYSICAL SHARED CHANNEL ALLOCATION message

If the UE receives a PHYSICAL SHARED CHANNEL ALLOCATION message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

1> ignore the invalid PHYSICAL SHARED CHANNEL ALLOCATION message;

1> submit the PUSCH CAPACITY REQUEST message for transmission on the uplink SHCCH, setting the information elements in the message as specified in subclause 8.2.8.3;

1> reset counter V310;

1> start timer T310;

1> proceed as described in subclause 8.2.8.

8.2.8 PUSCH capacity request [TDD only]

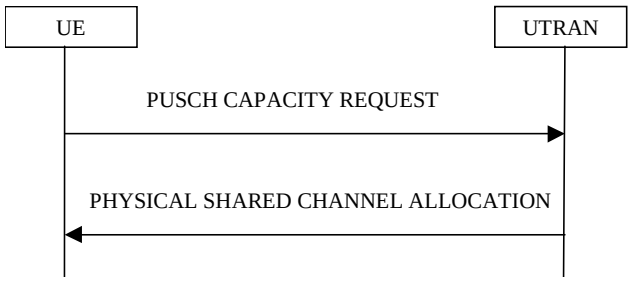

Figure 8.2.8-1: PUSCH Capacity request procedure

8.2.8.1 General

With this procedure, the UE transmits its request for PUSCH resources to the UTRAN. In the normal case, the UTRAN responds with a PHYSICAL SHARED CHANNEL ALLOCATION message, which either allocates the requested PUSCH resources, and/or allocates a PDSCH resource, or may just serve as an acknowledgement, indicating that PUSCH allocation is pending.

This procedure can also be used to acknowledge the reception of a PHYSICAL SHARED CHANNEL ALLOCATION message, or to indicate a protocol error in that message.

With the PUSCH CAPACITY REQUEST message, the UE can request capacity for one or more USCH.

8.2.8.2 Initiation

This procedure is initiated:

1> in the CELL_FACH or CELL_DCH state;

1> and when at least one RB using USCH has been established;

1> and when the UE sees the requirement to request physical resources (PUSCH) for an USCH channel or there is the need to reply to a PHYSICAL SHARED CHANNEL ALLOCATION message as described in clause 8.2.7 (i.e. to confirm the reception of a message, if requested to do so, or to indicate a protocol error).

The procedure can be initiated if:

- Timer T311 is not running.
- The timer T310 (capacity request repetition timer) is not running.

The UE shall:

1> set the IEs in the PUSCH CAPACITY REQUEST message according to subclause 8.2.8.3;

1> if the procedure is triggered to reply to a previous PHYSICAL SHARED CHANNEL ALLOCATION message by the IE "Confirm request" set to "Confirm PUSCH" and the IE "PUSCH capacity allocation info" is not present:

2> transmit the PUSCH CAPACITY REQUEST message on RACH.

1> else:

2> transmit the PUSCH CAPACITY REQUEST message on the uplink SHCCH.

1> set counter V310 to 1;

1> start timer T310.

8.2.8.3 PUSCH CAPACITY REQUEST message contents to set

With one PUSCH CAPACITY REQUEST message, capacity for one or more USCH can be requested. It shall include these information elements:

1> ~~C-RNTI~~ DSCH-RNTI to be used as UE identity if the message is sent on RACH;

1> Traffic volume measured results for each radio bearer satisfying the reporting criteria as specified in the MEASUREMENT CONTROL procedure (if no radio bearer satisfies the reporting criteria, traffic volume measured results shall not be included). These results shall include:

2> Radio Bearer ID of the Radio Bearer being reported;

2> RLC buffer payload for these radio bearers, as specified by the MEASUREMENT CONTROL procedure.

The UE shall:

1> if the initiation of the procedure is triggered by the IE "Traffic volume report request" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message:

2> report the traffic volume measurement result for the radio bearer mapped on USCH transport channel specified in the received message. These results shall include:

3> Radio Bearer ID of the Radio Bearer being reported;

3> RLC buffer payload for this radio bearer.

1> if the initiation of the procedure is triggered by the IE "Confirm request" set to "Confirm PDSCH" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message and the IE "PUSCH capacity allocation info" is present in this message:

2> set the CHOICE "Allocation confirmation" to "PDSCH Confirmation" with the value given in the IE "PDSCH Identity" stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the initiation of the procedure is triggered by the IE "Confirm request" set to "Confirm PUSCH" in a previously received PHYSICAL SHARED CHANNEL ALLOCATION message:

2> set the CHOICE "Allocation confirmation" to "PUSCH Confirmation" with the value given in the IE "PUSCH Identity" stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

1> if the variable PROTOCOL_ERROR_REJECT is set to TRUE:

2> include the IE "RRC transaction identifier" in the response message transmitted below; and

2> set it to the value of "RRC transaction identifier" in the entry for the PHYSICAL SHARED CHANNEL ALLOCATION message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "protocol error indicator" to TRUE;

2> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.

1> if the value of the variable PROTOCOL_ERROR_ REJECT is FALSE:

2> set the IE "Protocol error indicator" to FALSE.

As an option, the message may include IE "Timeslot ISCP" and IE "Primary CCPCH RSCP".

The timeslots for which "Timeslot ISCP" may be reported shall have been configured with a previous PHYSICAL SHARED CHANNEL ALLOCATION message and stored in the variable PHYSICAL_SHARED_CHANNEL_CONFIGURATION.

"Primary CCPCH RSCP" is reported when requested with a previous PHYSICAL SHARED CHANNEL ALLOCATION message.

8.2.8.4 Reception of a PUSCH CAPACITY REQUEST message by the UTRAN

Upon receiving a PUSCH CAPACITY REQUEST message with traffic volume measurement included for at least one radio bearer, the UTRAN should initiate the PHYSICAL SHARED CHANNEL ALLOCATION procedure, either for allocating PUSCH or PDSCH resources as required, or just as an acknowledgement, indicating a pending PUSCH allocation, as described in subclause 8.2.7.

8.2.8.5 T310 expiry

Upon expiry of timer T310, the UE shall:

1> if V310 is smaller than N310:

2> transmit a new PUSCH CAPACITY REQUEST message on the Uplink SHCCH;

2> restart timer T310;

2> increment counter V310;

2> set the IEs in the PUSCH CAPACITY REQUEST message as specified in subclause 8.2.8.3.

1> if V310 is greater than or equal to N310:

2> the procedure ends.

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19-23 August 2002

R2-022286

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1606** ⌘ **rev** **-** ⌘ Current version: **3.11.0** ⌘

*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 allowed logical channel list choice for RACH transport channels
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	13/08/2002
Category:	⌘	**F**
Release:	⌘	R99

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:	⌘	Currently the procedural text in 8.6.5.1 and the semantic text in 10.3.5.23 allows the logical channel list choice "All" for RACH transport channels. However, "Configured" should be the only allowed choice. Also for RB mapping there is no rule in 8.6.4.8 which specifies "Explicit list" should be the only valid choice for the RLC size list. Additionally text is added to 8.6.4.8 in order that the rules which only exist in 10.3.4.21 (that "Explicit list" is the only option for "RLC size list")
Summary of change:	⌘	In section 8.6.5.1 the RACH transport format set "All" is added to the case where the system information blocks should be ignored by the UE. Additionally text is added to 8.6.4.8 in order that the rules which only exist in 10.3.4.21 (that "Explicit list" is the only option for "RLC size list") Finally semantic description of these rules are removed from 10.3.4.21 and 10.3.5.23 as they are now covered in 8.6.5.1 and 8.6.4.8.
Consequences if not approved:	⌘	Erroneous definitions of mapping of RACH transport channels to logical channels would be possible in system information. **Impact analysis:** Functionality corrected : RB mapping of RACH transport channels Isolated impact statement: Correction to a function where specification was missing procedural text or rules. Would not affect implementations behaving like

	indicated in the CR, would affect implementations supporting the corrected functionality otherwise. The behaviour if either UE or UTRAN or both did not implement the CR then it would be possible to have erroneous definitions of RB mappings for RACH transport channels which the UE could not identify.

Clauses affected:	⌘	8.6.4.8 , 8.6.5.1 , 10.2.4.21 and 10.3.5.23				
		Y	**N**			
Other specs Affected:	⌘		**X**	Other core specifications	⌘	
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.6.4.8 RB mapping info

If the IE "RB mapping info" is included, the UE shall:

1> for each multiplexing option of the RB:

2> if a transport channel that would not exist as a result of the message (i.e. removed in the same message in IE "Deleted DL TrCH information" and IE "Deleted UL TrCH information") is referred to:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if a multiplexing option that maps a logical channel corresponding to a TM-RLC entity onto RACH, CPCH, FACH or DSCH is included:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the multiplexing option realises the radio bearer on the uplink (resp. on the downlink) using two logical channels with different values of the IE "Uplink transport channel type" (resp. of the IE "Downlink transport channel type"):

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using TM and the IE "Segmentation indication" is set to TRUE and, based on the multiplexing configuration resulting from this message, the logical channel corresponding to it is mapped onto the same transport channel as another logical channel:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the transport channel considered in that multiplexing option is different from RACH and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using UM or TM and the multiplexing option realises it using two logical channels:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> for each logical channel in that multiplexing option:

3> if the value of the IE "RLC size list" is set to "Explicit list":

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the IE transport format set of that transport channel given in the message; or

4> if the transport channel this logical channel is mapped on in this multiplexing option is different from RACH, and if a "Transport format set" for that transport channel is not included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the stored transport format set of that transport channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "All":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "Configured":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and for none of the RLC sizes defined for that transport channel in the "Transport format set", the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and for none of the RLC sizes defined in the transport format set stored for that transport channel, the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel:

5> set the variable INVALID_CONFIGURATION to TRUE.

1> if, as a result of the message this IE is included in, several radio bearers can be mapped onto the same transport channel, and the IE "Logical Channel Identity" was not included in the RB mapping info of any of those radio bearers for a multiplexing option on that transport channel or the same "Logical Channel Identity" was used more than once in the RB mapping info of those radio bearers for the multiplexing options on that transport channel:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> delete all previously stored multiplexing options for that radio bearer;

1> store each new multiplexing option for that radio bearer;

1> if the IE "Uplink transport channel type" is set to the value "RACH":

2> refer the IE "RLC size index" to the RACH Transport Format Set of the first PRACH received in the IE "PRACH system information list" received in SIB5 or SIB6.

1> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IEs "RLC size list" and/or the IEs "Logical Channel List" included in the applicable "Transport format set" (either the ones received in the same message or the ones stored if none were received); and

1> in case the selected multiplexing option is a multiplexing option on RACH:

2> ignore the RLC size indexes that do not correspond to any RLC size within the Transport Format Set stored for RACH.

1> if RACH is the transport channel to be used on the uplink, if that RB has a multiplexing option on RACH and if it is using AM:

2> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

NOTE: The IE "RB mapping info" is only included in IE "Predefined RB configurations" in system information when used for Inter-RAT handover to UTRAN and there is no AM RLC size change involved in this case.

1> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

2> re-establish the corresponding RLC entity;

2> configure the corresponding RLC entity with the new RLC size;

2> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

2> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

3> if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

4> if this IE was included in CELL UPDATE CONFIRM:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

4> if this IE was included in a reconfiguration message:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

1> if that RB is using UM:

2> indicate the largest applicable RLC size to the corresponding RLC entity.

1> configure MAC multiplexing according to the selected multiplexing option (MAC multiplexing shall only be configured for a logical channel if the transport channel it is mapped on according to the selected multiplexing option is the same as the transport channel another logical channel is mapped on according to the multiplexing option selected for it);

1> configure the MAC with the logical channel priorities according to selected multiplexing option;

1> configure the MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB;

1> if there is no multiplexing option applicable for the transport channels to be used in the RRC state indicated in the IE "RRC State Indicator" included in the received message:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if there is more than one multiplexing option applicable for the transport channels to be used in the RRC state indicated in the IE "RRC State Indicator" included in the received message:

2> set the variable INVALID_CONFIGURATION to TRUE.

In case IE "RLC info" includes IE "Downlink RLC mode " ("DL RLC logical channel info" is mandatory present) but IE "Number of downlink RLC logical channels" is absent in the corresponding IE "RB mapping info", the parameter values are exactly the same as for the corresponding UL logical channels. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards the IE "Channel type", the following rule should be applied to derive the DL channel type from the UL channel included in the IE:

Channel used in UL	**DL channel type implied by "same as"**
DCH	DCH
RACH	FACH
CPCH	FACH
USCH	DSCH

8.6.5.1 Transport Format Set

If the IE "Transport format set" is included, the UE shall:

1> if the transport format set is a RACH TFS received in System Information Block type 5 or 6, and CHOICE "Logical Channel List" has ~~a~~ a value different from “Configured” ~~the value "Explicit List"~~:

2> ignore that System Information Block.

1> if the transport format set for a downlink transport channel is received in a System Information Block, and CHOICE "Logical Channel List" has a value different from 'ALL':

2> ignore that System Information Block.

1> if the transport format set for a downlink transport channel is received in a message on a DCCH, and CHOICE "Logical Channel List" has a value different from 'ALL':

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the value of any IE "RB identity" (and "Logical Channel" for RBs using two UL logical channels) in the IE "Logical channel list" does not correspond to a logical channel indicated to be mapped onto this transport channel in any RB multiplexing option (either included in the same message or previously stored and not changed by this message); or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is set to "Configured" while it is set to "All" or given as an "Explicit List" for any other RLC size; or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is set to "All" and for any logical channel mapped to this transport channel, the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is not set to "Configured"; or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is given as an "Explicit List" that contains a logical channel for which the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is not set to "Configured"; or

1> if the "Logical Channel List" for all the RLC sizes defined for that transport channel are given as "Explicit List" and if one of the logical channels mapped onto this transport channel is not included in any of those lists; or

1> if the "Logical Channel List" for the RLC sizes defined for that transport channel is set to "Configured" and for any logical channel mapped onto that transport channel, the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is also set to "Configured"; or

1> if the IE "Transport Format Set" was not received within the IE "PRACH system information list" and if the "Logical Channel List" for the RLC sizes defined for that transport channel is set to "Configured" and for any logical channel mapped onto that transport channel, the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is given as an "Explicit List" that includes an "RLC size index" that does not correspond to any RLC size in this "Transport Format Set":

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the total number of configured transport formats for the transport channel exceeds maxTF:

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the IE "Transport format set" is considered as valid according to the rules above:

2> remove a previously stored transport format set if this exists for that transport channel;

2> store the transport format set for that transport channel;

2> consider the first instance of the parameter *Number of TBs and TTI List* within the *Dynamic transport format information* to correspond to transport format 0 for this transport channel, the second to transport format 1 and so on;

2> if the IE "Transport format Set" has the choice "Transport channel type" set to "Dedicated transport channel":

3> calculate the transport block size for all transport formats in the TFS using the following

$$\text{TB size} = \text{RLC size} + \text{MAC header size},$$

where:

- MAC header size is calculated according to [15] if MAC multiplexing is used. Otherwise it is 0 bits;
- 'RLC size' reflects the RLC PDU size.

2> if the IE "Transport format Set" has the choice "Transport channel type" set to "Common transport channel":

3> calculate the transport block size for all transport formats in the TFS using the following:

$$\text{TB size} = \text{RLC size}.$$

2> if the IE "Number of Transport blocks" <> 0 and IE "RLC size" = 0, no RLC PDU data exists but only parity bits exist for that transport format;

2> if the IE "Number of Transport blocks" = 0, neither RLC PDU neither data nor parity bits exist for that transport format;

2> configure the MAC with the new transport format set (with computed transport block sizes) for that transport channel;

2> if the RB multiplexing option for a RB mapped onto that transport channel (based on the stored RB multiplexing option) is not modified by this message:

3> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IE "Logical Channel List" and/or the IE "RLC Size List" from the previously stored RB multiplexing option.

3> if the IE "Transport Format Set" was received within the IE "PRACH system information list":

4> ignore the RLC size indexes in the stored RB multiplexing option that do not correspond to any RLC size in the received Transport Format Set.

3> if the IE "Transport Format Set" was received within the IE "PRACH system information list", if that RB is using AM and if RACH is the transport channel to be used on the uplink:

4> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

3> if the IE "Transport Format Set" was not received within the IE "PRACH system information list", and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:

4> set the variable INVALID_CONFIGURATION to true.

3> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

4> re-establish the corresponding RLC entity;

4> configure the corresponding RLC entity with the new RLC size;

4> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

4> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

5> if this IE was included in system information and if the IE "Status" in variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" for this CN domain that will be included in the CELL UPDATE message that will be sent before the next transmission.

5> if this IE was included in CELL UPDATE CONFIRM and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

5> if this IE was included in a reconfiguration message and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

5> if this IE was included in ACTIVE SET UPDATE and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the ACTIVE SET UPDATE COMPLETE message for this CN domain.

3> if that RB is using UM:

4> indicate the largest applicable RLC size to the corresponding RLC entity.

3> configure MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB.

For configuration restrictions on Blind Transport Format Detection, see [27].

10.3.4.21 RB mapping info

A multiplexing option for each possible transport channel this RB can be multiplexed on.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Information for each multiplexing option	MP	1 to <maxRBMuxOptions>		
>RLC logical channel mapping indicator	CV-*UL-RLCLogicalChannels*		Boolean	TRUE indicates that the first logical channel shall be used for data PDUs and the second logical channel shall be used for control PDUs. FALSE indicates that control and data PDUs can be sent on either of the two logical channels. This parameter is not used in this release and shall be set to TRUE.
>Number of uplink RLC logical channels	CV-*UL-RLC info*	1 to MaxLoCHperRLC		1 or 2 logical channels per RLC entity or radio bearer RLC [16]
>>Uplink transport channel type	MP		Enumerated(DCH,RACH, CPCH,USCH)	CPCH is FDD only USCH is TDD only
>>ULTransport channel identity	CV-*UL-DCH/USCH*		Transport channel identity 10.3.5.18	This is the ID of a DCH or USCH (TDD only) that this RB could be mapped onto.
>>Logical channel identity	OP		Integer(1..15	This parameter is used to

Information Element/Group name	Need	Multi	Type and reference	Semantics description
			)	distinguish logical channels multiplexed by MAC on a transport channel.
>>CHOICE *RLC size list*	MP			The RLC sizes that are allowed for this logical channel ~~For radio bearers mapped to RACH, "Explicit list" is the only valid choice. The UE shall regard all other choices as undefined IE values and handle these as specified in clause 9.~~
>>>All			Null	All RLC sizes listed in the *Transport Format Set*. 10.3.5.23
>>>Configured			Null	The RLC sizes configured for this logical channel in the *Transport Format Set*. 10.3.5.23 if present in this message or in the previously stored configuration otherwise
>>>Explicit List		1 to <maxTF>		Lists the RLC sizes that are valid for the logical channel.
>>>>RLC size index	MP		Integer(1..maxTF)	The integer number is a reference to the *RLC size* which arrived at that position in the *Transport Format Set* 10.3.5.23
>>MAC logical channel priority	MP		Integer(1..8)	This is priority between a user's different RBs (or logical channels). [15]
>Downlink RLC logical channel info	CV-*DL-RLC info*			
>>Number of downlink RLC logical channels	*MD*	1 to MaxLoCHperRLC		1 or 2 logical channels per RLC entity or radio bearer RLC [16] Default value is that parameter values for DL are exactly the same as for corresponding UL logical channel. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards to the IE "Channel type", rule is specified in 8.6.4.8.
>>>Downlink transport channel type	MP		Enumerated(DCH,FACH, DSCH,DCH+ DSCH)	
>>>DL DCH Transport channel identity	CV-*DL-DCH*		Transport channel identity 10.3.5.18	
>>>DL DSCH Transport channel identity	CV-*DL-DSCH*		Transport channel identity 10.3.5.18	
>>>Logical channel identity	OP		Integer(1..15)	16 is reserved

Condition	Explanation
UL-RLC info	If "CHOICE *Uplink RLC mode*" in the IE "RLC info" that applies for that RB (i.e. either the one stored or received in the same message for the RB for which

	the "RB mapping info" was received, or the one stored or received in the same message for the RB pointed at in the IE "Same as RB" in the IE "RB information to setup" stored or received in the same message) is present this IE is mandatory present. Otherwise the IE is not needed.
DL-RLC info	If "CHOICE *Downlink RLC mode*" in the IE "RLC info" that applies for that RB (i.e. either the one stored or received in the same message for the RB for which the "RB mapping info" was received, or the one stored or received in the same message for the RB pointed at in the IE "Same as RB" in the IE "RB information to setup" stored or received in the same message) is present this IE is mandatory present. Otherwise the IE is not needed.
UL-RLCLogicalChannels	If "Number of uplink RLC logical channels" in IE "RB mapping info" is 2, then this IE is mandatory present. Otherwise this IE is not needed.
UL-DCH/USCH	If IE "Uplink transport channel type" is equal to "DCH" or "USCH" (TDD only) this IE is mandatory present. Otherwise the IE is not needed.
DL-DCH	If IE "Downlink transport channel type" is equal to "DCH" or "DCH+DSCH" this IE is mandatory present. Otherwise the IE is not needed.
DL-DSCH	If IE "Downlink transport channel type" is equal to "DSCH" or "DCH+DSCH" this IE is mandatory present. Otherwise the IE is not needed.

10.3.5.23 Transport Format Set

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Transport channel type*	MP			
>Dedicated transport channels				The transport channel that is configured with this TFS is of type DCH
>>Dynamic Transport Format Information	MP	1 to <maxTF>		
>>>RLC Size	MP		Integer(0..4992)	Unit is bits
>>>Number of TBs and TTI List	MP	1 to <maxTF>		Present for every valid number of TB's (and TTI) for this RLC Size.
>>>>Transmission Time Interval	CV-*dynamicTTI*		Integer(10,20,40,80)	Unit is ms.
>>>>Number of Transport blocks	MP		Integer(0..512)	
>>>CHOICE *Logical Channel List*	MP			The logical channels that are allowed to use this RLC Size
>>>>ALL			Null	All logical channels mapped to this transport channel.
>>>>Configured			Null	The logical channels configured to use this RLC size in the *RB mapping info*. 10.3.4.21 if present in this

Information Element/Group name	Need	Multi	Type and reference	Semantics description
				message or in the previously stored configuration otherwise
>>>>Explicit List		1 to 15		Lists the logical channels that are allowed to use this RLC size.
>>>>>RB Identity	MP		RB identity 10.3.4.16	
>>>>>LogicalChannel	CH-*UL-RLCLogicalChannels*		Integer(0..1)	Indicates the relevant UL logical channel for this RB. "0" corresponds to the first, "1" corresponds to the second UL logical channel configured for this RB in the IE "RB mapping info".
>>Semi-static Transport Format Information	MP		Semi-static Transport Format Information 10.3.5.11	
>Common transport channels				The transport channel that is configured with this TFS is of a type not equal to DCH
>>Dynamic Transport Format Information	MP	1 to <maxTF>		Note
>>>RLC Size	MP		Integer(0..4992)	Unit is bits
>>>Number of TBs and TTI List	MP	1 to <maxTF>		Present for every valid number of TB's (and TTI) for this RLC Size.
>>>>Number of Transport blocks	MP		Integer(0..512)	
>>>>CHOICE *mode*	MP			
>>>>>FDD				(no data)
>>>>>TDD				
>>>>>>Transmission Time Interval	CV-*dynamicTTI*		Integer(10,20,40,80)	Unit is ms.
>>>CHOICE *Logical Channel List*	MP			The logical channels that are allowed to use this RLC Size. ~~For radio bearers mapped to RACH, the UE shall regard "Explicit list" as an undefined IE value and handle these as specified in clause 9.~~
>>>>ALL			Null	All logical channels mapped to this transport channel.
>>>>Configured			Null	The logical channels configured to use this RLC size in the *RB mapping info*. 10.3.4.21 if present in this message or in the previously stored configuration otherwise
>>>>Explicit List		1 to 15		Lists the logical channels that are allowed to use this RLC size.
>>>>>RB Identity	MP		RB identity 10.3.4.16	
>>>>>LogicalChannel	CV-*UL-RLCLogicalChannels*		Integer(0..1)	Indicates the relevant UL logical channel for this RB. "0" corresponds to the first, "1" corresponds to the second UL logical channel configured for this RB in the IE "RB mapping info".

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>Semi-static Transport Format Information	MP		Semi-static Transport Format Information 10.3.5.11	

Condition	Explanation
dynamicTTI	This IE is mandatory present if dynamic TTI usage is indicated in IE Transmission Time Interval in Semi-static Transport Format Information. Otherwise it is not needed.
UL-RLCLogicalChannels	If "Number of uplink RLC logical channels" in IE "RB mapping info" in this message is 2 or the IE "RB mapping info" is not present in this message and 2 UL logical channels are configured for this RB, then this IE is mandatory present. Otherwise this IE is not needed.

NOTE: The parameter "rate matching attribute" is in line with the RAN WG1 specifications. However, it is not currently in line with the description in [34].

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19-23 August 2002

R2-022287

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1607** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*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 allowed logical channel list choice for RACH transport channels	
Source: ⌘	TSG-RAN WG2	
Work item code: ⌘	TEI	***Date:*** ⌘ 13/08/2002
Category: ⌘	**A**	***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: ⌘	Currently the procedural text in 8.6.5.1 and the semantic text in 10.3.5.23 allows the logical channel list choice "All" for RACH transport channels. However, "Configured" should be the only allowed choice. Also for RB mapping there is no rule in 8.6.4.8 which specifies "Explicit list" should be the only valid choice for the RLC size list. Additionally text is added to 8.6.4.8 in order that the rules which only exist in 10.3.4.21 (that "Explicit list" is the only option for "RLC size list")
Summary of change: ⌘	In section 8.6.5.1 the RACH transport format set "All" is added to the case where the system information blocks should be ignored by the UE. Additionally text is added to 8.6.4.8 in order that the rules which only exist in 10.3.4.21 (that "Explicit list" is the only option for "RLC size list") Finally semantic description of these rules are removed from 10.3.4.21 and 10.3.5.23 as they are now covered in 8.6.5.1 and 8.6.4.8.
Consequences if not approved: ⌘	Erroneous definitions of mapping of RACH transport channels to logical channels would be possible in system information. **Impact analysis:** Functionality corrected : RB mapping of RACH transport channels Isolated impact statement: Correction to a function where specification was missing procedural text or rules. Would not affect implementations behaving like

	indicated in the CR, would affect implementations supporting the corrected functionality otherwise. The behaviour if either UE or UTRAN or both did not implement the CR then it would be possible to have erroneous definitions of RB mappings for RACH transport channels which the UE could not identify.

Clauses affected:	⌘	8.6.4.8 , 8.6.5.1 , 10.2.4.21 and 10.3.5.23			
		Y	**N**		
Other specs Affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.6.4.8 RB mapping info

If the IE "RB mapping info" is included, the UE shall:

1> for each multiplexing option of the RB:

2> if a transport channel that would not exist as a result of the message (i.e. removed in the same message in IE "Deleted DL TrCH information" and IE "Deleted UL TrCH information") is referred to:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if a multiplexing option that maps a logical channel corresponding to a TM-RLC entity onto RACH, CPCH, FACH or DSCH is included:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the multiplexing option realises the radio bearer on the uplink (resp. on the downlink) using two logical channels with different values of the IE "Uplink transport channel type" (resp. of the IE "Downlink transport channel type"):

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using TM and the IE "Segmentation indication" is set to TRUE and, based on the multiplexing configuration resulting from this message, the logical channel corresponding to it is mapped onto the same transport channel as another logical channel:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the transport channel considered in that multiplexing option is different from RACH and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using UM or TM and the multiplexing option realises it using two logical channels:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> for each logical channel in that multiplexing option:

3> if the value of the IE "RLC size list" is set to "Explicit list":

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the IE transport format set of that transport channel given in the message; or

4> if the transport channel this logical channel is mapped on in this multiplexing option is different from RACH, and if a "Transport format set" for that transport channel is not included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the stored transport format set of that transport channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "All":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "Configured":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and for none of the RLC sizes defined for that transport channel in the "Transport format set", the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and for none of the RLC sizes defined in the transport format set stored for that transport channel, the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel:

5> set the variable INVALID_CONFIGURATION to TRUE.

1> if, as a result of the message this IE is included in, several radio bearers can be mapped onto the same transport channel, and the IE "Logical Channel Identity" was not included in the RB mapping info of any of those radio bearers for a multiplexing option on that transport channel or the same "Logical Channel Identity" was used more than once in the RB mapping info of those radio bearers for the multiplexing options on that transport channel:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> delete all previously stored multiplexing options for that radio bearer;

1> store each new multiplexing option for that radio bearer;

1> if the IE "Uplink transport channel type" is set to the value "RACH":

2> in FDD:

3> refer the IE "RLC size index" to the RACH Transport Format Set of the first PRACH received in the IE "PRACH system information list" received in SIB5 or SIB6.

2> in TDD:

3> use the first Transport Format of the PRACH of the IE "PRACH system information list" at the position equal to the value in the IE "RLC size index".

1> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IEs "RLC size list" and/or the IEs "Logical Channel List" included in the applicable "Transport format set" (either the ones received in the same message or the ones stored if none were received); and

1> in case the selected multiplexing option is a multiplexing option on RACH:

2> ignore the RLC size indexes that do not correspond to any RLC size within the Transport Format Set stored for RACH.

1> if RACH is the transport channel to be used on the uplink, if that RB has a multiplexing option on RACH and if it is using AM:

2> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

NOTE: The IE "RB mapping info" is only included in IE "Predefined RB configurations" in system information when used for Inter-RAT handover to UTRAN and there is no AM RLC size change involved in this case.

1> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

2> re-establish the corresponding RLC entity;

2> configure the corresponding RLC entity with the new RLC size;

2> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

2> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

3> if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

4> if this IE was included in CELL UPDATE CONFIRM:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

4> if this IE was included in a reconfiguration message:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

1> if that RB is using UM:

2> indicate the largest applicable RLC size to the corresponding RLC entity.

1> configure MAC multiplexing according to the selected multiplexing option (MAC multiplexing shall only be configured for a logical channel if the transport channel it is mapped on according to the selected multiplexing option is the same as the transport channel another logical channel is mapped on according to the multiplexing option selected for it);

1> configure the MAC with the logical channel priorities according to selected multiplexing option;

1> configure the MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB;

1> if there is no multiplexing option applicable for the transport channels to be used in the RRC state indicated in the IE "RRC State Indicator" included in the received message:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if there is more than one multiplexing option applicable for the transport channels to be used in the RRC state indicated in the IE "RRC State Indicator" included in the received message:

2> set the variable INVALID_CONFIGURATION to TRUE.

In case IE "RLC info" includes IE "Downlink RLC mode" ("DL RLC logical channel info" is mandatory present) but IE "Number of downlink RLC logical channels" is absent in the corresponding IE "RB mapping info", the parameter values are exactly the same as for the corresponding UL logical channels. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards the IE "Channel type", the following rule should be applied to derive the DL channel type from the UL channel included in the IE:

Channel used in UL	DL channel type implied by "same as"
DCH	DCH
RACH	FACH
CPCH	FACH
USCH	DSCH

8.6.5.1 Transport Format Set

If the IE "Transport format set" is included, the UE shall:

1> if the transport format set is a RACH TFS received in System Information Block type 5 or 6, and CHOICE "Logical Channel List" has a value different from “Configured” ~~the value "Explicit List"~~:

2> ignore that System Information Block.

1> if the transport format set for a downlink transport channel is received in a System Information Block, and CHOICE "Logical Channel List" has a value different from 'ALL':

2> ignore that System Information Block.

1> if the transport format set for a downlink transport channel is received in a message on a DCCH, and CHOICE "Logical Channel List" has a value different from 'ALL':

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the value of any IE "RB identity" (and "Logical Channel" for RBs using two UL logical channels) in the IE "Logical channel list" does not correspond to a logical channel indicated to be mapped onto this transport channel in any RB multiplexing option (either included in the same message or previously stored and not changed by this message); or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is set to "Configured" while it is set to "All" or given as an "Explicit List" for any other RLC size; or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is set to "All" and for any logical channel mapped to this transport channel, the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is not set to "Configured"; or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is given as an "Explicit List" that contains a logical channel for which the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is not set to "Configured"; or

1> if the "Logical Channel List" for all the RLC sizes defined for that transport channel are given as "Explicit List" and if one of the logical channels mapped onto this transport channel is not included in any of those lists; or

1> if the "Logical Channel List" for the RLC sizes defined for that transport channel is set to "Configured" and for any logical channel mapped onto that transport channel, the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is also set to "Configured"; or

1> if the IE "Transport Format Set" was not received within the IE "PRACH system information list" and if the "Logical Channel List" for the RLC sizes defined for that transport channel is set to "Configured" and for any logical channel mapped onto that transport channel, the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is given as an "Explicit List" that includes an "RLC size index" that does not correspond to any RLC size in this "Transport Format Set":

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the total number of configured transport formats for the transport channel exceeds maxTF:

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the IE "Transport format set" is considered as valid according to the rules above:

2> remove a previously stored transport format set if this exists for that transport channel;

2> store the transport format set for that transport channel;

2> consider the first instance of the parameter *Number of TBs and TTI List* within the *Dynamic transport format information* to correspond to transport format 0 for this transport channel, the second to transport format 1 and so on;

2> if the IE "Transport format Set" has the choice "Transport channel type" set to "Dedicated transport channel":

3> calculate the transport block size for all transport formats in the TFS using the following

$$\text{TB size} = \text{RLC size} + \text{MAC header size},$$

where:

- MAC header size is calculated according to [15] if MAC multiplexing is used. Otherwise it is 0 bits;
- 'RLC size' reflects the RLC PDU size.

2> if the IE "Transport format Set" has the choice "Transport channel type" set to "Common transport channel":

3> calculate the transport block size for all transport formats in the TFS using the following:

$$\text{TB size} = \text{RLC size}.$$

2> if the IE "Number of Transport blocks" <> 0 and IE "RLC size" = 0, no RLC PDU data exists but only parity bits exist for that transport format;

2> if the IE "Number of Transport blocks" = 0, neither RLC PDU neither data nor parity bits exist for that transport format;

2> configure the MAC with the new transport format set (with computed transport block sizes) for that transport channel;

2> if the RB multiplexing option for a RB mapped onto that transport channel (based on the stored RB multiplexing option) is not modified by this message:

3> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IE "Logical Channel List" and/or the IE "RLC Size List" from the previously stored RB multiplexing option.

3> if the IE "Transport Format Set" was received within the IE "PRACH system information list":

4> ignore the RLC size indexes in the stored RB multiplexing option that do not correspond to any RLC size in the received Transport Format Set.

3> if the IE "Transport Format Set" was received within the IE "PRACH system information list", if that RB is using AM and if RACH is the transport channel to be used on the uplink:

4> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

3> if the IE "Transport Format Set" was not received within the IE "PRACH system information list", and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:

4> set the variable INVALID_CONFIGURATION to true.

3> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

4> re-establish the corresponding RLC entity;

4> configure the corresponding RLC entity with the new RLC size;

4> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

4> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

5> if this IE was included in system information and if the IE "Status" in variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" for this CN domain that will be included in the CELL UPDATE message that will be sent before the next transmission.

5> if this IE was included in CELL UPDATE CONFIRM and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

5> if this IE was included in a reconfiguration message and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

5> if this IE was included in ACTIVE SET UPDATE and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the ACTIVE SET UPDATE COMPLETE message for this CN domain.

3> if that RB is using UM:

4> indicate the largest applicable RLC size to the corresponding RLC entity.

3> configure MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB.

For configuration restrictions on Blind Transport Format Detection, see [27].

10.3.4.21 RB mapping info

A multiplexing option for each possible transport channel this RB can be multiplexed on.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Information for each multiplexing option	MP	1 to <maxRBMuxOptions>		
>RLC logical channel mapping indicator	CV-*UL-RLCLogicalChannels*		Boolean	TRUE indicates that the first logical channel shall be used for data PDUs and the second logical channel shall be used for control PDUs. FALSE indicates that control and data PDUs can be sent on either of the two logical channels. This parameter is not used in this release and shall be set to TRUE.
>Number of uplink RLC logical channels	CV-*UL-RLC info*	1 to MaxLoCHperRLC		1 or 2 logical channels per RLC entity or radio bearer RLC [16]
>>Uplink transport channel type	MP		Enumerated(DCH,RACH, CPCH,USCH)	CPCH is FDD only USCH is TDD only
>>ULTransport channel identity	CV-*UL-DCH/USC*		Transport channel	This is the ID of a DCH or USCH (TDD only) that this RB

Information Element/Group name	Need	Multi	Type and reference	Semantics description
	H		identity 10.3.5.18	could be mapped onto.
>>Logical channel identity	OP		Integer(1..15)	This parameter is used to distinguish logical channels multiplexed by MAC on a transport channel.
>>CHOICE *RLC size list*	MP			The RLC sizes that are allowed for this logical channel ~~For radio bearers mapped to RACH, "Explicit list" is the only valid choice. The UE shall regard all other choices as undefined IE values and handle these as specified in clause 9.~~
>>>All			Null	All RLC sizes listed in the *Transport Format Set*. 10.3.5.23
>>>Configured			Null	The RLC sizes configured for this logical channel in the *Transport Format Set*. 10.3.5.23 if present in this message or in the previously stored configuration otherwise
>>>Explicit List		1 to <maxTF>		Lists the RLC sizes that are valid for the logical channel.
>>>>RLC size index	MP		Integer(1..maxTF)	The integer number is a reference to the *RLC size* which arrived at that position in the *Transport Format Set* 10.3.5.23
>>MAC logical channel priority	MP		Integer(1..8)	This is priority between a user's different RBs (or logical channels). [15]
>Downlink RLC logical channel info	CV-*DL-RLC info*			
>>Number of downlink RLC logical channels	*MD*	1 to MaxLoCHperRLC		1 or 2 logical channels per RLC entity or radio bearer RLC [16] Default value is that parameter values for DL are exactly the same as for corresponding UL logical channel. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards to the IE "Channel type", rule is specified in 8.6.4.8.
>>>Downlink transport channel type	MP		Enumerated(DCH,FACH, DSCH,DCH+ DSCH)	
>>>DL DCH Transport channel identity	CV-*DL-DCH*		Transport channel identity 10.3.5.18	
>>>DL DSCH Transport channel identity	CV-*DL-DSCH*		Transport channel identity 10.3.5.18	
>>>Logical channel identity	OP		Integer(1..15)	16 is reserved

Condition	Explanation

UL-RLC info	If "CHOICE *Uplink RLC mode*" in the IE "RLC info" that applies for that RB (i.e. either the one stored or received in the same message for the RB for which the "RB mapping info" was received, or the one stored or received in the same message for the RB pointed at in the IE "Same as RB" in the IE "RB information to setup" stored or received in the same message) is present this IE is mandatory present. Otherwise the IE is not needed.
DL-RLC info	If "CHOICE *Downlink RLC mode*" in the IE "RLC info" that applies for that RB (i.e. either the one stored or received in the same message for the RB for which the "RB mapping info" was received, or the one stored or received in the same message for the RB pointed at in the IE "Same as RB" in the IE "RB information to setup" stored or received in the same message) is present this IE is mandatory present. Otherwise the IE is not needed.
UL-RLCLogicalChannels	If "Number of uplink RLC logical channels" in IE "RB mapping info" is 2, then this IE is mandatory present. Otherwise this IE is not needed.
UL-DCH/USCH	If IE "Uplink transport channel type" is equal to "DCH" or "USCH" (TDD only) this IE is mandatory present. Otherwise the IE is not needed.
DL-DCH	If IE "Downlink transport channel type" is equal to "DCH" or "DCH+DSCH" this IE is mandatory present. Otherwise the IE is not needed.
DL-DSCH	If IE "Downlink transport channel type" is equal to "DSCH" or "DCH+DSCH" this IE is mandatory present. Otherwise the IE is not needed.

10.3.5.23 Transport Format Set

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Transport channel type*	MP			
>Dedicated transport channels				The transport channel that is configured with this TFS is of type DCH
>>Dynamic Transport Format Information	MP	1 to <maxTF>		
>>>RLC Size	MP		Integer(0..4992)	Unit is bits
>>>Number of TBs and TTI List	MP	1 to <maxTF>		Present for every valid number of TB's (and TTI) for this RLC Size.
>>>>Transmission Time Interval	CV-*dynamicTTI*		Integer(10,20,40,80)	Unit is ms.
>>>>Number of Transport blocks	MP		Integer(0..512)	
>>>CHOICE *Logical Channel List*	MP			The logical channels that are allowed to use this RLC Size
>>>>ALL			Null	All logical channels mapped to this transport channel.
>>>>Configured			Null	The logical channels configured to use this RLC size in the *RB mapping info*. 10.3.4.21 if present in this message or in the previously

Information Element/Group name	Need	Multi	Type and reference	Semantics description
				stored configuration otherwise
>>>>Explicit List		1 to 15		Lists the logical channels that are allowed to use this RLC size.
>>>>>RB Identity	MP		RB identity 10.3.4.16	
>>>>>LogicalChannel	CH-*UL-RLCLogicalChannels*		Integer(0..1)	Indicates the relevant UL logical channel for this RB. "0" corresponds to the first, "1" corresponds to the second UL logical channel configured for this RB in the IE "RB mapping info".
>>Semi-static Transport Format Information	MP		Semi-static Transport Format Information 10.3.5.11	
>Common transport channels				The transport channel that is configured with this TFS is of a type not equal to DCH
>>Dynamic Transport Format Information	MP	1 to <maxTF>		Note
>>>RLC Size	MP		Integer(0..4992)	Unit is bits
>>>Number of TBs and TTI List	MP	1 to <maxTF>		Present for every valid number of TB's (and TTI) for this RLC Size.
>>>>Number of Transport blocks	MP		Integer(0..512)	
>>>>CHOICE *mode*	MP			
>>>>>FDD				(no data)
>>>>>TDD				
>>>>>>Transmission Time Interval	CV-*dynamicTTI*		Integer(10,20,40,80)	Unit is ms.
>>>CHOICE *Logical Channel List*	MP			The logical channels that are allowed to use this RLC Size. ~~For radio bearers mapped to RACH, the UE shall regard "Explicit list" as an undefined IE value and handle these as specified in clause 9.~~
>>>>ALL			Null	All logical channels mapped to this transport channel.
>>>>Configured			Null	The logical channels configured to use this RLC size in the *RB mapping info*. 10.3.4.21 if present in this message or in the previously stored configuration otherwise
>>>>Explicit List		1 to 15		Lists the logical channels that are allowed to use this RLC size.
>>>>>RB Identity	MP		RB identity 10.3.4.16	
>>>>>LogicalChannel	CV-*UL-RLCLogicalChannels*		Integer(0..1)	Indicates the relevant UL logical channel for this RB. "0" corresponds to the first, "1" corresponds to the second UL logical channel configured for this RB in the IE "RB mapping info".
>>Semi-static Transport Format	MP		Semi-static	

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Information			Transport Format Information 10.3.5.11	

Condition	Explanation
dynamicTTI	This IE is mandatory present if dynamic TTI usage is indicated in IE Transmission Time Interval in Semi-static Transport Format Information. Otherwise it is not needed.
UL-RLCLogicalChannels	If "Number of uplink RLC logical channels" in IE "RB mapping info" in this message is 2 or the IE "RB mapping info" is not present in this message and 2 UL logical channels are configured for this RB, then this IE is mandatory present. Otherwise this IE is not needed.

NOTE: The parameter "rate matching attribute" is in line with the RAN WG1 specifications. However, it is not currently in line with the description in [34].

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19-23 August 2002

R2-022288

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1608** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*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 allowed logical channel list choice for RACH transport channels	
Source: ⌘	TSG-RAN WG2	
Work item code: ⌘	TEI	***Date:*** ⌘ 13/08/2002
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: ⌘	Currently the procedural text in 8.6.5.1 and the semantic text in 10.3.5.23 allows the logical channel list choice "All" for RACH transport channels. However, "Configured" should be the only allowed choice. Also for RB mapping there is no rule in 8.6.4.8 which specifies "Explicit list" should be the only valid choice for the RLC size list. Additionally text is added to 8.6.4.8 in order that the rules which only exist in 10.3.4.21 (that "Explicit list" is the only option for "RLC size list")
Summary of change: ⌘	In section 8.6.5.1 the RACH transport format set "All" is added to the case where the system information blocks should be ignored by the UE. Additionally text is added to 8.6.4.8 in order that the rules which only exist in 10.3.4.21 (that "Explicit list" is the only option for "RLC size list") Finally semantic description of these rules are removed from 10.3.4.21 and 10.3.5.23 as they are now covered in 8.6.5.1 and 8.6.4.8.
Consequences if not approved: ⌘	Erroneous definitions of mapping of RACH transport channels to logical channels would be possible in system information. **Impact analysis:** Functionality corrected : RB mapping of RACH transport channels Isolated impact statement: Correction to a function where specification was missing procedural text or rules. Would not affect implementations behaving like

	indicated in the CR, would affect implementations supporting the corrected functionality otherwise. The behaviour if either UE or UTRAN or both did not implement the CR then it would be possible to have erroneous definitions of RB mappings for RACH transport channels which the UE could not identify.

Clauses affected:	⌘	8.6.4.8 , 8.6.5.1 , 10.2.4.21 and 10.3.5.23			
		Y	**N**		
Other specs Affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.6.4.8 RB mapping info

If the IE "RB mapping info" is included, the UE shall:

1> for each multiplexing option of the RB:

2> if a transport channel that would not exist as a result of the message (i.e. removed in the same message in IE "Deleted DL TrCH information" and IE "Deleted UL TrCH information") is referred to:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if a multiplexing option that maps a logical channel corresponding to a TM-RLC entity onto RACH, CPCH, FACH or DSCH or HS-DSCH is included:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the multiplexing option realises the radio bearer on the uplink (resp. on the downlink) using two logical channels with different values of the IE "Uplink transport channel type" (resp. of the IE "Downlink transport channel type"):

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using TM and the IE "Segmentation indication" is set to TRUE and, based on the multiplexing configuration resulting from this message, the logical channel corresponding to it is mapped onto the same transport channel as another logical channel:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the transport channel considered in that multiplexing option is different from RACH and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using UM or TM and the multiplexing option realises it using two logical channels:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> for each logical channel in that multiplexing option:

3> if the value of the IE "RLC size list" is set to "Explicit list":

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the IE transport format set of that transport channel given in the message; or

4> if the transport channel this logical channel is mapped on in this multiplexing option is different from RACH, and if a "Transport format set" for that transport channel is not included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the stored transport format set of that transport channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "All":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "Configured":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and for none of the RLC sizes defined for that transport channel in the "Transport format set", the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and for none of the RLC sizes defined in the transport format set stored for that transport channel, the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel:

5> set the variable INVALID_CONFIGURATION to TRUE.

1> if, as a result of the message this IE is included in, several radio bearers can be mapped onto the same transport channel, and the IE "Logical Channel Identity" was not included in the RB mapping info of any of those radio bearers for a multiplexing option on that transport channel or the same "Logical Channel Identity" was used more than once in the RB mapping info of those radio bearers for the multiplexing options on that transport channel:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> delete all previously stored multiplexing options for that radio bearer;

1> store each new multiplexing option for that radio bearer;

1> select and configure the multiplexing options applicable for the transport channels to be used;

1> if the IE "Uplink transport channel type" is set to the value "RACH":

2> in FDD:

3> refer the IE "RLC size index" to the RACH Transport Format Set of the first PRACH received in the IE "PRACH system information list" received in SIB5 or SIB6.

2> in TDD:

3> use the first Transport Format of the PRACH of the IE "PRACH system information list" at the position equal to the value in the IE "RLC size index".

1> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IEs "RLC size list" and/or the IEs "Logical Channel List" included in the applicable "Transport format set" (either the ones received in the same message or the ones stored if none were received); and

1> in case the selected multiplexing option is a multiplexing option on RACH:

2> ignore the RLC size indexes that do not correspond to any RLC size within the Transport Format Set stored for RACH.

1> if RACH is the transport channel to be used on the uplink, if that RB has a multiplexing option on RACH and if it is using AM:

2> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

1> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

2> re-establish the corresponding RLC entity;

2> configure the corresponding RLC entity with the new RLC size;

2> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

2> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

3> if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

4> if this IE was included in system information:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" for this CN domain that will be included in the CELL UPDATE message that will be sent before the next transmission.

4> if this IE was included in CELL UPDATE CONFIRM:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

4> if this IE was included in a reconfiguration message:

5> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

1> if that RB is using UM:

2> indicate the largest applicable RLC size to the corresponding RLC entity.

1> configure MAC multiplexing according to the selected multiplexing option (MAC multiplexing shall only be configured for a logical channel if the transport channel it is mapped on according to the selected multiplexing option is the same as the transport channel another logical channel is mapped on according to the multiplexing option selected for it);

1> configure the MAC with the logical channel priorities according to selected multiplexing option;

1> configure the MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB;

1> if there is no multiplexing option applicable for the transport channels to be used:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if there is more than one multiplexing option applicable for the transport channels to be used:

2> set the variable INVALID_CONFIGURATION to TRUE.

In case IE "RLC info" includes IE "Downlink RLC mode" ("DL RLC logical channel info" is mandatory present) but IE "Number of downlink RLC logical channels" is absent in the corresponding IE "RB mapping info", the parameter values are exactly the same as for the corresponding UL logical channels. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards the IE "Channel type", the following rule should be applied to derive the DL channel type from the UL channel included in the IE:

Channel used in UL	DL channel type implied by "same as"
DCH	DCH
RACH	FACH
CPCH	FACH
USCH	DSCH

8.6.5.1 Transport Format Set

If the IE "Transport format set" is included, the UE shall:

1> if the transport format set is a RACH TFS received in System Information Block type 5 or 6, and CHOICE "Logical Channel List" has the value "Explicit List":

2> ignore that System Information Block.

1> if the transport format set for a downlink transport channel is received in a System Information Block, and CHOICE "Logical Channel List" has a value different from 'ALL':

2> ignore that System Information Block.

1> if the transport format set for a downlink transport channel is received in a message on a DCCH, and CHOICE "Logical Channel List" has a value different from 'ALL':

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the value of any IE "RB identity" (and "Logical Channel" for RBs using two UL logical channels) in the IE "Logical channel list" does not correspond to a logical channel indicated to be mapped onto this transport channel in any RB multiplexing option (either included in the same message or previously stored and not changed by this message); or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is set to "Configured" while it is set to "All" or given as an "Explicit List" for any other RLC size; or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is set to "All" and for any logical channel mapped to this transport channel, the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is not set to "Configured"; or

1> if the "Logical Channel List" for any of the RLC sizes defined for that transport channel is given as an "Explicit List" that contains a logical channel for which the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is not set to "Configured"; or

1> if the "Logical Channel List" for all the RLC sizes defined for that transport channel are given as "Explicit List" and if one of the logical channels mapped onto this transport channel is not included in any of those lists; or

1> if the "Logical Channel List" for the RLC sizes defined for that transport channel is set to "Configured" and for any logical channel mapped onto that transport channel, the value of the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is also set to "Configured"; or

1> if the IE "Transport Format Set" was not received within the IE "PRACH system information list" and if the "Logical Channel List" for the RLC sizes defined for that transport channel is set to "Configured" and for any logical channel mapped onto that transport channel, the "RLC size list" (either provided in the IE "RB mapping info" if included in the same message, or stored) is given as an "Explicit List" that includes an "RLC size index" that does not correspond to any RLC size in this "Transport Format Set":

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the total number of configured transport formats for the transport channel exceeds maxTF:

2> keep the transport format set if this exists for that transport channel;

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the IE "Transport format set" is considered as valid according to the rules above:

2> remove a previously stored transport format set if this exists for that transport channel;

2> store the transport format set for that transport channel;

2> consider the first instance of the parameter *Number of TBs and TTI List* within the *Dynamic transport format information* to correspond to transport format 0 for this transport channel, the second to transport format 1 and so on;

2> if the IE "Transport format Set" has the choice "Transport channel type" set to "Dedicated transport channel":

3> calculate the transport block size for all transport formats in the TFS using the following

$$\text{TB size} = \text{RLC size} + \text{MAC header size},$$

where:

- MAC header size is calculated according to [15] if MAC multiplexing is used. Otherwise it is 0 bits;
- 'RLC size' reflects the RLC PDU size.

2> if the IE "Transport format Set" has the choice "Transport channel type" set to "Common transport channel":

3> calculate the transport block size for all transport formats in the TFS using the following:

$$\text{TB size} = \text{RLC size}.$$

2> if the IE "Number of Transport blocks" <> 0 and IE "RLC size" = 0, no RLC PDU data exists but only parity bits exist for that transport format;

2> if the IE "Number of Transport blocks" = 0, neither RLC PDU neither data nor parity bits exist for that transport format;

2> configure the MAC with the new transport format set (with computed transport block sizes) for that transport channel;

2> if the RB multiplexing option for a RB mapped onto that transport channel (based on the stored RB multiplexing option) is not modified by this message:

3> determine the sets of RLC sizes that apply to the logical channels used by that RB, based on the IE "Logical Channel List" and/or the IE "RLC Size List" from the previously stored RB multiplexing option.

3> if the IE "Transport Format Set" was received within the IE "PRACH system information list":

4> ignore the RLC size indexes in the stored RB multiplexing option that do not correspond to any RLC size in the received Transport Format Set.

3> if the IE "Transport Format Set" was received within the IE "PRACH system information list", if that RB is using AM and if RACH is the transport channel to be used on the uplink:

4> apply the largest size amongst the ones derived according to the previous bullet for the RLC size (or RLC sizes in case the RB is realised using two logical channels) for the corresponding RLC entity.

3> if the IE "Transport Format Set" was not received within the IE "PRACH system information list", and if that RB is using AM and the set of RLC sizes applicable to the logical channel transferring data PDUs has more than one element:

4> set the variable INVALID_CONFIGURATION to true.

3> if that RB is using AM and the RLC size applicable to the logical channel transporting data PDUs is different from the one derived from the previously stored configuration:

4> re-establish the corresponding RLC entity;

4> configure the corresponding RLC entity with the new RLC size;

4> for each AM RLC radio bearer in the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" in the variable ESTABLISHED_RABS whose RLC size is changed; and

4> for each AM RLC signalling radio bearer in the CN domain as indicated in the IE "CN domain identity" in the variable LATEST_CONFIGURED_CN_DOMAIN whose RLC size is changed:

5> if this IE was included in system information and if the IE "Status" in variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" for this CN domain that will be included in the CELL UPDATE message that will be sent before the next transmission.

5> if this IE was included in CELL UPDATE CONFIRM and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" included in the latest transmitted CELL UPDATE message for this CN domain.

5> if this IE was included in a reconfiguration message and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the reconfiguration complete message for this CN domain.

5> if this IE was included in ACTIVE SET UPDATE and if the IE "Status" in the variable CIPHERING_STATUS of this CN domain is set to "Started":

6> set the HFN values for the corresponding RLC entity equal to the value of the IE "START" that will be included in the ACTIVE SET UPDATE COMPLETE message for this CN domain.

3> if that RB is using UM:

4> indicate the largest applicable RLC size to the corresponding RLC entity.

3> configure MAC with the set of applicable RLC Sizes for each of the logical channels used for that RB.

For configuration restrictions on Blind Transport Format Detection, see [27].

10.3.4.21 RB mapping info

A multiplexing option for each possible transport channel this RB can be multiplexed on.

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Information for each multiplexing option	MP	1 to <maxRBMuxOptions>			
>RLC logical channel mapping indicator	CV-*UL-RLCLogicalChannels*		Boolean	TRUE indicates that the first logical channel shall be used for data PDUs and the second logical channel shall be used for control PDUs. FALSE indicates that control and data PDUs can be sent on either of the two logical channels. This parameter is not used in this release and shall	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
				be set to TRUE.	
>Number of uplink RLC logical channels	CV-*UL-RLC info*	1 to MaxLoCHperRLC		1 or 2 logical channels per RLC entity or radio bearer RLC [16]	
>>Uplink transport channel type	MP		Enumerated(DCH,RACH, CPCH,USCH)	CPCH is FDD only USCH is TDD only	
>>ULTransport channel identity	CV-*UL-DCH/USCH*		Transport channel identity 10.3.5.18	This is the ID of a DCH or USCH (TDD only) that this RB could be mapped onto.	
>>Logical channel identity	OP		Integer(1..15)	This parameter is used to distinguish logical channels multiplexed by MAC on a transport channel.	
>>CHOICE *RLC size list*	MP			The RLC sizes that are allowed for this logical channel ~~For radio bearers mapped to RACH, "Explicit list" is the only valid choice. The UE shall regard all other choices as undefined IE values and handle these as specified in clause 9.~~	
>>>All			Null	All RLC sizes listed in the *Transport Format Set*. 10.3.5.23	
>>>Configured			Null	The RLC sizes configured for this logical channel in the *Transport Format Set*. 10.3.5.23 if present in this message or in the previously stored configuration otherwise	
>>>Explicit List		1 to <maxTF>		Lists the RLC sizes that are valid for the logical channel.	
>>>>RLC size index	MP		Integer(1..maxTF)	The integer number is a reference to the *RLC size* which arrived at that position in the *Transport Format Set* 10.3.5.23	
>>MAC logical channel priority	MP		Integer(1..8)	This is priority between a user's	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
				different RBs (or logical channels). [15]	
>Downlink RLC logical channel info	CV-*DL-RLC info*				
>>Number of downlink RLC logical channels	*MD*	1 to MaxLoCHperRLC		1 or 2 logical channels per RLC entity or radio bearer RLC [16] Default value is that parameter values for DL are exactly the same as for corresponding UL logical channel. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards to the IE "Channel type", rule is specified in 8.6.4.8.	
>>>Downlink transport channel type	MP		Enumerated(DCH,FACH, DSCH,DCH+ DSCH		
			, HS-DSCH, DCH + HS-DSCH)		REL-5
>>>DL DCH Transport channel identity	CV-*DL-DCH*		Transport channel identity 10.3.5.18		
>>>DL DSCH Transport channel identity	CV-*DL-DSCH*		Transport channel identity 10.3.5.18		
>>>DL HS-DSCH MAC-d flow identity	*C-DL-HS-DSCH*		MAC-d flow identity 10.3.5.7c		REL-5
>>>Logical channel identity	OP		Integer(1..15)	16 is reserved	

Condition	Explanation
UL-RLC info	If "CHOICE *Uplink RLC mode*" in the IE "RLC info" that applies for that RB (i.e. either the one stored or received in the same message for the RB for which the "RB mapping info" was received, or the one stored or received in the same message for the RB pointed at in the IE "Same as RB" in the IE "RB information to setup" stored or received in the same message) is present this IE is mandatory present. Otherwise the IE is not needed.
DL-RLC info	If "CHOICE *Downlink RLC mode*" in the IE "RLC info" that applies for that RB (i.e. either the one stored or received in the same message for the RB for which the "RB mapping info" was received, or the one stored or received in the same message for the RB pointed

	at in the IE "Same as RB" in the IE "RB information to setup" stored or received in the same message) is present this IE is mandatory present. Otherwise the IE is not needed.
UL-RLCLogicalChannels	If "Number of uplink RLC logical channels" in IE "RB mapping info" is 2, then this IE is mandatory present. Otherwise this IE is not needed.
UL-DCH/USCH	If IE "Uplink transport channel type" is equal to "DCH" or "USCH" (TDD only) this IE is mandatory present. Otherwise the IE is not needed.
DL-DCH	If IE "Downlink transport channel type" is equal to "DCH" or "DCH+DSCH" this IE is mandatory present. Otherwise the IE is not needed.
DL-DSCH	If IE "Downlink transport channel type" is equal to "DSCH" or "DCH+DSCH" this IE is mandatory present. Otherwise the IE is not needed.
DL-HSDSCH	If IE "Downlink transport channel type" is equal to "HSDSCH" this IE is mandatory present. Otherwise the IE is not needed.

10.3.5.23 Transport Format Set

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Transport channel type*	MP			
>Dedicated transport channels				The transport channel that is configured with this TFS is of type DCH
>>Dynamic Transport Format Information	MP	1 to <maxTF>		
>>>RLC Size	MP		Integer(0..4992)	Unit is bits
>>>Number of TBs and TTI List	MP	1 to <maxTF>		Present for every valid number of TB's (and TTI) for this RLC Size.
>>>>Transmission Time Interval	CV-*dynamicTTI*		Integer(10,20,40,80)	Unit is ms.
>>>>Number of Transport blocks	MP		Integer(0..512)	
>>>CHOICE *Logical Channel List*	MP			The logical channels that are allowed to use this RLC Size
>>>>ALL			Null	All logical channels mapped to this transport channel.
>>>>Configured			Null	The logical channels configured to use this RLC size in the *RB mapping info*. 10.3.4.21 if present in this message or in the previously stored configuration otherwise
>>>>Explicit List		1 to 15		Lists the logical channels that are allowed to use this RLC size.
>>>>>RB Identity	MP		RB identity 10.3.4.16	
>>>>>LogicalChannel	CH-*UL-RLCLogicalChannels*		Integer(0..1)	Indicates the relevant UL logical channel for this RB. "0" corresponds to the first, "1" corresponds to the second UL logical channel configured for

Information Element/Group name	Need	Multi	Type and reference	Semantics description
				this RB in the IE "RB mapping info".
>>Semi-static Transport Format Information	MP		Semi-static Transport Format Information 10.3.5.11	
>Common transport channels				The transport channel that is configured with this TFS is of a type not equal to DCH
>>Dynamic Transport Format Information	MP	1 to <maxTF>		Note
>>>RLC Size	MP		Integer(0..4992)	Unit is bits
>>>Number of TBs and TTI List	MP	1 to <maxTF>		Present for every valid number of TB's (and TTI) for this RLC Size.
>>>>Number of Transport blocks	MP		Integer(0..512)	
>>>>CHOICE *mode*	MP			
>>>>>FDD				(no data)
>>>>>TDD				
>>>>>>Transmission Time Interval	CV-*dynamicTTI*		Integer(10,20,40,80)	Unit is ms.
>>>CHOICE *Logical Channel List*	MP			The logical channels that are allowed to use this RLC Size. ~~For radio bearers mapped to RACH, the UE shall regard "Explicit list" as an undefined IE value and handle these as specified in clause 9.~~
>>>>ALL			Null	All logical channels mapped to this transport channel.
>>>>Configured			Null	The logical channels configured to use this RLC size in the *RB mapping info*. 10.3.4.21 if present in this message or in the previously stored configuration otherwise
>>>>Explicit List		1 to 15		Lists the logical channels that are allowed to use this RLC size.
>>>>>RB Identity	MP		RB identity 10.3.4.16	
>>>>>LogicalChannel	CV-*UL-RLCLogicalChannels*		Integer(0..1)	Indicates the relevant UL logical channel for this RB. "0" corresponds to the first, "1" corresponds to the second UL logical channel configured for this RB in the IE "RB mapping info".
>>Semi-static Transport Format Information	MP		Semi-static Transport Format Information 10.3.5.11	

Condition	Explanation
dynamicTTI	This IE is mandatory present if dynamic TTI usage is indicated in IE Transmission Time Interval in Semi-static Transport Format Information. Otherwise it is not needed.

UL-RLCLogicalChannels	If "Number of uplink RLC logical channels" in IE "RB mapping info" in this message is 2 or the IE "RB mapping info" is not present in this message and 2 UL logical channels are configured for this RB, then this IE is mandatory present. Otherwise this IE is not needed.

NOTE: The parameter "rate matching attribute" is in line with the RAN WG1 specifications. However, it is not currently in line with the description in [34].

3GPP TSG-RAN2 Meeting #31 ***Tdoc ⌘R2-022289***
Stockholm-Arlanda, Sweden, August 19 - 23, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **TS 25.331 CR 1609** ⌘ **rev -** ⌘ Current version: **3.11.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

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

Title:	⌘	Clarification of SRNS Relocation Info
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	20/08/2002
Category:	⌘	**F**
Release:	⌘	R99

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: ⌘

1. The parameter value “await RB Release Complete” is not included in ASN.1 of SRNS Relocation Info although it is included in the tabular.This value would be needed when RB release procedure is used to switch the UE to CELL_FACH and trigger SRNS relocation upon the following cell update message.
2. With the current standard in the IE "SRNS Relocation info" in the list “Ciphering info per radio bearer” there should be an IE “RB Id” giving the RB identity of the radio bearer for which this information is valid.

Summary of change: ⌘

1. The parameter value "awaitRRC-ConnectionRe-establishmentComplete" is redefined as "awaitRB-ReleaseComplete"
2. It is clarified that the order of occurrence of the IE “Ciphering info per radio bearer” in the “SRNS Relocation Info” IE is the same as in the IE “Signalling RB information list” and the RBs in the IE “RAB information list”. The signalling RBs are supposed to be listed first. Only UM and AM RBs that are ciphered are supposed to be listed.

Isolated Impact analysis
No impact on a UE implementations because neither procedure nor parameter related to UE is changed.
It would not have any impact on UTRAN implementations behaving like specified in this CR, a UTRAN implementation that does not behave according this CR may not be able to succeed this type of relocation when the UE is switched to CELL_FACH.

Consequences if not approved: ⌘ SRNS Relocation in CELL_FACH triggered by a RB Release will not work.

Clauses affected: ⌘ 11.5, 14.12.4.2

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

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.5 RRC information between network nodes

```
Internode-definitions DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

    HandoverToUTRANCommand,
    MeasurementReport,
    PhysicalChannelReconfiguration,
    RadioBearerReconfiguration,
    RadioBearerRelease,
    RadioBearerSetup,
    RRC-FailureInfo,
    TransportChannelReconfiguration
FROM PDU-definitions

-- Core Network IEs :
    CN-DomainIdentity,
    CN-DomainInformationList,
    CN-DRX-CycleLengthCoefficient,
    NAS-SystemInformationGSM-MAP,
-- UTRAN Mobility IEs :
    CellIdentity,
    URA-Identity,
-- User Equipment IEs :
    C-RNTI,
    DL-PhysChCapabilityFDD-v380ext,
    FailureCauseWithProtErr,
    RRC-MessageSequenceNumber,
    STARTList,
    STARTSingle,
    START-Value,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    RB-Identity,
    SRB-InformationSetupList,
-- Transport Channel IEs :
    CPCH-SetID,
    DL-CommonTransChInfo,
    DL-AddReconfTransChInfoList,
    DRAC-StaticInformationList,
    UL-CommonTransChInfo,
    UL-AddReconfTransChInfoList,
-- Measurement IEs :
    MeasurementIdentity,
    MeasurementReportingMode,
    MeasurementType,
    AdditionalMeasurementID-List,
    PositionEstimate,
-- Other IEs :
    InterRAT-UE-RadioAccessCapabilityList
FROM InformationElements

    maxCNdomains,
    maxNoOfMeas,
    maxRB,
    maxSRBsetup
FROM Constant-definitions;


-- Part 1: Class definitions similar to what has been defined in 11.1 for RRC messages
-- Information that is tranferred in the same direction and across the same path is grouped

-- **************************************************
--
-- RRC information, to target RNC
--
```

```
-- **************************************************
-- RRC Information to target RNC sent either from source RNC or from another RAT

ToTargetRNC-Container ::= CHOICE {
    interRAThandover                    InterRATHandoverInfoWithInterRATCapabilities,
    srncRelocation                      SRNC-RelocationInfo,
    extension                           NULL
}

-- **************************************************
--
-- RRC information, target RNC to source RNC
--
-- **************************************************


TargetRNC-ToSourceRNC-Container::= CHOICE {
    radioBearerSetup                    RadioBearerSetup,
    radioBearerReconfiguration          RadioBearerReconfiguration,
    radioBearerRelease                  RadioBearerRelease,
    transportChannelReconfiguration     TransportChannelReconfiguration,
    physicalChannelReconfiguration      PhysicalChannelReconfiguration,
    rrc-FailureInfo                     RRC-FailureInfo,
    extension                           NULL
}

-- Part2: Container definitions, similar to the PDU definitions in 11.2 for RRC messages
-- In alphabetical order


-- **************************************************
--
-- Handover to UTRAN information
--
-- **************************************************

InterRATHandoverInfoWithInterRATCapabilities ::= CHOICE {
    r3                              SEQUENCE {
        -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
        -- includes non critical extensions
        interRAThandoverInfo-r3         InterRATHandoverInfoWithInterRATCapabilities-r3-IEs,
        v390NonCriticalExtensions           SEQUENCE {
            interRATHandoverInfoWithInterRATCapabilities-v390ext
    InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs,
            -- Reserved for future non critical extension
            nonCriticalExtensions           SEQUENCE {} OPTIONAL
        }       OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

InterRATHandoverInfoWithInterRATCapabilities-r3-IEs::=      SEQUENCE {
        -- The order of the IEs may not reflect the tabular format
        -- but has been chosen to simplify the handling of the information in the BSC
    --  Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
        -- interRATHandoverInfo, Octet string is used to obtain 8 bit length field prior to
        -- actual information.  This makes it possible for BSS to transparently handle information
        -- received via GSM air interface even when it includes non critical extensions.
        -- The octet string shall include the InterRATHandoverInfo information
        -- The BSS can re-use the 04.18 length field received from the MS
        interRATHandoverInfo            OCTET STRING (SIZE (0..255))
}

InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
        failureCauseWithProtErr             FailureCauseWithProtErr                 OPTIONAL
}

-- **************************************************
--
-- SRNC Relocation information
--
-- **************************************************

SRNC-RelocationInfo ::= CHOICE {
    r3                              SEQUENCE {
        sRNC-RelocationInfo-r3          SRNC-RelocationInfo-r3-IEs,
```

```
        v380NonCriticalExtensions           SEQUENCE {
            sRNC-RelocationInfo-v380ext SRNC-RelocationInfo-v380ext-IEs,
            -- Reserved for future non critical extension
            v390NonCriticalExtensions           SEQUENCE {
                sRNC-RelocationInfo-v390ext         SRNC-RelocationInfo-v390ext-IEs,
                v3a0NonCriticalExtensions           SEQUENCE {
                    sRNC-RelocationInfo-v3a0ext         SRNC-RelocationInfo-v3a0ext-IEs,
                    v3b0NonCriticalExtensions           SEQUENCE {
                        sRNC-RelocationInfo-v3b0ext         SRNC-RelocationInfo-v3b0ext-IEs,
                        -- Reserved for future non critical extension
                        nonCriticalExtensions           SEQUENCE {} OPTIONAL
                    }       OPTIONAL
                }       OPTIONAL
            }       OPTIONAL
        }       OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

SRNC-RelocationInfo-r3-IEs ::=              SEQUENCE {
    -- Non-RRC IEs
        stateOfRRC                      StateOfRRC,
        stateOfRRC-Procedure            StateOfRRC-Procedure,
    -- Ciphering related information IEs
    -- If the extension v380 is included use the extension for the ciphering status per CN domain
        cipheringStatus                 CipheringStatus,
        calculationTimeForCiphering     CalculationTimeForCiphering         OPTIONAL,
        cipheringInfoPerRB-List         CipheringInfoPerRB-List             OPTIONAL,
        count-C-List                    COUNT-C-List                        OPTIONAL,
        integrityProtectionStatus       IntegrityProtectionStatus,
        srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
        implementationSpecificParams    ImplementationSpecificParams        OPTIONAL,
    -- User equipment IEs
        u-RNTI                          U-RNTI,
        c-RNTI                          C-RNTI                              OPTIONAL,
        ue-RadioAccessCapability        UE-RadioAccessCapability,
        ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos         OPTIONAL,
    -- Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
    -- UTRAN mobility IEs
        ura-Identity                    URA-Identity                        OPTIONAL,
    -- Core network IEs
        cn-CommonGSM-MAP-NAS-SysInfo    NAS-SystemInformationGSM-MAP,
        cn-DomainInformationList        CN-DomainInformationList            OPTIONAL,
    -- Measurement IEs
        ongoingMeasRepList              OngoingMeasRepList                  OPTIONAL,
    -- Radio bearer IEs
        predefinedConfigStatusList      PredefinedConfigStatusList,
        srb-InformationList             SRB-InformationSetupList,
        rab-InformationList             RAB-InformationSetupList            OPTIONAL,
    -- Transport channel IEs
        ul-CommonTransChInfo            UL-CommonTransChInfo                OPTIONAL,
        ul-TransChInfoList              UL-AddReconfTransChInfoList         OPTIONAL,
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                transChDRAC-Info                DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        },
        dl-CommonTransChInfo            DL-CommonTransChInfo                OPTIONAL,
        dl-TransChInfoList              DL-AddReconfTransChInfoList         OPTIONAL,
    -- Measurement report
        measurementReport               MeasurementReport                   OPTIONAL
}

SRNC-RelocationInfo-v380ext-IEs ::= SEQUENCE {
    -- Ciphering related information IEs
        cn-DomainIdentity               CN-DomainIdentity,
        cipheringStatusList             CipheringStatusList
}

SRNC-RelocationInfo-v390ext-IEs ::= SEQUENCE {
        cn-DomainInformationList-v390ext    CN-DomainInformationList-v390ext        OPTIONAL,
        ue-RadioAccessCapability-v370ext    UE-RadioAccessCapability-v370ext        OPTIONAL,
        ue-RadioAccessCapability-v380ext    UE-RadioAccessCapability-v380ext        OPTIONAL,
        dl-PhysChCapabilityFDD-v380ext      DL-PhysChCapabilityFDD-v380ext,
        failureCauseWithProtErr             FailureCauseWithProtErr                 OPTIONAL
```

```
}

SRNC-RelocationInfo-v3a0ext-IEs ::= SEQUENCE {
        cipheringInfoForSRB1-v3a0ext        CipheringInfoPerRB-List-v3a0ext,
        ue-RadioAccessCapability-v3a0ext    UE-RadioAccessCapability-v3a0ext        OPTIONAL,
        -- cn-domain identity for IE startValueForCiphering-v3a0ext is specified
        -- in subsequent extension (SRNC-RelocationInfo-v3b0ext-IEs)
        startValueForCiphering-v3a0ext      START-Value
}

SRNC-RelocationInfo-v3b0ext-IEs ::= SEQUENCE {
        -- cn-domain identity for IE startValueForCiphering-v3a0ext included in previous extension
        cn-DomainIdentity               CN-DomainIdentity,
        -- the remaining start values are contained in IE startValueForCiphering-v3b0ext
        startValueForCiphering-v3b0ext      STARTList2                              OPTIONAL
}

STARTList2 ::=                      SEQUENCE (SIZE (2..maxCNdomains)) OF
                                        STARTSingle

CipheringInfoPerRB-List-v3a0ext ::= SEQUENCE {
        dl-UM-SN                        BIT STRING (SIZE (7))
}

CipheringStatusList ::=             SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        CipheringStatusCNdomain

CipheringStatusCNdomain ::=         SEQUENCE {
        cn-DomainIdentity               CN-DomainIdentity,
        cipheringStatus                 CipheringStatus
}

-- IE definitions

CalculationTimeForCiphering ::=     SEQUENCE {
    cell-Id                             CellIdentity,
    sfn                                 INTEGER (0..4095)
}

CipheringInfoPerRB ::=              SEQUENCE {
    dl-HFN                              BIT STRING (SIZE (20..25)),
    ul-HFN                              BIT STRING (SIZE (20..25))
}

-- TABULAR: CipheringInfoPerRB-List, multiplicity value numberOfRadioBearers
-- has been replaced with maxRB.
-- The order of occurrence of the IE “Ciphering info per radio bearer” in the
-- “SRNS Relocation Info” IE  is the same as in the IE “Signalling RB information
-- list” and the RBs in the IE “RAB information list”. The signalling RBs are supposed
-- to be listed first. Only UM and AM RBs that are ciphered are listed here

CipheringInfoPerRB-List ::=         SEQUENCE (SIZE (1..maxRB)) OF
                                        CipheringInfoPerRB

CipheringStatus ::=                 ENUMERATED {
                                        started, notStarted }

CN-DomainInformation-v390ext ::=        SEQUENCE {
    cn-DRX-CycleLengthCoeff             CN-DRX-CycleLengthCoefficient
}

CN-DomainInformationList-v390ext ::=    SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        CN-DomainInformation-v390ext

COUNT-C-List ::=                        SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        COUNT-CSingle

COUNT-CSingle ::=                       SEQUENCE {
    cn-DomainIdentity                   CN-DomainIdentity,
    count-C                             BIT STRING (SIZE (32))
}

ImplementationSpecificParams ::=    BIT STRING (SIZE (1..512))


IntegrityProtectionStatus ::=       ENUMERATED {
                                        started, notStarted }
```

```
MeasurementCommandWithType ::=      CHOICE {
    setup                               MeasurementType,
    modify                              NULL,
    release                             NULL
}

OngoingMeasRep ::=                  SEQUENCE {
    measurementIdentity         MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType
    measurementCommandWithType          MeasurementCommandWithType,
    measurementReportingMode            MeasurementReportingMode            OPTIONAL,
    additionalMeasurementID-List        AdditionalMeasurementID-List        OPTIONAL
}

OngoingMeasRepList ::=              SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                        OngoingMeasRep

SRB-SpecificIntegrityProtInfo ::=   SEQUENCE {
    ul-RRC-HFN                          BIT STRING (SIZE (28)),
    dl-RRC-HFN                          BIT STRING (SIZE (28)),
    ul-RRC-SequenceNumber               RRC-MessageSequenceNumber,
    dl-RRC-SequenceNumber               RRC-MessageSequenceNumber
}

SRB-SpecificIntegrityProtInfoList ::= SEQUENCE (SIZE (4..maxSRBsetup)) OF
                                        SRB-SpecificIntegrityProtInfo

StateOfRRC ::=                      ENUMERATED {
                                        cell-DCH, cell-FACH,
                                        cell-PCH, ura-PCH }

StateOfRRC-Procedure ::=            ENUMERATED {
                                        awaitNoRRC-Message,
                                        awaitRB-ReleaseCompleteawaitRRC-ConnectionRe-
establishmentComplete,
                                        awaitRB-SetupComplete,
                                        awaitRB-ReconfigurationComplete,
                                        awaitTransportCH-ReconfigurationComplete,
                                        awaitPhysicalCH-ReconfigurationComplete,
                                        awaitActiveSetUpdateComplete,
                                        awaitHandoverComplete,
                                        sendCellUpdateConfirm,
                                        sendUraUpdateConfirm,
                                        sendRrcConnectionReestablishment,
                                        otherStates
}

UE-Positioning-LastKnownPos ::=     SEQUENCE {
        sfn                             INTEGER (0..4095),
        cell-id                         CellIdentity,
        positionEstimate                PositionEstimate
}

END
```

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation.

Direction: source RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
Non RRC IEs				
>State of RRC	MP		RRC state indicator, 10.3.3.35a	
>State of RRC procedure	MP		Enumerated (await no RRC message, Complete, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, ~~await RB Release Complete,~~ await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)	
Ciphering related information				
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>		
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>Ciphering status	MP		Enumerated(Not started, Started)	
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
>Latest configured CN domain	MP		CN domain identity 10.3.1.1	Value contained in the variable of the same name.
>Calculation time for ciphering related information	CV-*Ciphering*			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call
>>SFN	MP		Integer(0..4095)	
>COUNT-C list	CV-*Ciphering*	1 to <maxCNdomains>		COUNT-C values for radio bearers using transparent mode RLC
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>COUNT-C	MP		Bit string(32)	
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.
>>RB identity	MP		RB identity 10.3.4.16	
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
>>Downlink SN	CV-*SRB1*		Bit String(7)	VT(US) of RLC UM
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
Integrity protection related information				
>Integrity protection status	MP		Enumerated(Not started, Started)	
>Signalling radio bearer specific integrity protection information	CV-*IP*	4 to <maxSRBsetup>		
>>Uplink RRC HFN	MP		Bit string (28)	
>>Downlink RRC HFN	MP		Bit string (28)	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	
>Implementation specific parameters	OP		Bit string (1..512)	
RRC IEs				
UE Information elements				
>U-RNTI	MP		U-RNTI 10.3.3.47	
>C-RNTI	OP		C-RNTI 10.3.3.8	
>UE radio access Capability	MP		UE radio access capability 10.3.3.42	
>UE radio access capability extension	OP		UE radio access capability extension	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.3.3.42a	
>Last known UE position	OP			
>>SFN	MP		Integer (0..4095)	Time when position was estimated
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.
>>CHOICE *Position estimate*	MP			
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a	
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d	
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e	
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b	
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c	
Other Information elements				
>UE system specific capability	OP	1 to <maxSystemCapability>		
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7	
UTRAN Mobility Information elements				
>URA Identifier	OP		URA identity 10.3.2.6	
CN Information Elements				
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9	
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain
>>CN domain identity	MP			
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9	
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
Measurement Related Information elements				
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>		
>>Measurement Identity	MP		Measurement identity 10.3.7.48	
>>Measurement Command	MP		Measurement command 10.3.7.46	
>>Measurement Type	CV-*Setup*		Measurement type 10.3.7.50	
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49	
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1	
>>CHOICE *Measurement*	OP			
>>>Intra-frequency				
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33	
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38	
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-frequency				
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13	
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measuremen	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			t quantity 10.3.7.18	
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-RAT				
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23	
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29	
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Traffic Volume				
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70	
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.3.7.71	
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74	
>>>>CHOICE *report criteria*	OP			
>>>>>Traffic volume measurement reporting criteria			Traffic volume measurement reporting criteria 10.3.7.72	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Quality				
>>>>Quality measurement Object	OP		Quality measurement object	
>>>>CHOICE *report criteria*	OP			
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>UE internal				
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79	
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82	
>>>>CHOICE *report criteria*	OP			
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>UE positioning				
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111	
>>>>CHOICE *report criteria*	OP			
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110	
>>>>>Periodical reporting			Periodical	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			reporting criteria 10.3.7.53	
>>>>>No reporting				
Radio Bearer Information Elements				
>Predefined configuration status information	OP		Predefined configuration status information 10.3.4.5a	
>Signalling RB information list	MP	1 to <maxSRBsetup>		For each signalling radio bearer
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24	
>RAB information list	OP	1 to <maxRABsetup>		Information for each RAB
>>RAB information	MP		RAB information to setup 10.3.4.10	
Transport Channel Information Elements				
Uplink transport channels				
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24	
>UL transport channel information list	OP	1 to <MaxTrCH>		
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2	
>CHOICE *mode*	OP			
>>FDD				
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5	
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH>		
>>>>DRAC static information	MP		DRAC static information 10.3.5.7	
>>TDD				(no data)
Downlink transport channels				
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6	
>DL transport channel	OP	1 to		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
information list		<MaxTrCH>		
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1	
>Measurement report	OP		MEASUREMENT REPORT 10.2.17	
Other Information elements				
Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)
Protocol error information	CV-*ProtErr*		Protocol error information 10.3.8.12	

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
Setup	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
Ciphering	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
IP	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
ProtErr	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
SRB1	The IE is mandatory present for RB1. Otherwise it is not needed.

3GPP TSG-RAN2 Meeting #31
Stockholm-Arlanda, Sweden, August 19 - 23, 2002

Tdoc ⌘R2-022290

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1610** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

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

Title:	⌘	Clarification of SRNS Relocation Info
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	20/08/2002
Category:	⌘	**A**
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: ⌘

1. The parameter value “await RB Release Complete” is not included in ASN.1 of SRNS Relocation Info although it is included in the tabular.This value would be needed when RB release procedure is used to switch the UE to CELL_FACH and trigger SRNS relocation upon the following cell update message.
2. With the current standard in the IE "SRNS Relocation info" in the list “Ciphering info per radio bearer” there should be an IE “RB Id” giving the RB identity of the radio bearer for which this information is valid.

Summary of change: ⌘

1. The parameter value "awaitRRC-ConnectionRe-establishmentComplete" is redefined as "awaitRB-ReleaseComplete"
2. It is clarified that the order of occurrence of the IE “Ciphering info per radio bearer” in the “SRNS Relocation Info” IE is the same as in the IE “Signalling RB information list” and the RBs in the IE “RAB information list”. The signalling RBs are supposed to be listed first. Only UM and AM RBs that are ciphered are supposed to be listed.

Isolated Impact analysis
No impact on a UE implementations because neither procedure nor parameter related to UE is changed.
It would not have any impact on UTRAN implementations behaving like specified in this CR, a UTRAN implementation that does not behave according this CR may not be able to succeed this type of relocation when the UE is switched to CELL_FACH.

Consequences if not approved: ⌘ SRNS Relocation in CELL_FACH triggered by a RB Release will not work.

Clauses affected: ⌘ 11.5, 14.12.4.2

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

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.5 RRC information between network nodes

```
Internode-definitions DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

    HandoverToUTRANCommand,
    MeasurementReport,
    PhysicalChannelReconfiguration,
    RadioBearerReconfiguration,
    RadioBearerRelease,
    RadioBearerSetup,
    RRC-FailureInfo-r3-IEs,
    TransportChannelReconfiguration
FROM PDU-definitions

-- Core Network IEs :
    CN-DomainIdentity,
    CN-DomainInformationList,
    CN-DRX-CycleLengthCoefficient,
    NAS-SystemInformationGSM-MAP,
-- UTRAN Mobility IEs :
    CellIdentity,
    URA-Identity,
-- User Equipment IEs :
    C-RNTI,
    DL-PhysChCapabilityFDD-v380ext,
    FailureCauseWithProtErr,
    RRC-MessageSequenceNumber,
    STARTList,
    STARTSingle,
    START-Value,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
    UE-RadioAccessCapability-v4xyext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    RAB-Identity,
    SRB-InformationSetupList,
-- Transport Channel IEs :
    CPCH-SetID,
    DL-CommonTransChInfo,
    DL-AddReconfTransChInfoList,
    DRAC-StaticInformationList,
    UL-CommonTransChInfo,
    UL-AddReconfTransChInfoList,
-- Measurement IEs :
    MeasurementIdentity,
    MeasurementReportingMode,
    MeasurementType,
    MeasurementType-r4,
    AdditionalMeasurementID-List,
    PositionEstimate,
    UE-Positioning-IPDL-Parameters-TDD-r4-ext,
-- Other IEs :
InterRAT-UE-RadioAccessCapabilityList
FROM InformationElements

    maxCNdomains,
    maxNoOfMeas,

    maxRB,
    maxSRBsetup
FROM Constant-definitions
;

-- Part 1: Class definitions similar to what has been defined in 11.1 for RRC messages
-- Information that is tranferred in the same direction and across the same path is grouped
```

```
-- **************************************************
--
-- RRC information, to target RNC
--
-- **************************************************
-- RRC Information to target RNC sent either from source RNC or from another RAT

ToTargetRNC-Container ::= CHOICE {
    interRATHandoverInfo                InterRATHandoverInfoWithInterRATCapabilities-r3,
    srncRelocation                      SRNC-RelocationInfo-r3,
    extension                           NULL
}

-- **************************************************
--
-- RRC information, target RNC to source RNC
--
-- **************************************************


Target-RNC-ToSourceRNC-Container ::= CHOICE {
    radioBearerSetup                    RadioBearerSetup,
    radioBearerReconfiguration          RadioBearerReconfiguration,
    radioBearerRelease                  RadioBearerRelease,
    transportChannelReconfiguration     TransportChannelReconfiguration,
    physicalChannelReconfiguration      PhysicalChannelReconfiguration,
    rrc-FailureInfo                     RRC-FailureInfo-r3-IEs,
    extension                           NULL
}

-- Part 2: Container definitions, similar to the PDU definitions in 11.2 for RRC messages
-- In alphabetical order


-- **************************************************
--
-- Handover to UTRAN information
--
-- **************************************************

InterRATHandoverInfoWithInterRATCapabilities-r3 ::= CHOICE {
    r3                          SEQUENCE {
        -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
        -- includes non critical extensions
        interRATHandoverInfo-r3         InterRATHandoverInfoWithInterRATCapabilities-r3-IEs,
        v390NonCriticalExtensions           SEQUENCE {
            interRATHandoverInfoWithInterRATCapabilities-v390ext
    InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs,
            -- Reserved for future non critical extension
            nonCriticalExtensions           SEQUENCE {} OPTIONAL
        }       OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

InterRATHandoverInfoWithInterRATCapabilities-r3-IEs::=      SEQUENCE {
        -- The order of the IEs may not reflect the tabular format
        --  but has been chosen to simplify the handling of the information in the BSC
    --  Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
        -- interRATHandoverInfo, Octet string is used to obtain 8 bit length field prior to
        -- actual information.  This makes it possible for BSS to transparently handle information
        -- received via GSM air interface even when it includes non critical extensions.
        -- The octet string shall include the InterRATHandoverInfo information
        -- The BSS can re-use the 04.18 length field received from the MS
        interRATHandoverInfo            OCTET STRING (SIZE (0..255))
}

InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
        failureCauseWithProtErr             FailureCauseWithProtErr                 OPTIONAL
}

-- **************************************************
--
-- SRNC Relocation information
--
-- **************************************************
```

```
SRNC-RelocationInfo-r3 ::= CHOICE {
    r3                              SEQUENCE {
        sRNC-RelocationInfo-r3          SRNC-RelocationInfo-r3-IEs,
            v380NonCriticalExtensions           SEQUENCE {
                sRNC-RelocationInfo-v380ext SRNC-RelocationInfo-v380ext-IEs,
                -- Reserved for future non critical extension
                v390NonCriticalExtensions           SEQUENCE {
                    sRNC-RelocationInfo-v390ext         SRNC-RelocationInfo-v390ext-IEs,
                    v3a0NonCriticalExtensions           SEQUENCE {
                        sRNC-RelocationInfo-v3a0ext         SRNC-RelocationInfo-v3a0ext-IEs,
                        v3b0NonCriticalExtensions           SEQUENCE {
                            sRNC-RelocationInfo-v3b0ext         SRNC-RelocationInfo-v3b0ext-IEs,
                            v4xyNonCriticalExtensions           SEQUENCE {
                                sRNC-RelocationInfo-v4xyext         SRNC-RelocationInfo-v4xyext-IEs,
                                -- Reserved for future non critical extension
                                nonCriticalExtensions           SEQUENCE {} OPTIONAL
                            }       OPTIONAL
                        }       OPTIONAL
                    }       OPTIONAL
                }       OPTIONAL
            }       OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

SRNC-RelocationInfo-r3-IEs ::=      SEQUENCE {
    -- Non-RRC IEs
        stateOfRRC                      StateOfRRC,
        stateOfRRC-Procedure            StateOfRRC-Procedure,
    -- Ciphering related information IEs
    -- If the extension v380 is included use the extension for the ciphering status per CN domain
        cipheringStatus                 CipheringStatus,
        calculationTimeForCiphering     CalculationTimeForCiphering         OPTIONAL,
        cipheringInfoPerRB-List         CipheringInfoPerRB-List             OPTIONAL,
        count-C-List                    COUNT-C-List                        OPTIONAL,
        integrityProtectionStatus       IntegrityProtectionStatus,
        srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
        implementationSpecificParams    ImplementationSpecificParams        OPTIONAL,
    -- User equipment IEs
        u-RNTI                          U-RNTI,
        c-RNTI                          C-RNTI                              OPTIONAL,
        ue-RadioAccessCapability        UE-RadioAccessCapability,
        ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos         OPTIONAL,
    -- Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
    -- UTRAN mobility IEs
        ura-Identity                    URA-Identity                        OPTIONAL,
    -- Core network IEs
        cn-CommonGSM-MAP-NAS-SysInfo    NAS-SystemInformationGSM-MAP,
        cn-DomainInformationList        CN-DomainInformationList            OPTIONAL,
    -- Measurement IEs
        ongoingMeasRepList              OngoingMeasRepList                  OPTIONAL,
    -- Radio bearer IEs
        predefinedConfigStatusList      PredefinedConfigStatusList,
        srb-InformationList             SRB-InformationSetupList,
        rab-InformationList             RAB-InformationSetupList            OPTIONAL,
    -- Transport channel IEs
        ul-CommonTransChInfo            UL-CommonTransChInfo                OPTIONAL,
        ul-TransChInfoList              UL-AddReconfTransChInfoList         OPTIONAL,
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                transChDRAC-Info                DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        },
        dl-CommonTransChInfo            DL-CommonTransChInfo                OPTIONAL,
        dl-TransChInfoList              DL-AddReconfTransChInfoList         OPTIONAL,
    -- Measurement report
        measurementReport               MeasurementReport                   OPTIONAL ,
        nonCriticalExtensions           SEQUENCE {
            -- In case of TDD only up-Ipdl-Parameters-TDD is present, otherwise
            -- this IE is absent
            up-Ipdl-Parameters-TDD          UE-Positioning-IPDL-Parameters-TDD-r4-ext   OPTIONAL,
        -- Extension mechanism for non- release4 information
            nonCriticalExtensions           SEQUENCE {}                                 OPTIONAL
        }                                                                       OPTIONAL
```

```
}

SRNC-RelocationInfo-v380ext-IEs ::= SEQUENCE {
    -- Ciphering related information IEs
        cn-DomainIdentity                   CN-DomainIdentity,
        cipheringStatusList                 CipheringStatusList
}

SRNC-RelocationInfo-v390ext-IEs ::= SEQUENCE {
        cn-DomainInformationList-v390ext    CN-DomainInformationList-v390ext        OPTIONAL,
        ue-RadioAccessCapability-v370ext    UE-RadioAccessCapability-v370ext        OPTIONAL,
        ue-RadioAccessCapability-v380ext    UE-RadioAccessCapability-v380ext        OPTIONAL,
        dl-PhysChCapabilityFDD-v380ext      DL-PhysChCapabilityFDD-v380ext,
        failureCauseWithProtErr             FailureCauseWithProtErr                 OPTIONAL
}

SRNC-RelocationInfo-v3a0ext-IEs ::= SEQUENCE {
        -- cn-domain identity for IE startValueForCiphering-v3a0ext is specified
        -- in subsequent extension (SRNC-RelocationInfo-v3b0ext-IEs)
        startValueForCIphering-v3a0ext      START-Value,
        cipheringInfoForSRB1-v3a0ext        CipheringInfoForSRB1-v3a0ext,
        ue-RadioAccessCapability-v3a0ext    UE-RadioAccessCapability-v3a0ext        OPTIONAL
}

SRNC-RelocationInfo-v3b0ext-IEs ::= SEQUENCE {
        -- cn-domain identity for IE startValueForCiphering-v3a0ext included in previous extension
        cn-DomainIdentity               CN-DomainIdentity,
        -- the remaining start values are contained in IE startValueForCiphering-v3b0ext
        startValueForCiphering-v3b0ext      STARTList2                              OPTIONAL
}

STARTList2 ::=                      SEQUENCE (SIZE (2..maxCNdomains)) OF
                                        STARTSingle


SRNC-RelocationInfo-v4xyext-IEs ::= SEQUENCE {
        ue-RadioAccessCapability-v4xyext    UE-RadioAccessCapability-v4xyext
}

CipheringInfoForSRB1-v3a0ext ::= SEQUENCE {
        dl-UM-SN                            BIT STRING (SIZE (7))
}

CipheringStatusList ::=         SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        CipheringStatusCNdomain

CipheringStatusCNdomain ::=             SEQUENCE {
        cn-DomainIdentity               CN-DomainIdentity,
        cipheringStatus                 CipheringStatus
}

SRNC-RelocationInfo-r4 ::=          SEQUENCE {
    -- Non-RRC IEs
        stateOfRRC                      StateOfRRC,
        stateOfRRC-Procedure            StateOfRRC-Procedure,
        cipheringStatus                 CipheringStatus,
        calculationTimeForCiphering     CalculationTimeForCiphering         OPTIONAL,
        cipheringInfoPerRB-List         CipheringInfoPerRB-List             OPTIONAL,
        integrityProtectionStatus       IntegrityProtectionStatus,
        srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
        implementationSpecificParams    ImplementationSpecificParams        OPTIONAL,
    -- User equipment IEs
        u-RNTI                          U-RNTI,
        c-RNTI                          C-RNTI                              OPTIONAL,
        ue-RadioAccessCapability        UE-RadioAccessCapability,
        ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos         OPTIONAL,
    -- Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
    -- UTRAN mobility IEs
        ura-Identity                    URA-Identity                        OPTIONAL,
    -- Core network IEs
        cn-CommonGSM-MAP-NAS-SysInfo    NAS-SystemInformationGSM-MAP,
        cn-DomainInformationList        CN-DomainInformationList            OPTIONAL,
    -- Measurement IEs
        ongoingMeasRepList              OngoingMeasRepList-r4               OPTIONAL,
    -- Radio bearer IEs
        predefinedConfigStatusList      PredefinedConfigStatusList,
        srb-InformationList             SRB-InformationSetupList,
```

```
        rab-InformationList             RAB-InformationSetupList            OPTIONAL,
    -- Transport channel IEs
        ul-CommonTransChInfo            UL-CommonTransChInfo                OPTIONAL,
        ul-TransChInfoList              UL-AddReconfTransChInfoList         OPTIONAL,
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                transChDRAC-Info                DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        },
        dl-CommonTransChInfo            DL-CommonTransChInfo                OPTIONAL,
        dl-TransChInfoList              DL-AddReconfTransChInfoList         OPTIONAL,
    -- Measurement report
        measurementReport               MeasurementReport                   OPTIONAL,
        nonCriticalExtensions           SEQUENCE {
            -- In case of TDD only up-Ipdl-Parameters-TDD is present, otherwise
            -- this IE is absent
            up-Ipdl-Parameters-TDD          UE-Positioning-IPDL-Parameters-TDD-r4-ext   OPTIONAL,
        -- Extension mechanism for non- release4 information
            nonCriticalExtensions           SEQUENCE {}                                OPTIONAL
        }                                                                       OPTIONAL
}

-- IE definitions

CalculationTimeForCiphering ::=     SEQUENCE {
    cell-Id                             CellIdentity,
    sfn                                 INTEGER (0..4095)
}

CipheringInfoPerRB ::=              SEQUENCE {
    dl-HFN                              BIT STRING (SIZE (20..25)),
    ul-HFN                              BIT STRING (SIZE (20..25))
}

-- TABULAR: CipheringInfoPerRB-List, multiplicity value numberOfRadioBearers
-- has been replaced with maxRB.
-- The order of occurrence of the IE “Ciphering info per radio bearer” in the
-- “SRNS Relocation Info” IE  is the same as in the IE “Signalling RB information
-- list” and the RBs in the IE “RAB information list”. The signalling RBs are supposed
-- to be listed first. Only UM and AM RBs that are ciphered are listed here

CipheringInfoPerRB-List ::=         SEQUENCE (SIZE (1..maxRB)) OF
                                        CipheringInfoPerRB

CipheringStatus ::=                 ENUMERATED {
                                        started, notStarted }

CN-DomainInformation-v390ext ::=        SEQUENCE {
    cn-DRX-CycleLengthCoeff             CN-DRX-CycleLengthCoefficient
}

CN-DomainInformationList-v390ext ::=    SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        CN-DomainInformation-v390ext

COUNT-C-List ::=                        SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        COUNT-CSingle

COUNT-CSingle ::=                       SEQUENCE {
    cn-DomainIdentity                   CN-DomainIdentity,
    count-C                             BIT STRING (SIZE (32))
}

ImplementationSpecificParams ::=    BIT STRING (SIZE (1..512))


IntegrityProtectionStatus ::=       ENUMERATED {
                                        started, notStarted }

MeasurementCommandWithType ::=      CHOICE {
    setup                               MeasurementType,
    modify                              NULL,
    release                             NULL
}

MeasurementCommandWithType-r4 ::=   CHOICE {
    setup                               MeasurementType-r4,
```

```
    modify                              NULL,
    release                             NULL
}

OngoingMeasRep ::=                  SEQUENCE {
    measurementIdentity         MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType
    measurementCommandWithType          MeasurementCommandWithType,
    measurementReportingMode            MeasurementReportingMode            OPTIONAL,
    additionalMeasurementID-List        AdditionalMeasurementID-List        OPTIONAL
}

OngoingMeasRep-r4 ::=               SEQUENCE {
    measurementIdentity         MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType-r4.
    measurementCommandWithType          MeasurementCommandWithType-r4,
    measurementReportingMode            MeasurementReportingMode            OPTIONAL,
    additionalMeasurementID-List        AdditionalMeasurementID-List        OPTIONAL
}

OngoingMeasRepList ::=              SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                        OngoingMeasRep

OngoingMeasRepList-r4 ::=           SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                        OngoingMeasRep-r4

SRB-SpecificIntegrityProtInfo ::=   SEQUENCE {
    ul-RRC-HFN                          BIT STRING (SIZE (28)),
    dl-RRC-HFN                          BIT STRING (SIZE (28)),
    ul-RRC-SequenceNumber               RRC-MessageSequenceNumber,
    dl-RRC-SequenceNumber               RRC-MessageSequenceNumber
}

SRB-SpecificIntegrityProtInfoList ::= SEQUENCE (SIZE (4..maxSRBsetup)) OF
                                        SRB-SpecificIntegrityProtInfo

StateOfRRC ::=                      ENUMERATED {
                                        cell-DCH, cell-FACH,
                                        cell-PCH, ura-PCH }

StateOfRRC-Procedure ::=            ENUMERATED {
                                        awaitNoRRC-Message,
                                        awaitRB-ReleaseCompleteawaitRRC-ConnectionRe-
establishmentComplete,
                                        awaitRB-SetupComplete,
                                        awaitRB-ReconfigurationComplete,
                                        awaitTransportCH-ReconfigurationComplete,
                                        awaitPhysicalCH-ReconfigurationComplete,
                                        awaitActiveSetUpdateComplete,
                                        awaitHandoverComplete,
                                        sendCellUpdateConfirm,
                                        sendUraUpdateConfirm,
                                        sendRrcConnectionReestablishment,
                                        otherStates
}

UE-Positioning-LastKnownPos ::=     SEQUENCE {
        sfn                             INTEGER (0..4095),
        cell-id                         CellIdentity,
        positionEstimate                PositionEstimate
}
```

END

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation.

Direction: source RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
Non RRC IEs				
>State of RRC	MP		RRC state indicator, 10.3.3.35a	
>State of RRC procedure	MP		Enumerated (await no RRC message, Complete, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, ~~await RB Release Complete,~~ await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)	
Ciphering related information				
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>		
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>Ciphering status	MP		Enumerated(Not started, Started)	
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.
>Latest configured CN domain	MP		CN domain	Value contained in the variable

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			identity 10.3.1.1	of the same name.
>Calculation time for ciphering related information	CV-*Ciphering*			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call
>>SFN	MP		Integer(0..4095)	
>COUNT-C list	CV-*Ciphering*	1 to <maxCNdomains>		COUNT-C values for radio bearers using transparent mode RLC
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>COUNT-C	MP		Bit string(32)	
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.
>>RB identity	MP		RB identity 10.3.4.16	
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
>>Downlink SN	CV-*SRB1*		Bit String(7)	VT(US) of RLC UM
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
Integrity protection related information				
>Integrity protection status	MP		Enumerated(Not started, Started)	
>Signalling radio bearer specific integrity protection information	CV-*IP*	4 to <maxSRBsetup>		
>>Uplink RRC HFN	MP		Bit string (28)	
>>Downlink RRC HFN	MP		Bit string (28)	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	
>Implementation specific parameters	OP		Bit string (1..512)	
RRC IEs				
UE Information elements				
>U-RNTI	MP		U-RNTI 10.3.3.47	
>C-RNTI	OP		C-RNTI 10.3.3.8	
>UE radio access Capability	MP		UE radio access capability 10.3.3.42	
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a	
>Last known UE position	OP			
>>SFN	MP		Integer	Time when position was

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			(0..4095)	estimated
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.
>>CHOICE *Position estimate*	MP			
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a	
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d	
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e	
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b	
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c	
Other Information elements				
>UE system specific capability	OP	1 to <maxSystemCapability>		
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7	
UTRAN Mobility Information elements				
>URA Identifier	OP		URA identity 10.3.2.6	
CN Information Elements				
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9	
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain
>>CN domain identity	MP			
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9	
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6	
Measurement Related Information elements				
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>		
>>Measurement Identity	MP		Measuremen	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			t identity 10.3.7.48	
>>Measurement Command	MP		Measurement command 10.3.7.46	
>>Measurement Type	CV-*Setup*		Measurement type 10.3.7.50	
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49	
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1	
>>CHOICE *Measurement*	OP			
>>>Intra-frequency				
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33	
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38	
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-frequency				
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13	
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement quantity 10.3.7.18	
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-RAT				
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23	
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29	
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Traffic Volume				
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70	
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71	
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74	
>>>>CHOICE *report criteria*	OP			
>>>>>Traffic volume			Traffic	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
measurement reporting criteria			volume measurement reporting criteria 10.3.7.72	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Quality				
>>>>Quality measurement Object	OP		Quality measurement object	
>>>>CHOICE *report criteria*	OP			
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>UE internal				
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79	
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82	
>>>>CHOICE *report criteria*	OP			
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>UE positioning				
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111	
>>>>CHOICE *report criteria*	OP			
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting				
Radio Bearer Information Elements				
>Predefined configuration status information	OP		Predefined configuration status	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			information 10.3.4.5a	
>Signalling RB information list	MP	1 to <maxSRBsetup>		For each signalling radio bearer
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24	
>RAB information list	OP	1 to <maxRABsetup>		Information for each RAB
>>RAB information	MP		RAB information to setup 10.3.4.10	
Transport Channel Information Elements				
Uplink transport channels				
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24	
>UL transport channel information list	OP	1 to <MaxTrCH>		
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2	
>CHOICE *mode*	OP			
>>FDD				
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5	
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH>		
>>>>DRAC static information	MP		DRAC static information 10.3.5.7	
>>TDD				(no data)
Downlink transport channels				
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6	
>DL transport channel information list	OP	1 to <MaxTrCH>		
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1	
>Measurement report	OP		MEASUREMENT REPORT	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.2.17	
Other Information elements				
Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)
Protocol error information	CV-*ProtErr*		Protocol error information 10.3.8.12	

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
Setup	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
Ciphering	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
IP	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
ProtErr	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
SRB1	The IE is mandatory present for RB1. Otherwise it is not needed.

3GPP TSG-RAN2 Meeting #31 **Tdoc ⌘R2-022291**
Stockholm-Arlanda, Sweden, August 19 - 23, 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1611** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

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

Title: ⌘	Clarification of SRNS Relocation Info	
Source: ⌘	TSG-RAN WG2	
Work item code: ⌘	TEI	***Date:*** ⌘ 20/08/2002
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: ⌘

1. The parameter value “await RB Release Complete” is not included in ASN.1 of SRNS Relocation Info although it is included in the tabular.This value would be needed when RB release procedure is used to switch the UE to CELL_FACH and trigger SRNS relocation upon the following cell update message.
2. With the current standard in the IE "SRNS Relocation info" in the list “Ciphering info per radio bearer” there should be an IE “RB Id” giving the RB identity of the radio bearer for which this information is valid.

Summary of change: ⌘

1. The parameter value "awaitRRC-ConnectionRe-establishmentComplete" is redefined as "awaitRB-ReleaseComplete"
2. It is clarified that the order of occurrence of the IE “Ciphering info per radio bearer” in the “SRNS Relocation Info” IE is the same as in the IE “Signalling RB information list” and the RBs in the IE “RAB information list”. The signalling RBs are supposed to be listed first. Only UM and AM RBs that are ciphered are supposed to be listed.

Isolated Impact analysis
No impact on a UE implementations because neither procedure nor parameter related to UE is changed.
It would not have any impact on UTRAN implementations behaving like specified in this CR, a UTRAN implementation that does not behave according this CR may not be able to succeed this type of relocation when the UE is switched to CELL_FACH.

Consequences if not approved: ⌘ SRNS Relocation in CELL_FACH triggered by a RB Release will not work.

Clauses affected: ⌘ 11.5, 14.12.4.2

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

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.5 RRC information between network nodes

```
Internode-definitions DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

    HandoverToUTRANCommand,
    MeasurementReport,
    PhysicalChannelReconfiguration,
    RadioBearerReconfiguration,
    RadioBearerRelease,
    RadioBearerSetup,
    RRC-FailureInfo-r3-IEs,
    TransportChannelReconfiguration
FROM PDU-definitions

-- Core Network IEs :
    CN-DomainIdentity,
    CN-DomainInformationList,
    CN-DRX-CycleLengthCoefficient,
    NAS-SystemInformationGSM-MAP,
-- UTRAN Mobility IEs :
    CellIdentity,
    URA-Identity,
-- User Equipment IEs :
    C-RNTI,
    DL-PhysChCapabilityFDD-v380ext,
    FailureCauseWithProtErr,
    RRC-MessageSequenceNumber,
    STARTList,
    STARTSingle,
    START-Value,
    U-RNTI,
    UE-RadioAccessCapability,
    UE-RadioAccessCapability-v370ext,
    UE-RadioAccessCapability-v380ext,
    UE-RadioAccessCapability-v3a0ext,
    UE-RadioAccessCapability-v4xyext,
-- Radio Bearer IEs :
    PredefinedConfigStatusList,
    PredefinedConfigValueTag,
    RAB-InformationSetupList,
    RAB-Identity,
    RB-Identity,
    SRB-InformationSetupList,
-- Transport Channel IEs :
    CPCH-SetID,
    DL-CommonTransChInfo,
    DL-AddReconfTransChInfoList,
    DRAC-StaticInformationList,
    UL-CommonTransChInfo,
    UL-AddReconfTransChInfoList,
-- Measurement IEs :
    MeasurementIdentity,
    MeasurementReportingMode,
    MeasurementType,
    MeasurementType-r4,
    AdditionalMeasurementID-List,
    PositionEstimate,
    UE-Positioning-IPDL-Parameters-TDD-r4-ext,
-- Other IEs :
InterRAT-UE-RadioAccessCapabilityList
FROM InformationElements

    maxCNdomains,
    maxNoOfMeas,

    maxRB,
    maxRBallRABs,
    maxRFC3095-CID,
    maxSRBsetup
FROM Constant-definitions
;
```

```
-- Part 1: Class definitions similar to what has been defined in 11.1 for RRC messages
-- Information that is tranferred in the same direction and across the same path is grouped

-- **************************************************
--
-- RRC information, to target RNC
--
-- **************************************************
-- RRC Information to target RNC sent either from source RNC or from another RAT

ToTargetRNC-Container ::= CHOICE {
    interRATHandoverInfo                InterRATHandoverInfoWithInterRATCapabilities-r3,
    srncRelocation                      SRNC-RelocationInfo-r3,
    rfc3095-ContextInfo                 RFC3095-ContextInfo-r5,
    extension                           NULL
}

-- **************************************************
--
-- RRC information, target RNC to source RNC
--
-- **************************************************


Target-RNC-ToSourceRNC-Container ::= CHOICE {
    radioBearerSetup                    RadioBearerSetup,
    radioBearerReconfiguration          RadioBearerReconfiguration,
    radioBearerRelease                  RadioBearerRelease,
    transportChannelReconfiguration     TransportChannelReconfiguration,
    physicalChannelReconfiguration      PhysicalChannelReconfiguration,
    rrc-FailureInfo                     RRC-FailureInfo-r3-IEs,
    extension                           NULL
}

-- Part 2: Container definitions, similar to the PDU definitions in 11.2 for RRC messages
-- In alphabetical order


-- **************************************************
--
-- Handover to UTRAN information
--
-- **************************************************

InterRATHandoverInfoWithInterRATCapabilities-r3 ::= CHOICE {
    r3                              SEQUENCE {
        -- IE InterRATHandoverInfoWithInterRATCapabilities-r3-IEs also
        -- includes non critical extensions
        interRATHandoverInfo-r3         InterRATHandoverInfoWithInterRATCapabilities-r3-IEs,
        v390NonCriticalExtensions           SEQUENCE {
            interRATHandoverInfoWithInterRATCapabilities-v390ext
    InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs,
            -- Reserved for future non critical extension
            nonCriticalExtensions           SEQUENCE {} OPTIONAL
        }       OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

InterRATHandoverInfoWithInterRATCapabilities-r3-IEs::=      SEQUENCE {
        -- The order of the IEs may not reflect the tabular format
        --  but has been chosen to simplify the handling of the information in the BSC
    --  Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
        -- interRATHandoverInfo, Octet string is used to obtain 8 bit length field prior to
        -- actual information.  This makes it possible for BSS to transparently handle information
        -- received via GSM air interface even when it includes non critical extensions.
        -- The octet string shall include the InterRATHandoverInfo information
        -- The BSS can re-use the 04.18 length field received from the MS
        interRATHandoverInfo            OCTET STRING (SIZE (0..255))
}

InterRATHandoverInfoWithInterRATCapabilities-v390ext-IEs ::= SEQUENCE {
    -- User equipment IEs
        failureCauseWithProtErr             FailureCauseWithProtErr                 OPTIONAL
}

-- **************************************************
```

```
--
-- RFC3095 context, source RNC to target RNC
--
-- **************************************************

RFC3095-ContextInfo-r5 ::= CHOICE {
    r5                              SEQUENCE {
        rFC3095-ContextInfoList-r5      RFC3095-ContextInfoList-r5,
        -- Reserved for future non critical extension
        nonCriticalExtensions           SEQUENCE {} OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

RFC3095-ContextInfoList-r5  ::=     SEQUENCE (SIZE (1..maxRBallRABs)) OF
                                        RFC3095-ContextInfo


-- **************************************************
--
-- SRNC Relocation information
--
-- **************************************************

SRNC-RelocationInfo-r3 ::= CHOICE {
    r3                              SEQUENCE {
        sRNC-RelocationInfo-r3          SRNC-RelocationInfo-r3-IEs,
            v380NonCriticalExtensions           SEQUENCE {
                sRNC-RelocationInfo-v380ext SRNC-RelocationInfo-v380ext-IEs,
                -- Reserved for future non critical extension
                v390NonCriticalExtensions           SEQUENCE {
                    sRNC-RelocationInfo-v390ext         SRNC-RelocationInfo-v390ext-IEs,
                    v3a0NonCriticalExtensions           SEQUENCE {
                        sRNC-RelocationInfo-v3a0ext         SRNC-RelocationInfo-v3a0ext-IEs,
                        v3b0NonCriticalExtensions           SEQUENCE {
                            sRNC-RelocationInfo-v3b0ext         SRNC-RelocationInfo-v3b0ext-IEs,
                            v4xyNonCriticalExtensions           SEQUENCE {
                                sRNC-RelocationInfo-v4xyext         SRNC-RelocationInfo-v4xyext-IEs,
                                -- Reserved for future non critical extension
                                nonCriticalExtensions           SEQUENCE {} OPTIONAL
                            }       OPTIONAL
                        }       OPTIONAL
                    }       OPTIONAL
                }       OPTIONAL
            }       OPTIONAL
    },
    criticalExtensions              SEQUENCE {}
}

SRNC-RelocationInfo-r3-IEs ::=      SEQUENCE {
    -- Non-RRC IEs
        stateOfRRC                      StateOfRRC,
        stateOfRRC-Procedure            StateOfRRC-Procedure,
    -- Ciphering related information IEs
    -- If the extension v380 is included use the extension for the ciphering status per CN domain
        cipheringStatus                 CipheringStatus,
        calculationTimeForCiphering     CalculationTimeForCiphering         OPTIONAL,
        cipheringInfoPerRB-List         CipheringInfoPerRB-List             OPTIONAL,
        count-C-List                    COUNT-C-List                        OPTIONAL,
        integrityProtectionStatus       IntegrityProtectionStatus,
        srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
        implementationSpecificParams    ImplementationSpecificParams        OPTIONAL,
    -- User equipment IEs
        u-RNTI                          U-RNTI,
        c-RNTI                          C-RNTI                              OPTIONAL,
        ue-RadioAccessCapability        UE-RadioAccessCapability,
        ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos         OPTIONAL,
    -- Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
    -- UTRAN mobility IEs
        ura-Identity                    URA-Identity                        OPTIONAL,
    -- Core network IEs
        cn-CommonGSM-MAP-NAS-SysInfo    NAS-SystemInformationGSM-MAP,
        cn-DomainInformationList        CN-DomainInformationList            OPTIONAL,
    -- Measurement IEs
        ongoingMeasRepList              OngoingMeasRepList                  OPTIONAL,
    -- Radio bearer IEs
        predefinedConfigStatusList      PredefinedConfigStatusList,
```

```
        srb-InformationList             SRB-InformationSetupList,
        rab-InformationList             RAB-InformationSetupList            OPTIONAL,
    -- Transport channel IEs
        ul-CommonTransChInfo            UL-CommonTransChInfo                OPTIONAL,
        ul-TransChInfoList              UL-AddReconfTransChInfoList         OPTIONAL,
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                transChDRAC-Info                DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        },
        dl-CommonTransChInfo            DL-CommonTransChInfo                OPTIONAL,
        dl-TransChInfoList              DL-AddReconfTransChInfoList         OPTIONAL,
    -- Measurement report
        measurementReport               MeasurementReport                   OPTIONAL ,
        nonCriticalExtensions           SEQUENCE {
            -- In case of TDD only up-Ipdl-Parameters-TDD is present, otherwise
            -- this IE is absent
            up-Ipdl-Parameters-TDD          UE-Positioning-IPDL-Parameters-TDD-r4-ext   OPTIONAL,
        -- Extension mechanism for non- release4 information
            nonCriticalExtensions           SEQUENCE {}                                OPTIONAL
        }                                                                       OPTIONAL
}

SRNC-RelocationInfo-v380ext-IEs ::= SEQUENCE {
    -- Ciphering related information IEs
        cn-DomainIdentity                   CN-DomainIdentity,
        cipheringStatusList                 CipheringStatusList
}

SRNC-RelocationInfo-v390ext-IEs ::= SEQUENCE {
        cn-DomainInformationList-v390ext    CN-DomainInformationList-v390ext        OPTIONAL,
        ue-RadioAccessCapability-v370ext    UE-RadioAccessCapability-v370ext        OPTIONAL,
        ue-RadioAccessCapability-v380ext    UE-RadioAccessCapability-v380ext        OPTIONAL,
        dl-PhysChCapabilityFDD-v380ext      DL-PhysChCapabilityFDD-v380ext,
        failureCauseWithProtErr             FailureCauseWithProtErr                 OPTIONAL
}

SRNC-RelocationInfo-v3a0ext-IEs ::= SEQUENCE {
        -- cn-domain identity for IE startValueForCiphering-v3a0ext is specified
        -- in subsequent extension (SRNC-RelocationInfo-v3b0ext-IEs)
        startValueForCIphering-v3a0ext      START-Value,
        cipheringInfoForSRB1-v3a0ext        CipheringInfoForSRB1-v3a0ext,
        ue-RadioAccessCapability-v3a0ext    UE-RadioAccessCapability-v3a0ext        OPTIONAL
}

SRNC-RelocationInfo-v3b0ext-IEs ::= SEQUENCE {
        -- cn-domain identity for IE startValueForCiphering-v3a0ext included in previous extension
        cn-DomainIdentity               CN-DomainIdentity,
        -- the remaining start values are contained in IE startValueForCiphering-v3b0ext
        startValueForCiphering-v3b0ext      START-List2                             OPTIONAL
}

START-List2 ::=                     SEQUENCE (SIZE (2..maxCNdomains)) OF
                                        START-Single

SRNC-RelocationInfo-v4xyext-IEs ::= SEQUENCE {
        ue-RadioAccessCapability-v4xyext    UE-RadioAccessCapability-v4xyext
}

CipheringInfoForSRB1-v3a0ext ::= SEQUENCE {
        dl-UM-SN                            BIT STRING (SIZE (7))
}

CipheringStatusList ::=         SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        CipheringStatusCNdomain

CipheringStatusCNdomain ::=             SEQUENCE {
        cn-DomainIdentity               CN-DomainIdentity,
        cipheringStatus                 CipheringStatus
}

SRNC-RelocationInfo-r4 ::=          SEQUENCE {
    -- Non-RRC IEs
        stateOfRRC                      StateOfRRC,
        stateOfRRC-Procedure            StateOfRRC-Procedure,
        cipheringStatus                 CipheringStatus,
```

```
        calculationTimeForCiphering     CalculationTimeForCiphering         OPTIONAL,
        cipheringInfoPerRB-List         CipheringInfoPerRB-List             OPTIONAL,
        integrityProtectionStatus       IntegrityProtectionStatus,
        srb-SpecificIntegrityProtInfo   SRB-SpecificIntegrityProtInfoList,
        implementationSpecificParams    ImplementationSpecificParams        OPTIONAL,
    -- User equipment IEs
        u-RNTI                          U-RNTI,
        c-RNTI                          C-RNTI                              OPTIONAL,
        ue-RadioAccessCapability        UE-RadioAccessCapability,
        ue-Positioning-LastKnownPos     UE-Positioning-LastKnownPos         OPTIONAL,
    -- Other IEs
        ue-RATSpecificCapability        InterRAT-UE-RadioAccessCapabilityList   OPTIONAL,
    -- UTRAN mobility IEs
        ura-Identity                    URA-Identity                        OPTIONAL,
    -- Core network IEs
        cn-CommonGSM-MAP-NAS-SysInfo    NAS-SystemInformationGSM-MAP,
        cn-DomainInformationList        CN-DomainInformationList            OPTIONAL,
    -- Measurement IEs
        ongoingMeasRepList              OngoingMeasRepList-r4               OPTIONAL,
    -- Radio bearer IEs
        predefinedConfigStatusList      PredefinedConfigStatusList,
        srb-InformationList             SRB-InformationSetupList,
        rab-InformationList             RAB-InformationSetupList            OPTIONAL,
    -- Transport channel IEs
        ul-CommonTransChInfo            UL-CommonTransChInfo                OPTIONAL,
        ul-TransChInfoList              UL-AddReconfTransChInfoList         OPTIONAL,
        modeSpecificInfo                CHOICE {
            fdd                             SEQUENCE {
                cpch-SetID                      CPCH-SetID                  OPTIONAL,
                transChDRAC-Info                DRAC-StaticInformationList  OPTIONAL
            },
            tdd                             NULL
        },
        dl-CommonTransChInfo            DL-CommonTransChInfo                OPTIONAL,
        dl-TransChInfoList              DL-AddReconfTransChInfoList         OPTIONAL,
    -- Measurement report
        measurementReport               MeasurementReport                   OPTIONAL,
        nonCriticalExtensions           SEQUENCE {
            -- In case of TDD only up-Ipdl-Parameters-TDD is present, otherwise
            -- this IE is absent
            up-Ipdl-Parameters-TDD          UE-Positioning-IPDL-Parameters-TDD-r4-ext   OPTIONAL,
        -- Extension mechanism for non- release4 information
            nonCriticalExtensions           SEQUENCE {}                                 OPTIONAL
        }                                                                       OPTIONAL
}

-- IE definitions

CalculationTimeForCiphering ::=     SEQUENCE {
    cell-Id                             CellIdentity,
    sfn                                 INTEGER (0..4095)
}

CipheringInfoPerRB ::=              SEQUENCE {
    dl-HFN                              BIT STRING (SIZE (20..25)),
    ul-HFN                              BIT STRING (SIZE (20..25))
}

-- TABULAR: CipheringInfoPerRB-List, multiplicity value numberOfRadioBearers
-- has been replaced with maxRB.
-- The order of occurrence of the IE “Ciphering info per radio bearer” in the
-- “SRNS Relocation Info” IE  is the same as in the IE “Signalling RB information
-- list” and the RBs in the IE “RAB information list”. The signalling RBs are supposed
-- to be listed first. Only UM and AM RBs that are ciphered are listed here

CipheringInfoPerRB-List ::=         SEQUENCE (SIZE (1..maxRB)) OF
                                        CipheringInfoPerRB

CipheringStatus ::=                 ENUMERATED {
                                        started, notStarted }

CN-DomainInformation-v390ext ::=        SEQUENCE {
    cn-DRX-CycleLengthCoeff             CN-DRX-CycleLengthCoefficient
}

CN-DomainInformationList-v390ext ::=    SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        CN-DomainInformation-v390ext
```

```
COUNT-C-List ::=                        SEQUENCE (SIZE (1..maxCNdomains)) OF
                                        COUNT-CSingle

COUNT-CSingle ::=                       SEQUENCE {
    cn-DomainIdentity                   CN-DomainIdentity,
    count-C                             BIT STRING (SIZE (32))
}

-- The structure of DL-RFC3095-Context is FFS
DL-RFC3095-Context ::=              SEQUENCE {
    rfc3095-Context-Identity            INTEGER (0..16383),
    dl-mode                             ENUMERATED {u, o, r}
}

ImplementationSpecificParams ::=    BIT STRING (SIZE (1..512))


IntegrityProtectionStatus ::=       ENUMERATED {
                                        started, notStarted }

MeasurementCommandWithType ::=      CHOICE {
    setup                               MeasurementType,
    modify                              NULL,
    release                             NULL
}

MeasurementCommandWithType-r4 ::=   CHOICE {
    setup                               MeasurementType-r4,
    modify                              NULL,
    release                             NULL
}

OngoingMeasRep ::=                  SEQUENCE {
    measurementIdentity         MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType
    measurementCommandWithType          MeasurementCommandWithType,
    measurementReportingMode            MeasurementReportingMode            OPTIONAL,
    additionalMeasurementID-List        AdditionalMeasurementID-List        OPTIONAL
}

OngoingMeasRep-r4 ::=               SEQUENCE {
    measurementIdentity         MeasurementIdentity,
    -- TABULAR: The CHOICE Measurement in the tabular description is included
    -- in MeasurementCommandWithType-r4.
    measurementCommandWithType          MeasurementCommandWithType-r4,
    measurementReportingMode            MeasurementReportingMode            OPTIONAL,
    additionalMeasurementID-List        AdditionalMeasurementID-List        OPTIONAL
}

OngoingMeasRepList ::=              SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                        OngoingMeasRep

OngoingMeasRepList-r4 ::=           SEQUENCE (SIZE (1..maxNoOfMeas)) OF
                                        OngoingMeasRep-r4

RFC3095-ContextInfo ::=             SEQUENCE {
    rb-Identity                         RB-Identity,
    rfc3095-Context-List                RFC3095-Context-List
}

RFC3095-Context-List ::=            SEQUENCE (SIZE (1..maxRFC3095-CID)) OF SEQUENCE {
    dl-RFC3095-Context                  DL-RFC3095-Context      OPTIONAL,
    ul-RFC3095-Context                  UL-RFC3095-Context      OPTIONAL
 }

SRB-SpecificIntegrityProtInfo ::=   SEQUENCE {
    ul-RRC-HFN                          BIT STRING (SIZE (28)),
    dl-RRC-HFN                          BIT STRING (SIZE (28)),
    ul-RRC-SequenceNumber               RRC-MessageSequenceNumber,
    dl-RRC-SequenceNumber               RRC-MessageSequenceNumber
}

SRB-SpecificIntegrityProtInfoList ::= SEQUENCE (SIZE (4..maxSRBsetup)) OF
                                        SRB-SpecificIntegrityProtInfo

StateOfRRC ::=                      ENUMERATED {
                                        cell-DCH, cell-FACH,
```

```
                                        cell-PCH, ura-PCH }

StateOfRRC-Procedure ::=            ENUMERATED {
                                        awaitNoRRC-Message,
                                        awaitRB-ReleaseComplete,
                                        awaitRB-SetupComplete,
                                        awaitRB-ReconfigurationComplete,
                                        awaitTransportCH-ReconfigurationComplete,
                                        awaitPhysicalCH-ReconfigurationComplete,
                                        awaitActiveSetUpdateComplete,
                                        awaitHandoverComplete,
                                        sendCellUpdateConfirm,
                                        sendUraUpdateConfirm,
                                        sendRrcConnectionReestablishment,
                                        otherStates
}

UE-Positioning-LastKnownPos ::=     SEQUENCE {
        sfn                             INTEGER (0..4095),
        cell-id                         CellIdentity,
        positionEstimate                PositionEstimate
}

-- The structure of UL-RFC3095-Context is FFS
UL-RFC3095-Context ::=              SEQUENCE {
    rfc3095-Context-Identity            INTEGER (0..16383),
    ul-mode                             ENUMERATED {u, o, r}
}

END
```

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation.

Direction: source RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
Non RRC IEs				
>State of RRC	MP		RRC state indicator, 10.3.3.35a	
>State of RRC procedure	MP		Enumerated (await no RRC message, Complete, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, ~~await RB Release Complete,~~ await Transport CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)	
Ciphering related information				
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>		
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>Ciphering status	MP		Enumerated(Not started, Started)	
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.
>Latest configured CN domain	MP		CN domain	Value contained in the variable

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			identity 10.3.1.1	of the same name.
>Calculation time for ciphering related information	CV-*Ciphering*			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call
>>SFN	MP		Integer(0..4095)	
>COUNT-C list	CV-*Ciphering*	1 to <maxCNdomains>		COUNT-C values for radio bearers using transparent mode RLC
>>CN domain identity	MP		CN domain identity 10.3.1.1	
>>COUNT-C	MP		Bit string(32)	
>Ciphering info per radio bearer	OP	1 to <maxRB>		For signalling radio bearers this IE is mandatory.
>>RB identity	MP		RB identity 10.3.4.16	
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
>>Downlink SN	CV-*SRB1*		Bit String(7)	VT(US) of RLC UM
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)
Integrity protection related information				
>Integrity protection status	MP		Enumerated(Not started, Started)	
>Signalling radio bearer specific integrity protection information	CV-*IP*	4 to <maxSRBsetup>		
>>Uplink RRC HFN	MP		Bit string (28)	
>>Downlink RRC HFN	MP		Bit string (28)	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	
>Implementation specific parameters	OP		Bit string (1..512)	
RRC IEs				
UE Information elements				
>U-RNTI	MP		U-RNTI 10.3.3.47	
>C-RNTI	OP		C-RNTI 10.3.3.8	
>UE radio access Capability	MP		UE radio access capability 10.3.3.42	
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a	
>Last known UE position	OP			
>>SFN	MP		Integer	Time when position was

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			(0..4095)	estimated
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.
>>CHOICE *Position estimate*	MP			
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a	
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d	
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e	
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b	
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c	
Other Information elements				
>UE system specific capability	OP	1 to <maxSystemCapability>		
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7	
UTRAN Mobility Information elements				
>URA Identifier	OP		URA identity 10.3.2.6	
CN Information Elements				
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9	
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain
>>CN domain identity	MP			
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9	
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6	
Measurement Related Information elements				
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>		
>>Measurement Identity	MP		Measuremen	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			t identity 10.3.7.48	
>>Measurement Command	MP		Measurement command 10.3.7.46	
>>Measurement Type	CV-*Setup*		Measurement type 10.3.7.50	
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49	
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1	
>>CHOICE *Measurement*	OP			
>>>Intra-frequency				
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33	
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38	
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-frequency				
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13	
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement quantity 10.3.7.18	
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Inter-RAT				
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23	
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29	
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32	
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>>>>Measurement validity	OP		Measurement validity 10.3.7.51	
>>>>CHOICE *report criteria*	OP			
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Traffic Volume				
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70	
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71	
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74	
>>>>CHOICE *report criteria*	OP			
>>>>>Traffic volume			Traffic	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
measurement reporting criteria			volume measurement reporting criteria 10.3.7.72	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>Quality				
>>>>Quality measurement Object	OP		Quality measurement object	
>>>>CHOICE *report criteria*	OP			
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>UE internal				
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79	
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82	
>>>>CHOICE *report criteria*	OP			
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting			NULL	
>>>UE positioning				
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111	
>>>>CHOICE *report criteria*	OP			
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110	
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53	
>>>>>No reporting				
Radio Bearer Information Elements				
>Predefined configuration status information	OP		Predefined configuration status	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			information 10.3.4.5a	
>Signalling RB information list	MP	1 to <maxSRBsetup>		For each signalling radio bearer
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24	
>RAB information list	OP	1 to <maxRABsetup>		Information for each RAB
>>RAB information	MP		RAB information to setup 10.3.4.10	
Transport Channel Information Elements				
Uplink transport channels				
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24	
>UL transport channel information list	OP	1 to <MaxTrCH>		
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2	
>CHOICE *mode*	OP			
>>FDD				
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5	
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH>		
>>>>DRAC static information	MP		DRAC static information 10.3.5.7	
>>TDD				(no data)
Downlink transport channels				
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6	
>DL transport channel information list	OP	1 to <MaxTrCH>		
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1	
>Measurement report	OP		MEASUREMENT REPORT	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description
			10.2.17	
Other Information elements				
Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)
Protocol error information	CV-*ProtErr*		Protocol error information 10.3.8.12	

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
Setup	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
Ciphering	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
IP	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
ProtErr	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
SRB1	The IE is mandatory present for RB1. Otherwise it is not needed.

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19 – 23 August 2002

Tdoc R2-022292

CR-Form-v5

CHANGE REQUEST

⌘ **25.331** **CR** **1612** ⌘ **rev** **-** ⌘ Current version: **3.11.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network ☐

Title:	⌘	DCH quality target
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	August 21, 2002
Category:	⌘	**F**
Release:	⌘	R99

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)

Reason for change: ⌘

The specification is unclear on when UE shall use the Transport Channel BLER value included in IE "DCH Quality target" for adjustment of the SIR target in Downlink power control. Section 8.6.5.4 can be interpreted such that UE need not adjust its SIR target unless CRC exists in all transport formats of the downlink TFS of the DCH. This is not the intended behaviour.

For most of the reference RBs of 34.108 (mainly with exception of AMR speech RBs), there is no CRC for the zero-block transport format.

TSG-RAN1 indicated in LS R2-021821 (R1-02-1016) that the current text in 8.6.5.4 could give the wrong impression. It is the understanding of RAN1 that discontinuous operation of outer loop power control is allowed.

Summary of change: ⌘

Section 8.6.5.4:

1. The two original sentences are rephrased and separated into bullets.
2. Note added to clarify when target SIR adjustment can be performed by the UE, with reference to TS 25.212.

Impact analysis: This CR is considered to have isolated impact. If the UE does not implement this CR, it may omit to adjust the SIR target in case there exists at least one transport format in the TFS without a CRC.

Consequences if not approved: ⌘

Downlink power control might not work for CCTrCHs carrying DCHs that have at least one transport format without a CRC, i.e. for most RAB combinations of 34.108.

Clauses affected: ⌘ 8.6.5.4

		Y	N		
Other specs	⌘		**X**	Other core specifications	⌘

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

8.6.5.4 DCH quality target

If the IE “DCH quality target” is included, the UE shall:

1> at physical channel establishment set an initial downlink target SIR value based on the received IE "DCH quality target";

1> adjust the target SIR for the downlink power control to meet the quality target received in the IE “DCH quality target".

NOTE: Adjusting the target SIR is possible to do continuously by the UE if a CRC exists in all transport formats in the downlink TFS for a DCH. If a CRC does not exist in all transport formats, the UE can only adjust the target SIR when receiving transport formats containing a CRC and the UE has knowledge about the transport format according to [27].

~~At physical channel establishment, the UE sets an initial downlink target SIR value based on the received IEs "DCH quality target". The IE "DCH quality target" for a given DCH shall be used by the UE to set the target SIR for the downlink power control in case quality target can be set for this DCH, i.e. CRC exists in all transport formats in downlink TFS for this DCH.~~

14.9 Downlink power control

14.9.1 Generalities

This function is implemented in the UE in order to set the SIR target value on each CCTrCH used for the downlink power control. This SIR value shall be adjusted according to an autonomous function in the UE in order to achieve the same measured quality as the quality target set by UTRAN. The quality target is set as the transport channel BLER value for each transport channel as signalled by UTRAN. For CPCH the quality target is set as the BER of the DL DPCCH as signalled by UTRAN.

When transport channel BLER is used the UE shall run a quality target control loop such that the quality requirement is met for each transport channel, which has been assigned a BLER target.

When DL DPCCH BER is used the UE shall run a quality target control loop such that the quality requirement is met for each CPCH transport channel, which has been assigned a DL DPCCH BER target.

The UE shall set the SIR target when the physical channel has been set up or reconfigured. It shall not increase the SIR target value before the power control has converged on the current value. The UE may estimate whether the power control has converged on the current value, by comparing the averaged measured SIR to the SIR target value.

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19 – 23 August 2002

Tdoc R2-022293

CR-Form-v5

CHANGE REQUEST

⌘ **25.331** **CR** **1613** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network ☐

Title:	⌘	DCH quality target
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	August 21, 2002
Category:	⌘	**A**
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)*
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Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘ The specification is unclear on when UE shall use the Transport Channel BLER value included in IE "DCH Quality target" for adjustment of the SIR target in Downlink power control. Section 8.6.5.4 can be interpreted such that UE need not adjust its SIR target unless CRC exists in all transport formats of the downlink TFS of the DCH. This is not the intended behaviour.

For most of the reference RBs of 34.108 (mainly with exception of AMR speech RBs), there is no CRC for the zero-block transport format.

TSG-RAN1 indicated in LS R2-021821 (R1-02-1016) that the current text in 8.6.5.4 could give the wrong impression. It is the understanding of RAN1 that discontinuous operation of outer loop power control is allowed.

Summary of change: ⌘ Section 8.6.5.4:

1. The two original sentences are rephrased and separated into bullets.
2. Note added to clarify when target SIR adjustment can be performed by the UE, with reference to TS 25.212.

Impact analysis: This CR is considered to have isolated impact. If the UE does not implement this CR, it may omit to adjust the SIR target in case there exists at least one transport format in the TFS without a CRC.

Consequences if not approved: ⌘ Downlink power control might not work for CCTrCHs carrying DCHs that have at least one transport format without a CRC, i.e. for most RAB combinations of 34.108.

Clauses affected: ⌘ 8.6.5.4

		Y	N		
Other specs	⌘		**X**	Other core specifications	⌘

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

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8.6.5.4 DCH quality target

If the IE “DCH quality target” is included, the UE shall:

1> at physical channel establishment set an initial downlink target SIR value based on the received IE "DCH quality target";

1> adjust the target SIR for the downlink power control to meet the quality target received in the IE “DCH quality target".

NOTE: Adjusting the target SIR is possible to do continuously by the UE if a CRC exists in all transport formats in the downlink TFS for a DCH. If a CRC does not exist in all transport formats, the UE can only adjust the target SIR when receiving transport formats containing a CRC and the UE has knowledge about the transport format according to [27].

~~At physical channel establishment, the UE sets an initial downlink target SIR value based on the received IEs "DCH quality target". The IE "DCH quality target" for a given DCH shall be used by the UE to set the target SIR for the downlink power control in case quality target can be set for this DCH, i.e. CRC exists in all transport formats in downlink TFS for this DCH.~~

14.9 Downlink power control

14.9.1 Generalities

This function is implemented in the UE in order to set the SIR target value on each CCTrCH used for the downlink power control. This SIR value shall be adjusted according to an autonomous function in the UE in order to achieve the same measured quality as the quality target set by UTRAN. The quality target is set as the transport channel BLER value for each transport channel as signalled by UTRAN. For CPCH the quality target is set as the BER of the DL DPCCH as signalled by UTRAN.

When transport channel BLER is used the UE shall run a quality target control loop such that the quality requirement is met for each transport channel, which has been assigned a BLER target.

When DL DPCCH BER is used the UE shall run a quality target control loop such that the quality requirement is met for each CPCH transport channel, which has been assigned a DL DPCCH BER target.

The UE shall set the SIR target when the physical channel has been set up or reconfigured. It shall not increase the SIR target value before the power control has converged on the current value. The UE may estimate whether the power control has converged on the current value, by comparing the averaged measured SIR to the SIR target value.

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19 – 23 August 2002

Tdoc R2-022294

CR-Form-v5

CHANGE REQUEST

⌘ **25.331** **CR** **1614** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	DCH quality target
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	August 21, 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)

Reason for change: ⌘

The specification is unclear on when UE shall use the Transport Channel BLER value included in IE "DCH Quality target" for adjustment of the SIR target in Downlink power control. Section 8.6.5.4 can be interpreted such that UE need not adjust its SIR target unless CRC exists in all transport formats of the downlink TFS of the DCH. This is not the intended behaviour.

For most of the reference RBs of 34.108 (mainly with exception of AMR speech RBs), there is no CRC for the zero-block transport format.

TSG-RAN1 indicated in LS R2-021821 (R1-02-1016) that the current text in 8.6.5.4 could give the wrong impression. It is the understanding of RAN1 that discontinuous operation of outer loop power control is allowed.

Summary of change: ⌘

Section 8.6.5.4:

1. The two original sentences are rephrased and separated into bullets.
2. Note added to clarify when target SIR adjustment can be performed by the UE, with reference to TS 25.212.

Impact analysis: This CR is considered to have isolated impact. If the UE does not implement this CR, it may omit to adjust the SIR target in case there exists at least one transport format in the TFS without a CRC.

Consequences if not approved: ⌘

Downlink power control might not work for CCTrCHs carrying DCHs that have at least one transport format without a CRC, i.e. for most RAB combinations of 34.108.

Clauses affected: ⌘ 8.6.5.4

		Y	N		
Other specs	⌘		X	Other core specifications	⌘

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

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8.6.5.4 DCH quality target

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1> adjust the target SIR for the downlink power control to meet the quality target received in the IE “DCH quality target".

NOTE: Adjusting the target SIR is possible to do continuously by the UE if a CRC exists in all transport formats in the downlink TFS for a DCH. If a CRC does not exist in all transport formats, the UE can only adjust the target SIR when receiving transport formats containing a CRC and the UE has knowledge about the transport format according to [27].

~~At physical channel establishment, the UE sets an initial downlink target SIR value based on the received IEs "DCH quality target". The IE "DCH quality target" for a given DCH shall be used by the UE to set the target SIR for the downlink power control in case quality target can be set for this DCH, i.e. CRC exists in all transport formats in downlink TFS for this DCH.~~

14.9 Downlink power control

14.9.1 Generalities

This function is implemented in the UE in order to set the SIR target value on each CCTrCH used for the downlink power control. This SIR value shall be adjusted according to an autonomous function in the UE in order to achieve the same measured quality as the quality target set by UTRAN. The quality target is set as the transport channel BLER value for each transport channel as signalled by UTRAN. For CPCH the quality target is set as the BER of the DL DPCCH as signalled by UTRAN.

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The UE shall set the SIR target when the physical channel has been set up or reconfigured. It shall not increase the SIR target value before the power control has converged on the current value. The UE may estimate whether the power control has converged on the current value, by comparing the averaged measured SIR to the SIR target value.

3GPP TSG-RAN WG2 Meeting #31 ***R2-022295***
Stockholm, Sweden, 19 – 23 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1615** ⌘ **rev** **-** ⌘ Current version: **3.11.0** ⌘

*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:	⌘	Handling of variables CELL_INFO_LIST and MEASUREMENT_IDENTITY(2)		
Source:	⌘	TSG-RAN WG2a		
Work item code:	⌘	TEI	***Date:*** ⌘	July 2002
Category:	⌘	**F**	***Release:*** ⌘	R99

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: ⌘

CR's 1399, 1400 and 1401 (approved at last RAN meeting) mainly focused on the handling related to the MEASUREMENT_IDENTITY variable. Unluckily, an inconsistency related to the MEASUREMENT_IDENTITY variable was introduced (1). In addition, a backward incompatible change to the handling of the CELL_INFO_LIST was introduced (2).

In this contribution we want to address these two issues:

1. MEASUREMENT_IDENTITY inconsistency

The above mentioned CR's intended to clarify that when reading the broadcast information in SIB11/12, the relevant information related to the intra-frequency measurement was stored in the MEASUREMENT_ INDENTITY variable. Before these CR's, the storing seemed to take place in an intermediate store, and only at transition to CELL-DCH state, the relevant information was stored in the MEASUREMENT_IDENTITY variable.

The indicated CR's do update the text on UE actions when reading SIB11/12 (8.1.1.6.11/8.1.1.6.12), however did not remove the original text in 8.4.1.7.1. Furthermore, the newly introduced text in 8.1.1.6.11/8.1.1.6.12 uses other criteria to determine what is relevant information then the text in 8.4.1.7.1.

2. Clearing of CELL_INFO_LIST

Before the above mentioned CR's were accepted, it was clear that when the UE reads SIB11, it would first clear the CELL_INFO_LIST. This enables a situation in which it is always unambiguously clear what the contents of the CELL_INFO_LIST is in the UE.

	The above mentioned CR's moved the sentence indicating the clearing of the CELL_INFO_LIST, which was previously always executed when reading SIB11, under a condition stating "if in IDLE mode". This means that e.g. on cell reselection in connected mode or channel switching to CELL_FACH state, the CELL_INFO_LIST would no longer be cleared. The CELL_INFO_LIST would get a kind of history in CELL_FACH state. That this was probably not the intention can be concluded from the fact that the same CR's, as a result of discussions on another CR (R2-020974) also included a sentence in section 13.4.0. stating: "This IE shall be cleared at cell re-selection, when leaving UTRA RRC connected mode, when switched off as well as at selection of a new PLMN." 3 - Handling of CELL_INFO_LIST on transition to CELL_DCH. If the UE performs a state transition from CELL_DCH to CELL_FACH and then back to CELL_DCH, it is not clear whether the UE should start measuring on the CELL_INFO_LIST that was acquired from system information read in CELL_FACH or the same CELL_INFO_LIST as used when the UE was previously in CELL_DCH.
Summary of change: ⌘	1 - MEASUREMENT IDENTITY inconsistency It is proposed to remove the concerning text from 8.4.1.7.1 which now became obsolete. To maintain alignment with the specification prior the introduction of the inconsistency, the measurement information from SIB11/12 is only stored in MEASUREMENT IDENTITY if no intra-frequency measurement has been setup or modified through MEASUREMENT CONTROL. This is corrected in section 8.1.1.6.11 and 8.1.1.6.12 2 - Clearing of CELL_INFO_LIST It is proposed to move the concerning sentence outside the idle mode condition. 3 - Sections 8.4.1.7.1, 8.4.1.7.2 and 8.4.1.8.1 are corrected so it is clearer that the UE uses the CELL_INFO_LIST acquired from system information. **Isolated Impact Change Analysis.** Impacted functionality: Variable related measurement behaviour Note: The corrections have no foreseen impact on the T1 test specifications. Clarification: W.r.t. first issue, the inconsistency in the specification is removed. W.r.t the second issue, the situation as existed before CR1399, 1400 and 1401 were accepted is restored.
Consequences if not approved: ⌘	- The inconsistency w.r.t the MEASUREMENT IDENTITY variable remains. - The CELL_INFO_LIST variable would not be cleared in all cases considered necessary.

Clauses affected:	⌘	8.1.1.6.11; 8.1.1.6.12; 8.4.1.7.1, 8.4.1.7.2, 8.4.1.8.1			
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.

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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.

8.1.1.6.11 System Information Block type 11

The UE should store all relevant IEs included in this system information block. The UE shall:

1> if in idle mode:

2> clear the variable MEASUREMENT_IDENTITY;

~~2> clear the variable CELL_INFO_LIST.~~

1> if IE "FACH measurement occasion info" is included:

2> act as specified in subclause 8.6.7.

1> else:

2> may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell.

1> clear the variable CELL_INFO_LIST.

1> act upon the received IE "Intra-frequency cell info list"/"Inter-frequency cell info list"/"Inter-RAT cell info list" as described in subclause 8.6.7.3;

1> if in idle mode; or

1> if in connected mode and if System Information Block type 12 is not broadcast in the cell:

2> if no intra-frequency measurement ~~with the measurement identity indicated in the IE "Intra-frequency measurement system information"~~ was set up or modified through a MEASUREMENT CONTROL message:

3> if included, store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

1> if in connected mode and if System Information Block type 12 is not broadcast in the cell:

2> read the IE "Traffic volume measurement information";

2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:

3> update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.

1> if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT Cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

1> if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

2> use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

1> if in connected mode, and System Information Block type 12 is indicated as used in the cell:

2> read and act on information sent in System Information Block type 12 as indicated in subclause 8.1.1.6.12.

8.1.1.6.12 System Information Block type 12

If in connected mode, the UE should store all relevant IEs included in this system information block. The UE shall:

1> after reception of System Information Block type 11:

2> update the variable MEASUREMENT_IDENTITY with the measurement information in the received IEs unless specified otherwise.

1> if IE "FACH measurement occasion info" is included:

2> act as specified in subclause 8.6.7.

1> else:

2> may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell.

1> act upon the received IE "Intra-frequency cell info list"/"Inter-frequency cell info list"/"Inter-RAT cell info list" as described in subclause 8.6.7.3;

1> if any of the IEs "Intra-frequency measurement quantity", "Intra-frequency reporting quantity for RACH reporting", "Maximum number of reported cells on RACH" or "Reporting information for state CELL_DCH" are not included in the system information block:

2> read the corresponding IE(s) in system information block type 11 and use that information for the intra-frequency measurement.

1> if included in this system information block or in System Information Block type 11:

2> if no intra-frequency measurement in the variable MEASUREMENT_IDENTITY ~~with the measurement identity indicated in the IE "Intra-frequency measurement system information"~~ was set up or modified through a MEASUREMENT CONTROL message:

3> store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

1> if the IE "Traffic volume measurement system information" is not included in this system information block:

2> read the corresponding IE in System Information Block type 11.

1> if the IE "Traffic volume measurement system information" was received either in this system information block or in System Information Block type 11:

2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:

3> update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.

1> if in CELL_FACH state:

2> start or continue the traffic volume measurements stored in the variable MEASUREMENT_IDENTITY that are valid in CELL_FACH state.

1> if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

1> if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

2> use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

If in idle mode, the UE shall not use the values of the IEs in this system information block.

8.4.1.7 Measurements after transition from CELL_FACH to CELL_DCH state

The UE shall apply the following rules for different measurement types after transiting from CELL_FACH to CELL_DCH state:

8.4.1.7.1 Intra-frequency measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

~~1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;~~

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2~~1~~> resume the measurement reporting;

~~1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:~~

~~2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):~~

~~3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.~~

8.4.1.7.2 Inter-frequency measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

~~1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and~~

1> if inter-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2~~1~~> resume the measurement reporting.

8.4.1.8.1 Intra-frequency measurement

Upon transition from idle mode to CELL_DCH state, the UE shall:

~~1> begin or continue monitoring the list of cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~1> if the "intra-frequency measurement reporting criteria" IE was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):~~

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> begin measurement reporting ~~according to the IE~~.

3GPP TSG-RAN WG2 Meeting #31 ***R2-022296***
Stockholm, Sweden, 19 – 23 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1616** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*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:	⌘	Handling of variables CELL_INFO_LIST and MEASUREMENT_IDENTITY(2)		
Source:	⌘	TSG-RAN WG2		
Work item code:	⌘	TEI	***Date:*** ⌘	July 2002
Category:	⌘	**A**	***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: ⌘

CR's 1399, 1400 and 1401 (approved at last RAN meeting) mainly focused on the handling related to the MEASUREMENT_IDENTITY variable. Unluckily, an inconsistency related to the MEASUREMENT_IDENTITY variable was introduced (1). In addition, a backward incompatible change to the handling of the CELL_INFO_LIST was introduced (2).

In this contribution we want to address these two issues:

1. MEASUREMENT_IDENTITY inconsistency

The above mentioned CR's intended to clarify that when reading the broadcast information in SIB11/12, the relevant information related to the intra-frequency measurement was stored in the MEASUREMENT_ INDENTITY variable. Before these CR's, the storing seemed to take place in an intermediate store, and only at transition to CELL-DCH state, the relevant information was stored in the MEASUREMENT_IDENTITY variable.

The indicated CR's do update the text on UE actions when reading SIB11/12 (8.1.1.6.11/8.1.1.6.12), however did not remove the original text in 8.4.1.7.1. Furthermore, the newly introduced text in 8.1.1.6.11/8.1.1.6.12 uses other criteria to determine what is relevant information then the text in 8.4.1.7.1.

2. Clearing of CELL_INFO_LIST

Before the above mentioned CR's were accepted, it was clear that when the UE reads SIB11, it would first clear the CELL_INFO_LIST. This enables a situation in which it is always unambiguously clear what the contents of the CELL_INFO_LIST is in the UE.

	The above mentioned CR's moved the sentence indicating the clearing of the CELL_INFO_LIST, which was previously always executed when reading SIB11, under a condition stating "if in IDLE mode". This means that e.g. on cell reselection in connected mode or channel switching to CELL_FACH state, the CELL_INFO_LIST would no longer be cleared. The CELL_INFO_LIST would get a kind of history in CELL_FACH state. That this was probably not the intention can be concluded from the fact that the same CR's, as a result of discussions on another CR (R2-020974) also included a sentence in section 13.4.0. stating: "This IE shall be cleared at cell re-selection, when leaving UTRA RRC connected mode, when switched off as well as at selection of a new PLMN." 3 - Handling of CELL_INFO_LIST on transition to CELL_DCH. If the UE performs a state transition from CELL_DCH to CELL_FACH and then back to CELL_DCH, it is not clear whether the UE should start measuring on the CELL_INFO_LIST that was acquired from system information read in CELL_FACH or the same CELL_INFO_LIST as used when the UE was previously in CELL_DCH.
Summary of change: ⌘	1 - MEASUREMENT IDENTITY inconsistency It is proposed to remove the concerning text from 8.4.1.7.1 which now became obsolete. To maintain alignment with the specification prior the introduction of the inconsistency, the measurement information from SIB11/12 is only stored in MEASUREMENT IDENTITY if no intra-frequency measurement has been setup or modified through MEASUREMENT CONTROL. This is corrected in section 8.1.1.6.11 and 8.1.1.6.12 2 - Clearing of CELL_INFO_LIST It is proposed to move the concerning sentence outside the idle mode condition. 3 - Sections 8.4.1.7.1, 8.4.1.7.2 and 8.4.1.8.1 are corrected so it is clearer that the UE uses the CELL_INFO_LIST acquired from system information. **Isolated Impact Change Analysis.** Impacted functionality: Variable related measurement behaviour Note: The corrections have no foreseen impact on the T1 test specifications. Clarification: W.r.t. first issue, the inconsistency in the specification is removed. W.r.t the second issue, the situation as existed before CR1399, 1400 and 1401 were accepted is restored.
Consequences if not approved: ⌘	- The inconsistency w.r.t the MEASUREMENT IDENTITY variable remains. - The CELL_INFO_LIST variable would not be cleared in all cases considered necessary.

Clauses affected:	⌘	8.1.1.6.11; 8.1.1.6.12; 8.4.1.7.1, 8.4.1.7.2, 8.4.1.8.1			
Other specs affected:	⌘	**Y**	**N**		
			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.

8.1.1.6.11 System Information Block type 11

The UE should store all relevant IEs included in this system information block. The UE shall:

1> if in idle mode:

2> clear the variable MEASUREMENT_IDENTITY;

~~2> clear the variable CELL_INFO_LIST.~~

1> if IE "FACH measurement occasion info" is included:

2> act as specified in subclause 8.6.7.

1> else:

2> may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell.

1> clear the variable CELL_INFO_LIST.

1> act upon the received IE "Intra-frequency cell info list"/"Inter-frequency cell info list"/"Inter-RAT cell info list" as described in subclause 8.6.7.3;

1> if in idle mode; or

1> if in connected mode and if System Information Block type 12 is not broadcast in the cell:

2> if no intra-frequency measurement ~~with the measurement identity indicated in the IE "Intra-frequency measurement system information"~~ was set up or modified through a MEASUREMENT CONTROL message:

3> if included, store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

1> if in connected mode and if System Information Block type 12 is not broadcast in the cell:

2> read the IE "Traffic volume measurement information";

2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:

3> update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.

1> if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT Cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

1> if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

2> use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

1> if in connected mode, and System Information Block type 12 is indicated as used in the cell:

2> read and act on information sent in System Information Block type 12 as indicated in subclause 8.1.1.6.12.

8.1.1.6.12 System Information Block type 12

If in connected mode, the UE should store all relevant IEs included in this system information block. The UE shall:

1> after reception of System Information Block type 11:

2> update the variable MEASUREMENT_IDENTITY with the measurement information in the received IEs unless specified otherwise.

1> if IE "FACH measurement occasion info" is included:

2> act as specified in subclause 8.6.7.

1> else:

2> may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell.

1> act upon the received IE "Intra-frequency cell info list"/"Inter-frequency cell info list"/"Inter-RAT cell info list" as described in subclause 8.6.7.3;

1> if any of the IEs "Intra-frequency measurement quantity", "Intra-frequency reporting quantity for RACH reporting", "Maximum number of reported cells on RACH" or "Reporting information for state CELL_DCH" are not included in the system information block:

2> read the corresponding IE(s) in system information block type 11 and use that information for the intra-frequency measurement.

1> if included in this system information block or in System Information Block type 11:

2> if no intra-frequency measurement in the variable MEASUREMENT_IDENTITY ~~with the measurement identity indicated in the IE "Intra-frequency measurement system information"~~ was set up or modified through a MEASUREMENT CONTROL message:

3> store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

1> if the IE "Traffic volume measurement system information" is not included in this system information block:

2> read the corresponding IE in System Information Block type 11.

1> if the IE "Traffic volume measurement system information" was received either in this system information block or in System Information Block type 11:

2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:

3> update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.

1> if in CELL_FACH state:

2> start or continue the traffic volume measurements stored in the variable MEASUREMENT_IDENTITY that are valid in CELL_FACH state.

1> if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

1> if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

2> use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

If in idle mode, the UE shall not use the values of the IEs in this system information block.

8.4.1.7 Measurements after transition from CELL_FACH to CELL_DCH state

The UE shall apply the following rules for different measurement types after transiting from CELL_FACH to CELL_DCH state:

8.4.1.7.1 Intra-frequency measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

~~1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;~~

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2~~1~~> resume the measurement reporting;

~~1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:~~

~~2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):~~

~~3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.~~

8.4.1.7.2 Inter-frequency measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

~~1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and~~

1> if inter-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2~~1~~> resume the measurement reporting.

8.4.1.8.1 Intra-frequency measurement

Upon transition from idle mode to CELL_DCH state, the UE shall:

~~1> begin or continue monitoring the list of cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~1> if the "intra-frequency measurement reporting criteria" IE was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):~~

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> begin measurement reporting~~ according to the IE~~.

3GPP TSG-RAN WG2 Meeting #31
Stockholm, Sweden, 19 – 23 August 2002

R2-022297

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **1617** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*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:	⌘	Handling of variables CELL_INFO_LIST and MEASUREMENT_IDENTITY(2)			
Source:	⌘	TSG-RAN WG2			
Work item code:	⌘	TEI	***Date:***	⌘	July 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: ⌘

CR's 1399, 1400 and 1401 (approved at last RAN meeting) mainly focused on the handling related to the MEASUREMENT_IDENTITY variable. Unluckily, an inconsistency related to the MEASUREMENT_IDENTITY variable was introduced (1). In addition, a backward incompatible change to the handling of the CELL_INFO_LIST was introduced (2).

In this contribution we want to address these two issues:

1. MEASUREMENT_IDENTITY inconsistency

The above mentioned CR's intended to clarify that when reading the broadcast information in SIB11/12, the relevant information related to the intra-frequency measurement was stored in the MEASUREMENT_ INDENTITY variable. Before these CR's, the storing seemed to take place in an intermediate store, and only at transition to CELL-DCH state, the relevant information was stored in the MEASUREMENT_IDENTITY variable.

The indicated CR's do update the text on UE actions when reading SIB11/12 (8.1.1.6.11/8.1.1.6.12), however did not remove the original text in 8.4.1.7.1. Furthermore, the newly introduced text in 8.1.1.6.11/8.1.1.6.12 uses other criteria to determine what is relevant information then the text in 8.4.1.7.1.

2. Clearing of CELL_INFO_LIST

Before the above mentioned CR's were accepted, it was clear that when the UE reads SIB11, it would first clear the CELL_INFO_LIST. This enables a situation in which it is always unambiguously clear what the contents of the CELL_INFO_LIST is in the UE.

	The above mentioned CR's moved the sentence indicating the clearing of the CELL_INFO_LIST, which was previously always executed when reading SIB11, under a condition stating "if in IDLE mode". This means that e.g. on cell reselection in connected mode or channel switching to CELL_FACH state, the CELL_INFO_LIST would no longer be cleared. The CELL_INFO_LIST would get a kind of history in CELL_FACH state. That this was probably not the intention can be concluded from the fact that the same CR's, as a result of discussions on another CR (R2-020974) also included a sentence in section 13.4.0. stating: "This IE shall be cleared at cell re-selection, when leaving UTRA RRC connected mode, when switched off as well as at selection of a new PLMN." 3 - Handling of CELL_INFO_LIST on transition to CELL_DCH. If the UE performs a state transition from CELL_DCH to CELL_FACH and then back to CELL_DCH, it is not clear whether the UE should start measuring on the CELL_INFO_LIST that was acquired from system information read in CELL_FACH or the same CELL_INFO_LIST as used when the UE was previously in CELL_DCH.
Summary of change: ⌘	1 - MEASUREMENT IDENTITY inconsistency It is proposed to remove the concerning text from 8.4.1.7.1 which now became obsolete. To maintain alignment with the specification prior the introduction of the inconsistency, the measurement information from SIB11/12 is only stored in MEASUREMENT IDENTITY if no intra-frequency measurement has been setup or modified through MEASUREMENT CONTROL. This is corrected in section 8.1.1.6.11 and 8.1.1.6.12 2 - Clearing of CELL_INFO_LIST It is proposed to move the concerning sentence outside the idle mode condition. 3 - Sections 8.4.1.7.1, 8.4.1.7.2 and 8.4.1.8.1 are corrected so it is clearer that the UE uses the CELL_INFO_LIST acquired from system information. **Isolated Impact Change Analysis.** Impacted functionality: Variable related measurement behaviour Note: The corrections have no foreseen impact on the T1 test specifications. Clarification: W.r.t. first issue, the inconsistency in the specification is removed. W.r.t the second issue, the situation as existed before CR1399, 1400 and 1401 were accepted is restored.
Consequences if not approved: ⌘	- The inconsistency w.r.t the MEASUREMENT IDENTITY variable remains. - The CELL_INFO_LIST variable would not be cleared in all cases considered necessary.

Clauses affected:	⌘	8.1.1.6.11; 8.1.1.6.12; 8.4.1.7.1, 8.4.1.7.2, 8.4.1.8.1			
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.

8.1.1.6.11 System Information Block type 11

The UE should store all relevant IEs included in this system information block. The UE shall:

1> if in idle mode:

2> clear the variable MEASUREMENT_IDENTITY;

~~2> clear the variable CELL_INFO_LIST.~~

1> if IE "FACH measurement occasion info" is included:

2> act as specified in subclause 8.6.7.

1> else:

2> may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell.

1> clear the variable CELL_INFO_LIST.

1> act upon the received IE "Intra-frequency cell info list"/"Inter-frequency cell info list"/"Inter-RAT cell info list" as described in subclause 8.6.7.3;

1> if in idle mode; or

1> if in connected mode and if System Information Block type 12 is not broadcast in the cell:

2> if no intra-frequency measurement ~~with the measurement identity indicated in the IE "Intra-frequency measurement system information"~~ was set up or modified through a MEASUREMENT CONTROL message:

3> if included, store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

1> if in connected mode and if System Information Block type 12 is not broadcast in the cell:

2> read the IE "Traffic volume measurement information";

2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:

3> update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.

1> if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT Cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

1> if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

2> use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

1> if in connected mode, and System Information Block type 12 is indicated as used in the cell:

2> read and act on information sent in System Information Block type 12 as indicated in subclause 8.1.1.6.12.

8.1.1.6.12 System Information Block type 12

If in connected mode, the UE should store all relevant IEs included in this system information block. The UE shall:

1> after reception of System Information Block type 11:

2> update the variable MEASUREMENT_IDENTITY with the measurement information in the received IEs unless specified otherwise.

1> if IE "FACH measurement occasion info" is included:

2> act as specified in subclause 8.6.7.

1> else:

2> may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell.

1> act upon the received IE "Intra-frequency cell info list"/"Inter-frequency cell info list"/"Inter-RAT cell info list" as described in subclause 8.6.7.3;

1> if any of the IEs "Intra-frequency measurement quantity", "Intra-frequency reporting quantity for RACH reporting", "Maximum number of reported cells on RACH" or "Reporting information for state CELL_DCH" are not included in the system information block:

2> read the corresponding IE(s) in system information block type 11 and use that information for the intra-frequency measurement.

1> if included in this system information block or in System Information Block type 11:

2> if no intra-frequency measurement in the variable MEASUREMENT_IDENTITY ~~with the measurement identity indicated in the IE "Intra-frequency measurement system information"~~ was set up or modified through a MEASUREMENT CONTROL message:

3> store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered in the variable MEASUREMENT_IDENTITY. The IE "Cells for measurement" is absent for this measurement. The IE "Measurement Validity" is absent for this measurement after a state transition to CELL_DCH;

1> if the IE "Traffic volume measurement system information" is not included in this system information block:

2> read the corresponding IE in System Information Block type 11.

1> if the IE "Traffic volume measurement system information" was received either in this system information block or in System Information Block type 11:

2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:

3> update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.

1> if in CELL_FACH state:

2> start or continue the traffic volume measurements stored in the variable MEASUREMENT_IDENTITY that are valid in CELL_FACH state.

1> if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list".

2> if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT cell info list":

3> use the default values specified for the IE "HCS neighbouring cell information" for that cell.

2> if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

3> for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

1> if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

2> use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

If in idle mode, the UE shall not use the values of the IEs in this system information block.

8.4.1.7 Measurements after transition from CELL_FACH to CELL_DCH state

The UE shall apply the following rules for different measurement types after transiting from CELL_FACH to CELL_DCH state:

8.4.1.7.1 Intra-frequency measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

~~1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;~~

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2~~1~~> resume the measurement reporting;

~~1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:~~

~~2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):~~

~~3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.~~

8.4.1.7.2 Inter-frequency measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

~~1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and~~

1> if inter-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2~~1~~> resume the measurement reporting.

8.4.1.8.1 Intra-frequency measurement

Upon transition from idle mode to CELL_DCH state, the UE shall:

~~1> begin or continue monitoring the list of cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);~~

~~1> if the "intra-frequency measurement reporting criteria" IE was included in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):~~

1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:

2> begin measurement reporting~~ according to the IE~~.

3GPP RAN- WG2 Meeting #31 **R2-022389**
Arlanda, Sweden, 19th – 23rd August 2002

CR-Form-v6.1

CHANGE REQUEST

⌘ **TS 25.331 CR 1618** ⌘ **rev 1** ⌘ Current version: **3.11.0** ⌘

⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction of secondary CCPCH selection and PRACH selection
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	14/08/2002
Category:	⌘	**F**
Release:	⌘	R99

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)

Reason for change: ⌘

The original version of this CR included the following changes:

8.5.19 Secondary CCPCH selection
The SCCPCH configuration contained in SIB 6 may be a delta as compared to SIB 5. This means that the SCCPCH configuration contained in SIB 6 may not include an SCCPCH carrying a PCH. It is obvious that in CELL_PCH and URA_PCH states the UE shall only consider the SCCPCH information in SIB 6 for performing SCCPCH selection if it includes an SCCPCH carrying a PCH. Since this is not clear from the current text, some clarification is added.

Revision 1 of this CR includes the following additional changes:

8.5.17 PRACH selection
Wrong range for rand function in Random access procedure: if the rand value is 1, Index of selected PRACH is out of range
Furthermore, the use of SIB 5 and 6 for RACH selection was not specified ambiguously, as was the case for the SCCPCH selection

Summary of change: ⌘

This CR includes the following changes:

8.5.19 Secondary CCPCH selection
Clarification is added that a UE in CELL_PCH and URA_PCH states shall only consider the SCCPCH information in SIB 6 for performing SCCPCH selection if it includes an SCCPCH carrying a PCH. A similar correction has been performed for CELL_FACH state.

8.5.17 PRACH selection
Correction of the rand function range in the chapter 8.5.17: $0 \leq rand < 1$
Furthermore, the RACH selection specification has been restructured in a similar manner as done for the SCCPCH selection

Impact analysis:

For 8.5.17:

Impacted functionality: UE behaviour for RACH selection

This change concerns a detail that is likely to be correctly implemented. UEs not complying with the CR do not work in this detail.

For 8.5.19:
Impacted functionality: Secondary CCPCH selection in CELL_PCH and URA_PCH states when SIB 6 is used but does not include a SCCPCH carrying PCH

Correction type: Clarification of a function where the specification is ambiguous. Does not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise

Interoperability:

- Isolated impact: the impact is isolated; only the corrected functionality is affected
- CR implemented only by UTRAN or only by the UE: If UTRAN applies SIB 6 but does not include a SCCPCH carrying PCH, the paging of a UE in CELL_PCH and URA_PCH may result not work

Consequences if not approved:	⌘	Unclarity regarding the use of SCCPCH information contained in SIB 5 & SIB 6 for SCCPCH selection remains If not corrected and function rand returns value 1, the UE will choose PRACH which is out of range

Clauses affected:	⌘	8.5.17, 8.5.19		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ 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.

8.5.17 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> if both RACH with 10 ms and 20 ms TTI are included in the list of candidate PRACH(s) ~~indicated in System Information Block type 5 or System Information Block type 6~~:

3> select the appropriate TTI based on power requirements, as specified in subclause 8.5.18.

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

2> select a ~~"~~PRACH ~~system information"~~ randomly from the list of candidate PRACH(s)~~ones listed in System Information Block type 5 or System Information Block type 6~~ as follows:

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

where K is equal to the number of ~~listed~~ candidate PRACH system informations ~~that carry an RACH with the above selected TTI~~, "rand" is a random number uniformly distributed in the range 0 ≤ rand <~~,...,~~ 1, and "floor" refers to rounding down to nearest integer. ~~PRACH system informations carrying RACHs with 10 and 20 ms TTI shall be counted separately.~~ These candidate PRACH system informations shall be indexed from 0 to K-1 ~~in the order of their occurrence in System Information Block type 5 or System Information Block type 6~~. 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> in Connected mode:~~

~~3> select the PRACH according to the following preference:~~

~~4> if System Information Block type 6 is defined and PRACH info is included:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 6.~~

~~4> if System Information Block type 6 is defined and no PRACH info is included:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 5.~~

~~4> if no System Information Block type 6 is defined:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 5.~~

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.

8.5.19 Secondary CCPCH selection

In UTRAN Connected mode, the UE shall select the Secondary CCPCH according to the following rules:

1> in Cell_DCH state:

2> select Secondary CCPCH according to subclause 8.6.6.4.

1> in Cell_FACH state:

2> if SIB 6 is defined and includes one or more SCCPCH that carry a FACH, (the UE shall) compile a list of candidate SCCPCH that consists of these SCCPCH, in the order of appearance in SIB 6

NOTE 1: An SCCPCH carries a FACH if the size of the “FACH/PCH information” list within the IE “Secondary CCPCH system information” exceeds 1 or if the size of this list equals 1 while IE “Secondary CCPCH system information” does not contain an IE “PICH info”

2> otherwise (the UE shall) compile a list of candidate SCCPCH that consists of the SCCPCH(s) included in SIB 5 that that carry a FACH, in the order of appearance in SIB 5

2> select an SCCPCH from the list of candidate SCCPCHs ~~listed in SIB 5 or SIB 6~~ based on U-RNTI as follows:

"Index of selected SCCPCH" = U-RNTI mod K,

where K is equal to the number of ~~listed~~ candidate SCCPCHs ~~that carry a FACH (i.e., SCCPCHs carrying PCH only shall not be counted). These SCCPCHs shall be indexed from 0 to K-1in the order of their occurrence in SIB 5 or SIB 6. "Index of selected SCCPCH" identifies the selected SCCPCH~~.

~~2> if SIB 6 is defined and SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 6.~~

~~2> if SIB 6 is defined and no SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

~~2> if no SIB 6 is defined:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

1> in Cell_PCH and URA_PCH states:

2> if SIB 6 is defined and includes one or more SCCPCH that carry a PCH, (the UE shall) compile a list of candidate SCCPCH that consists of these SCCPCH, in the order of appearance in SIB 6

NOTE 2: An SCCPCH carries a PCH if the IE “Secondary CCPCH system information” contains IE “PICH info”

2> otherwise (the UE shall) compile a list of candidate SCCPCH that consists of the SCCPCH(s) included in SIB 5 that that carry a PCH , in the order of appearance in SIB 5

2> select an SCCPCH from the list of candidate SCCPCHs ~~listed in SIB 5 or SIB 6~~ based on U-RNTI as follows:

"Index of selected SCCPCH" = U-RNTI mod K,

where K is equal to the number of ~~listed~~ candidate SCCPCHs ~~that carry a PCH (i.e., SCCPCHs carrying FACH only shall not be counted). These SCCPCHs shall be indexed in the order of their occurrence in system information from 0 to K-1, and "Index of selected SCCPCH" identifies the selected SCCPCH~~.

~~2> if SIB 6 is defined and SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 6.~~

~~2> if SIB 6 is defined and no SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

~~2> if no SIB 6 is defined:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

UE shall set CFN in relation to SFN of current cell according to subclause 8.5.15.

The UE shall support reception of all transport formats on all FACHs multiplexed on the selected S-CCPCH.

3GPP RAN- WG2 Meeting #31 **R2-022390**
Arlanda, Sweden, 19th – 23rd August 2002

CR-Form-v6.1

CHANGE REQUEST

⌘ **TS 25.331 CR 1619** ⌘ **rev 1** ⌘ Current version: **4.5.0** ⌘
⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction of secondary CCPCH selection and PRACH selection
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	14/08/2002
Category:	⌘	**A**
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)

Reason for change: ⌘ The original version of this CR included the following changes:

8.5.19 Secondary CCPCH selection
The SCCPCH configuration contained in SIB 6 may be a delta as compared to SIB 5. This means that the SCCPCH configuration contained in SIB 6 may not include an SCCPCH carrying a PCH. It is obvious that in CELL_PCH and URA_PCH states the UE shall only consider the SCCPCH information in SIB 6 for performing SCCPCH selection if it includes an SCCPCH carrying a PCH. Since this is not clear from the current text, some clarification is added.

Revision 1 of this CR includes the following additional changes:

8.5.17 PRACH selection
Wrong range for rand function in Random access procedure: if the rand value is 1, Index of selected PRACH is out of range
Furthermore, the use of SIB 5 and 6 for RACH selection was not specified ambiguously, as was the case for the SCCPCH selection

Summary of change: ⌘ This CR includes the following changes:

8.5.19 Secondary CCPCH selection
Clarification is added that a UE in CELL_PCH and URA_PCH states shall only consider the SCCPCH information in SIB 6 for performing SCCPCH selection if it includes an SCCPCH carrying a PCH. A similar correction has been performed for CELL_FACH state

8.5.17 PRACH selection
Correction of the rand function range in the chapter 8.5.17: $0 \leq rand < 1$
Furthermore, the RACH selection specification has been restructured in a similar

		manner as done for the SCCPCH selection
Consequences if not approved:	⌘	Unclarity regarding the use of SCCPCH information contained in SIB 5 & SIB 6 for SCCPCH selection remains If not corrected and function rand returns value 1, the UE will choose PRACH which is out of range

Clauses affected:	⌘	8.5.17, 8.5.19		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ 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/3G_Specs/CRs.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.

<Start of modified section>

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)~~indicated in System Information Block type 5 or System Information Block type 6~~:

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)~~indicated in System Information Block type 5 or System Information Block Type 6~~:

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 ~~system information"~~ randomly from the list of candidate PRACH(s)~~ones listed in System Information Block type 5 or System Information Block type 6~~ as follows:

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

where K is equal to the number of ~~listed~~ candidate PRACH system informations ~~that carry an RACH with the above selected TTI~~, "rand" is a random number uniformly distributed in the range 0,...,1, and "floor" refers to rounding down to nearest integer. ~~PRACH system informations carrying RACHs with 10 and 20 ms TTI shall be counted separately.~~ These candidate PRACH system informations shall be indexed from 0 to K-1 ~~in the order of their occurrence in System Information Block type 5 or System Information Block type 6~~. 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> in Connected mode:~~

~~3> select the PRACH according to the following preference:~~

~~4> if System Information Block type 6 is defined and PRACH info is included:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 6.~~

~~4> if System Information Block type 6 is defined and no PRACH info is included:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 5.~~

~~4> if no System Information Block type 6 is defined:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 5.~~

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.

8.5.19 Secondary CCPCH selection

In UTRAN Connected mode, the UE shall select the Secondary CCPCH according to the following rules:

1> in Cell_DCH state:

2> select Secondary CCPCH according to subclause 8.6.6.4.

1> in Cell_FACH state:

2> if SIB 6 is defined and includes one or more SCCPCH that carry a FACH, (the UE shall) compile a list of candidate SCCPCH that consists of these SCCPCH, in the order of appearance in SIB 6

NOTE 1: An SCCPCH carries a FACH if the size of the "FACH/PCH information" list within the IE "Secondary CCPCH system information" exceeds 1 or if the size of this list equals 1 while IE "Secondary CCPCH system information" does not contain an IE "PICH info"

2> otherwise (the UE shall) compile a list of candidate SCCPCH that consists of the SCCPCH(s) included in SIB 5 that that carry a FACH, in the order of appearance in SIB 5

2> select an SCCPCH from the list of candidate SCCPCHs ~~listed in SIB 5 or SIB 6~~ based on U-RNTI as follows:

"Index of selected SCCPCH" = U-RNTI mod K,

where K is equal to the number of ~~listed~~ candidate SCCPCHs ~~that carry a FACH (i.e., SCCPCHs carrying PCH only shall not be counted). These SCCPCHs shall be indexed from 0 to K-1in the order of their occurrence in SIB 5 or SIB 6. "Index of selected SCCPCH" identifies the selected SCCPCH~~.

~~2> if SIB 6 is defined and SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 6.~~

~~2> if SIB 6 is defined and no SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

~~2> if no SIB 6 is defined:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

1> in Cell_PCH and URA_PCH states:

2> if SIB 6 is defined and includes one or more SCCPCH that carry a PCH, (the UE shall) compile a list of candidate SCCPCH that consists of these SCCPCH, in the order of appearance in SIB 6

NOTE 2: An SCCPCH carries a PCH if the IE "Secondary CCPCH system information" contains IE "PICH info"

2> otherwise (the UE shall) compile a list of candidate SCCPCH that consists of the SCCPCH(s) included in SIB 5 that that carry a PCH , in the order of appearance in SIB 5

2> select an SCCPCH from the list of candidate SCCPCHs ~~listed in SIB 5 or SIB 6~~ based on U-RNTI as follows:

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~~2> if SIB 6 is defined and no SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

~~2> if no SIB 6 is defined:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

UE shall set CFN in relation to SFN of current cell according to subclause 8.5.15.

The UE shall support reception of all transport formats on all FACHs multiplexed on the selected S-CCPCH.

3GPP RAN- WG2 Meeting #31 **R2-022391**
Arlanda, Sweden, 19th – 23rd August 2002

CR-Form-v6.1

CHANGE REQUEST

⌘ **TS 25.331 CR 1620** ⌘ **rev 1** ⌘ Current version: **5.1.0** ⌘

⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction of secondary CCPCH selection and PRACH selection
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	14/08/2002
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),*
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REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘ The original version of this CR included the following changes:

8.5.19 Secondary CCPCH selection
The SCCPCH configuration contained in SIB 6 may be a delta as compared to SIB 5. This means that the SCCPCH configuration contained in SIB 6 may not include an SCCPCH carrying a PCH. It is obvious that in CELL_PCH and URA_PCH states the UE shall only consider the SCCPCH information in SIB 6 for performing SCCPCH selection if it includes an SCCPCH carrying a PCH. Since this is not clear from the current text, some clarification is added.

Revision 1 of this CR includes the following additional changes:

8.5.17 PRACH selection
Wrong range for rand function in Random access procedure: if the rand value is 1, Index of selected PRACH is out of range
Furthermore, the use of SIB 5 and 6 for RACH selection was not specified ambiguously, as was the case for the SCCPCH selection

Summary of change: ⌘ The original version of this CR included the following changes:

8.5.19 Secondary CCPCH selection
Clarification is added that a UE in CELL_PCH and URA_PCH states shall only consider the SCCPCH information in SIB 6 for performing SCCPCH selection if it includes an SCCPCH carrying a PCH. A similar correction has been performed for CELL_FACH state
Revision 1 of this CR includes the following additional changes:

Revision 1 of this CR includes the following additional changes:

8.5.17 PRACH selection

		Correction of the rand function range in the chapter 8.5.17: 0 ≤ rand < 1 Furthermore, the RACH selection specification has been restructured in a similar manner as done for the SCCPCH selection
Consequences if not approved:	⌘	Unclarity regarding the use of SCCPCH information contained in SIB 5 & SIB 6 for SCCPCH selection remains If not corrected and function rand returns value 1, the UE will choose PRACH which is out of range

Clauses affected:	⌘	8.5.17, 8.5.19		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ 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.

<Start of modified section>

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)~~indicated in System Information Block type 5 or System Information Block type 6~~:

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)~~indicated in System Information Block type 5 or System Information Block Type 6~~:

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 ~~system information"~~ randomly from the list of candidate PRACH(s) ~~ones listed in System Information Block type 5 or System Information Block type 6~~ as follows:

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

where K is equal to the number of ~~listed~~ candidate PRACH system informations ~~that carry an RACH with the above selected TTI~~, "rand" is a random number uniformly distributed in the range 0,...,1, and "floor" refers to rounding down to nearest integer. ~~PRACH system informations carrying RACHs with 10 and 20 ms TTI shall be counted separately.~~ These candidate PRACH system informations shall be indexed from 0 to K-1 ~~in the order of their occurrence in System Information Block type 5 or System Information Block type 6~~. 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> in Connected mode:~~

~~3> select the PRACH according to the following preference:~~

~~4> if System Information Block type 6 is defined and PRACH info is included:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 6.~~

~~4> if System Information Block type 6 is defined and no PRACH info is included:~~

~~5> select PRACH from the PRACHs listed in System Information Block type 5.~~

~~4> if no System Information Block type 6 is defined:~~

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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 include

8.5.19 Secondary CCPCH selection

In UTRAN Connected mode, the UE shall select the Secondary CCPCH according to the following rules:

1> in Cell_DCH state:

2> select Secondary CCPCH according to subclause 8.6.6.4.

1> in Cell_FACH state:

2> if SIB 6 is defined and includes one or more SCCPCH that carry a FACH, (the UE shall) compile a list of candidate SCCPCH that consists of these SCCPCH, in the order of appearance in SIB 6

NOTE 1: An SCCPCH carries a FACH if the size of the "FACH/PCH information" list within the IE "Secondary CCPCH system information" exceeds 1 or if the size of this list equals 1 while IE "Secondary CCPCH system information" does not contain an IE "PICH info"

2> otherwise (the UE shall) compile a list of candidate SCCPCH that consists of the SCCPCH(s) included in SIB 5 that that carry a FACH, in the order of appearance in SIB 5

2> select an SCCPCH from the list of candidate SCCPCHs ~~listed in SIB 5 or SIB 6~~ based on U-RNTI as follows:

"Index of selected SCCPCH" = U-RNTI mod K,

where K is equal to the number of ~~listed~~ candidate SCCPCHs ~~that carry a FACH (i.e., SCCPCHs carrying PCH only shall not be counted). These SCCPCHs shall be indexed from 0 to K-1in the order of their occurrence in SIB 5 or SIB 6. "Index of selected SCCPCH" identifies the selected SCCPCH~~.

~~2> if SIB 6 is defined and SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 6.~~

~~2> if SIB 6 is defined and no SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

~~2> if no SIB 6 is defined:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

1> in Cell_PCH and URA_PCH states:

2> if SIB 6 is defined and includes one or more SCCPCH that carry a PCH, (the UE shall) compile a list of candidate SCCPCH that consists of these SCCPCH, in the order of appearance in SIB 6

NOTE 2: An SCCPCH carries a PCH if the IE "Secondary CCPCH system information" contains IE "PICH info"

2> otherwise (the UE shall) compile a list of candidate SCCPCH that consists of the SCCPCH(s) included in SIB 5 that that carry a PCH , in the order of appearance in SIB 5

2> select an SCCPCH from the list of candidate SCCPCHs ~~listed in SIB 5 or SIB 6~~ based on U-RNTI as follows:

"Index of selected SCCPCH" = U-RNTI mod K,

where K is equal to the number of ~~listed~~ candidate SCCPCHs ~~that carry a PCH (i.e., SCCPCHs carrying FACH only shall not be counted). These SCCPCHs shall be indexed in the order of their occurrence in system information from 0 to K-1, and "Index of selected SCCPCH" identifies the selected SCCPCH~~.

~~2> if SIB 6 is defined and SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 6.~~

~~2> if SIB 6 is defined and no SCCPCH info is included:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

~~2> if no SIB 6 is defined:~~

~~3> select SCCPCH from the SCCPCHs listed in SIB 5.~~

UE shall set CFN in relation to SFN of current cell according to subclause 8.5.15.

The UE shall support reception of all transport formats on all FACHs multiplexed on the selected S-CCPCH.