TSG-RAN Meeting #8 *RP-000216*
Düsseldorf, Germany, 21 – 23 June 2000

Title: **Agreed CRs to TS 25.303**

Source: **TSG-RAN WG2**

Agenda item: **5.2.3**

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Version	Versio
R2-000762	agreed	25.303	029		Corrections to L2 link management and radio link setup in interlayer message sequence charts	F	3.3.0	3.4.0
R2-000763	agreed	25.303	030		Alignment of FDD downlink shared channel descriptions with 25.331	F	3.3.0	3.4.0
R2-000971	agreed	25.303	031	1	End of CPCH transmission	B	3.3.0	3.4.0
R2-001086	agreed	25.303	033		Out-of-synch corrections	F	3.3.0	3.4.0
R2-001143	agreed	25.303	034		Traffic Volume Monitoring	D	3.3.0	3.4.0

3GPP RAN WG2 Meeting #12
Seoul, Korea, 10-14 Apr 2000

***Document* R2-000762**
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25.303	CR	029	Current Version:	3.3.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: TSG-RAN WG2 **Date:** 10.4.2000

Subject: Corrections to L2 link management and radio link setup in interlayer message sequence charts

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

In figure 1 (RRC Connection Setup) there are two corrections, which have not been done to all other figures:

- L2 establishment / release is local, in earlier figures it has been drawn as spanning between UE and RNC and thus appearing synchronous. Figures 3, 5, 6, 7, 8, 10 are affected.
- TrCH-Config and RL-Setup primitives are sent across Iub in one message, thus it may appear confusing when the confirmation for one is received before even sending the other. Figures 5, 6 and 11 are affected.

Clauses affected: 6.1.3.1, 6.2.1.1.1, 6.2.1.1.2, 6.2.1.1.3, 6.2.1.1.4, 6.2.1.2.1, 6.2.1.3.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

<--------- double-click here for help and instructions on how to create a CR.

6.1.3.1 RRC Connection Release from Dedicated Physical Channel

Figure 3: RRC Connection Release from Dedicated Physical Channel

The RRC layer entity in the network issues an RRC CONNECTION RELEASE message using unacknowledged mode on the DCCH. Upon reception of this message the UE-RRC sends an RRC Signalling Connection Release Indication primitive to NAS The UE replies with an RRC CONNECTION RELEASE COMPLETE message, which is sent in unacknowledged-mode on the dedicated channel. To improve the reliability of the message, quick repeat on RRC-level can be used. The UE will then proceed to release RLC(s), MAC and the radio link(s) after which the UE RRC enters Idle Mode.

The primary method to detect the release of the signalling link in the NW is the RRC CONNECTION RELEASE COMPLETE-message from the UE. Should the message be lost despite the use of quick repeat, the release of the signalling link is detected by the out-of-sync primitive from either Node-B L1 or RNC-L1 to RNC RRC. After receiving this primitive, the RNC-RRC layer releases L2 and L1 resources on the network side and enters the idle mode.

6.2.1.1.1 Radio Bearer Establishment with Dedicated Physical Channel Activation

The procedure in figure 5 is applied when a new physical channel needs to be created for the radio bearer. A Radio Bearer Establishment is initiated when an RB Establish Request primitive is received from the DC-SAP on the network side of the RRC layer. This primitive contains a bearer reference and QoS parameters. Based on these QoS parameters, L1 and L2 parameters are chosen by the RRC entity on the network side.

The physical layer processing on the network side is started with the CPHY-RL-Setup request primitive issued to all applicable Node B:s. If any of the intended recipients is / are unable to provide the service, it will be indicated in the confirmation primitive(s).After setting up L1 including the start of tx / rx in Node B, the NW-RRC sends a RADIO BEARER SETUP message to its peer entity (acknowledged or unacknowledged transmission optional for the NW). This message contains L1, MAC and RLC parameters. After receiving the message, the UE-RRC configures L1 and MAC.

When L1 synchronisation is indicated, the UE sends a RADIO BEARER SETUP COMPLETE message in acknowledged-mode back to the network. The NW-RRC configures MAC and RLC on the network side.

After receiving the confirmation for the RADIO BEARER SETUP COMPLETE, the UE-RRC creates a new RLC entity associated with the new radio bearer. The applicable method of RLC establishment may depend on RLC transfer mode. The RLC connection can be either implicitly established, or explicit signalling can be applied.

Finally, an RB Establish Indication primitive is sent by UE-RRC and an RB Establish Confirmation primitive is issued by the RNC-RRC.

Figure 5: Radio Bearer Establishment with Dedicated Physical Channel Activation

6.2.1.1.2 Radio Bearer Establishment with Unsynchronised Dedicated Physical Channel Modification

Figure 6: Radio Bearer Establishment with Unsynchronised Dedicated Physical Channel Modification

The establishment of a radio bearer, when unsynchronised physical channel modification is applicable, is shown in figure 6. If the old and new physical layer configurations are compatible in the sense that they can coexist in the peer entities, an unsynchronised procedure for radio bearer establishment can be applied. In this case no fixed activation time is required.

The modifications on the physical layer in the network are done in response to an CPHY_ modify request. Failure to comply is indicated in the confirmation primitive. In an error-free case the RADIO BEARER SETUP message on L3 is transmitted. Acknowledged or unacknowledged transmission is a network option. Configuration changes on the UE-side proceed after this message has been received. Reception of the RADIO BEARER SETUP COMPLETE message triggers configuration changes in MAC and RLC in the network.

6.2.1.1.3 Radio Bearer Establishment with Synchronised Dedicated Physical Channel Modification

In this case the CPHY-RL-Modify request doesn't immediately cause any changes in the physical layer configuration, it only checks the availability of the requested configuration and makes a "reservation". After the confirmations have been received from all applicable Node B:s, the RRC chooses the appropriate "activation time" when the new configuration can be activated. This information is signalled to MAC, RLC and also the physical layer (CPHY_Commit request primitive).

After the RADIO BEARER SETUP message (acknowledged transmission on L2 required) between peer L3 entities the setup proceeds on the UE-side. The new configuration is now available both on the UE and the network side, and at the scheduled activation time the new configuration is assumed by all applicable peer entities.

In case the old and the new physical channel configurations are incompatible with each other (due to different DPCCH format, TFCI patterns or similar differences), the modification on physical layer and L2 require exact synchronisation between the UE and the NW, as shown in figure 7.

Figure 7: Radio Bearer Establishment with Synchronised Dedicated Physical Channel Modification

6.2.1.1.4 Radio Bearer Establishment without Dedicated Physical Channel

Figure 8: Radio Bearer Establishment without Dedicated Physical Channel

For some radio bearers dedicated radio resources are not permanently associated. Therefore the setting up of the physical resource is separate from the actual radio bearer setup, which involves only RLC and MAC.

MAC can be initially configured to operate either on existing dedicated transport and physical channels or on common channels.

6.2.1.1.5 Radio Bearer Establishment with CPCH Channel Allocation

When the RNC determines the need to assign CPCH UL resources to a UE, the RNC sends an RB Setup message to the UE. Since the CPCH physical parameters are broadcast in the BCCH, the RB Setup message does not include a DPCH part. The Transport Channel information includes the CPCH set (CPCH Set ID#) to which the UE is to be assigned. MAC entities are configured: MAC-D and MAC-C/SH in the UE, MAC-C/SH in the CRNC, and MAC-D in the SRNC. Node B MAC controls access to the individual CPCH channels in the CPCH set. However, Node B MAC does not require configuration, since it was configured to control the CPCH set when the CPCH set was initially allocated to that cell. The Node B MAC can function independently of the number of UEs assigned to the CPCH set. Once the RB setup is complete, the UE may access the CPCH when the logical channel for this RB next presents data to send in the uplink direction.

The message flow diagram for RB establishment for CPCH is similar to the RB establishment without Dedicated Physical Channel (see subclause 6.2.1.1.4).

Figure 9: Radio Bearer Establishment with CPCH Channel Allocation

6.2.1.2 Radio Bearer Release

Similar as for Radio Bearer Establishment procedure, the Radio Bearer Release can include physical channel modification or physical channel deactivation depending on the differences between new and old QoS parameters. These can also be both synchronised and unsynchronised.

The Radio Bearer Release procedure is initiated when the release is requested from the RRC layer on the NW side. This request contains a bearer reference, and on retrieval a RB Release Confirm primitive is immediately returned to the Non-Access Stratum.

New L1 and L2 parameters may be chosen for remaining radio bearers if any. A RADIO BEARER RELEASE message is sent from the RRC layer in the network to its peer entity in the UE. This message includes possible new L1, MAC and RLC parameters for remaining radio bearers and indentification of the radio bearer to be released (note). An RB Release Indication is sent by the UE-RRC.

NOTE: In synchronised case a specific activation time would be needed for the change of L1 and L2 configuration to avoid data loss.

The RRC on the UE side configures L1 and MAC, and releases the RLC entity associated to the released radio bearer. After receiving a RADIO BEARER RELEASE COMPLETE message from the UE, the NW-RRC does a similar reconfiguration also on the network side.

6.2.1.2.1 Radio Bearer Release with Unsynchronised Dedicated Physical Channel Modification

The example in figure 10 shows the case where release can be executed as an unsychronised physical channel modification, i.e. without physical channel deactivation.

After notifying upper layers of the release, a RADIO BEARER RELEASE message (acknowledged or unacknowledged transmission optional for the network) is sent to the UE triggering the reconfiguration in the UE. When this is finalised the UE sends a RADIO BEARER RELEASE COMPLETE message to the network, after which the reconfiguration is executed in the network.

Figure 10: Radio Bearer Release with Unsynchronised Dedicated Physical Channel Modification

6.2.1.3 Radio Bearer Reconfiguration

For Radio Bearer Reconfiguration, both synchronised and unsynchronised procedures are applicable. The unsynchronised procedure is shown as an example.

6.2.1.3.1 Unsynchronised Radio Bearer Reconfiguration

Because of the unsynchronised nature of the procedure in figure 11, there is no activation time and no separate commit request for the Node B physical layer is needed. The possibility for executing the requested modification will be reported in the confirmation primitives from the physical layer. If the modification involves the release of an old configuration, the release can be postponed to the end of the procedure. After the reception of a RADIO BEARER RECONFIGURATION from the RNC-RRC (acknowledged or unacknowledged transmission optional for the network), the UE executes the modifications on L1 and L2.

Upon reception of a RADIO BEARER RECONFIGURATION COMPLETE message from the UE-RRC, the NW-RRC executes the modifications on L1 and L2. Finally the old configuration, if any, is released from Node B-L1.

Figure 11: Unsynchronised Radio Bearer Reconfiguration

3GPP TSG RAN WG2 Meeting #12
Seoul, Korea, 10 April - 13 April 2000

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25.303	CR	030	Current Version:	3.3.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)*	(U)SIM		ME	X	UTRAN / Radio	X	Core Network	

Source: TSG-RAN WG2 **Date:** 10 April 2000

Subject: Alignment of FDD downlink shared channel descriptions with 25.331

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: To aligne FDD downlink shared channel descriptions with TS 25.331.

Clauses affected: 6.3.1, 6.3.2

Other specs affected:

Other 3G core specifications		→ List of CRs:	
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

<--------- double-click here for help and instructions on how to create a CR.

6.3.1 Acknowledged-mode data transmission on DSCH using hard split of TFCI-word

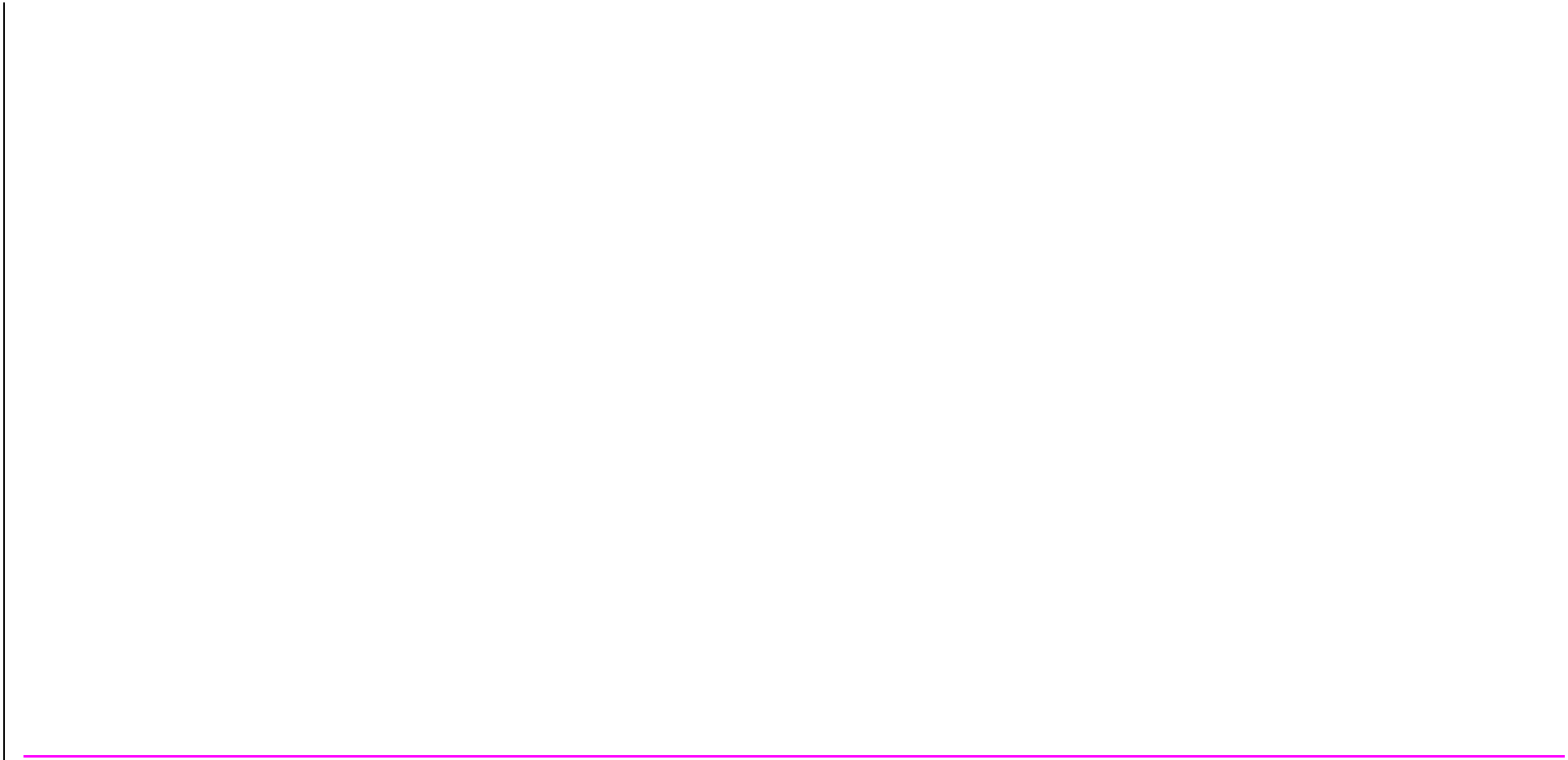

Figure 20: Example of acknowledged-mode data transmission on DSCH

Figure 20 shows an example of acknowledged-mode data transmission on DSCH associated with a DCH. First RLC in SRNC requests data transmission locally from MAC-d. MAC-d routes the request either locally or across the Iur to MAC-c/sh in CRNC, where DSCH transmission scheduling takes place. MAC-c/sh determines the TFI for the data ('TFI2') and requests data transmission across Iub from the physical layer in Node B. At the same time data for an associated dedicated channel may arrive in Node B.

All TFI:s for DCH:s (e.g. 'TFI1')) are translated into TFCI(field1). TFCI(field2) carries corresponding information~~TFI~~ for the DSCH~~, and~~ TFCI(field1)~~TFI2 for the DCH~~and TFCI(field2) are combined in the physical layer using 'hard' split of the TFCI-word and transmitted on the DPCCH (dedicated physical control channel) of the associated DPCH (dedicated physical channel). The DSCH data is transmitted separately on the PDSCH (physical downlink shared channel). TFCI(field2)~~TFI~~ is used to decode DSCH data, which is then forwarded through MAC-c/sh and MAC-d to the receiving RLC. An acknowledgement is eventually sent by the UE-RLC mapped to a DCH, unless the DCH is released before the acknowledgement.

6.3.2 Acknowledged-mode data transmission on DSCH ~~associated to a DCH~~ using logical split of~~one~~ TFCI-word

NOTE: For release-99 this example is only valid in the case where SRNC = CRNC.

Figure 21 shows an example of acknowledged-mode data transmission on DSCH. First RLC in SRNC requests data transmission from MAC-d. MAC-d passes the data on to MAC-c/sh, which schedules the DSCH transmission and determines the TFI2 for the data. ~~The~~ TFCI(field2)~~TFI~~ and CFN (connection frame number) for transmission are given back to MAC-d.

MAC-c/sh ~~selects the TFI and~~ transmits the ~~data for~~ DSCH data while MAC-d transmits ~~the~~ all TFI:s synchronised with the transmission of any DCH data and TFI:s intended for transmission in the same frame. TFCI(field2)~~TFI~~ for the DSCH and TFCI(field1)~~TFI2~~ for the DCH are combined into the same TFCI on the physical layer using 'logical' split of TFCI-word and transmitted on the DPCCH (dedicated physical control channel) of the associated DPCH (dedicated physical channel). The DSCH data is transmitted separately on the PDSCH (physical downlink shared channel). TFCI(field2)~~TFI~~ is used to decode DSCH data, which is then forwarded through MAC-c/sh and MAC-d to the receiving RLC. An acknowledgement is eventually sent by the UE-RLC mapped to a DCH, unless the DCH is released before the acknowledgement.

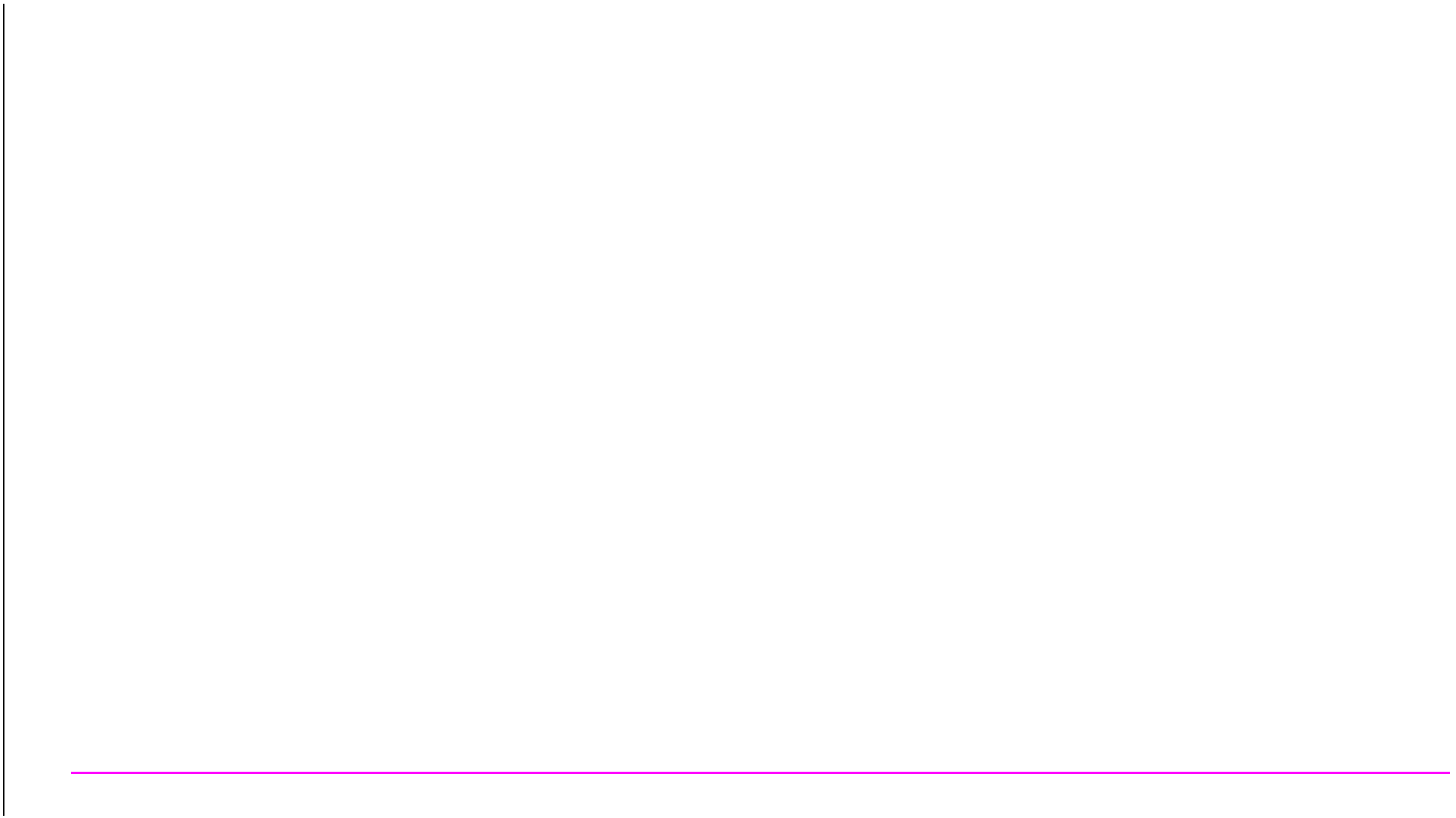

Figure 21: Example of acknowledged-mode data transmission on DSCH

3GPP TSG-RAN WG2 Meeting #13
Oahu, HI, USA, 22 - 26 May 2000

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25.303	CR	031r1	Current Version:	3.3.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from:* ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: TSG-RAN WG2 **Date:** 13 April, 2000

Subject: End of CPCH transmission

Work item:

Category: *(only one category Shall be marked With an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature	X		Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: There was agreement that EOT procedures should be adopted for CPCH as part of release 99 (R2_000890). This CR makes the appropriate changes to 25.303 to reflect that agreement.

Clauses affected: 6.3.3

Other specs Affected:

Other 3G core specifications		→ List of CRs:
Other GSM core specifications		→ List of CRs:
MS test specifications		→ List of CRs:
BSS test specifications		→ List of CRs:
O&M specifications		→ List of CRs:

Other comments:

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6.3.3 Data transmission on CPCH

Figure 22: Example of data transmission on CPCH (page 1 of 2)

~~Figure 23: Example of data transmission on CPCH (page 2 of 2)~~

Figure 23: Example of data transmission on CPCH (page 2 of 2)

Figure 22 shows an example of data transmission on CPCH. It is assumed that RLC acknowledged or unacknowledged transmission modes are applied for all logical channels mapped to CPCH.

CPCH transmission is applied in the Connected mode RRC state CELL_FACH with CPCH resources assigned to the UE. The UE needs to be configured for CPCH transmission via a respective RRC procedure (e.g. with RADIO BEARER SETUP or TRANSPORT CHANNEL RECONFIGURATION messages).

Upon reception of a data transmission request from RLC, MAC first requests CPCH channel status information from the physical layer. It is assumed that CPCH channel status information is broadcast on the CSICH physical channel using the same DL channelisation code as AP-AICH. The status information provides an indication of the maximum available data rate on PCPCH resources when Channel Assignment (CA) is active. When Channel Assignment is not active, then UE Channel Selection is employed. In this case the status information provides indication of the availability of each defined PCPCH. In either case, the channel status information is converted into a set of transport formats that are allowed to be employed at that given time. Whether channel assignment is active or not shall be indicated via System Information message. Current assumption is that the conversion of CPCH status information into Transport Formats is a L1 internal function.

Based on the permitted transport formats and the data available for transmission, MAC selects a desired transport format for CPCH access request. The MAC CPCH transmission control procedure is started by performing the persistency check based on persistence value received from RRC. When persistence check is passed, the physical CPCH transmission procedure is initiated by sending of a PHY-Access-REQ primitive. The PCPCH transmission procedure starts with an access preamble power ramping cycle. MAC then waits for status indication from L1 via PHY-Status-IND primitive. When acquisition of the access preamble is indicated on AP-AICH the CD preamble is sent on PCPCH. Reception of the CD preamble in Node B is indicated on CD-ICH to the UE. If Channel Assignment is active, channel assignment information is simultaneously transmitted on CD/CA-ICH. Layer 1 provides status indication to MAC indicating the CD or CD/CA information. The CA information defines in the UE on L1 the PCPCH to use for the power control preamble and the message part. Then MAC builds the CPCH transport block set to be transmitted via PHY-Data-REQ with the appropriate Transport Format that may differ from the requested transport format.

After the 0 or 8 slot period for the power control preamble, the first Transport Block Set (first TTI) of the message is transmitted.

While the first transport block is being sent, Node B layer 1 sends the start of message indicator whereby upon the reception of this start of message indicator UE can know if it uses correct CPCH channel or not. If UE does not receive the start of message indicator within certain period, it stops its message transmission immediately. Otherwise, UE continues the transmission.

Data transmission on CPCH is continued until all available data has been sent or until the maximum frame length [NF_max] is reached. If the UE has no more data to send prior to NF_max, the UE can notify the UTRAN that no more frames will be transmitted prior to the maximum frame length [NF_max] on the CPCH by using End of Transmission indication. The acknowledgements from RLC entities in SRNC are routed by the NW MAC to the UE RLC entities using the FACH DL transport channel.

In figure 22, the events between points A and B define the CPCH transmission procedure for the first TTI. In figure 23, events from point C to D describe the CPCH transmission procedure for each subsequent TTI. In figure 23, the events from point E to F describes the stop procedure of CPCH transmission when the UE has no more data to send prior to the maximum frame length [NF_max]. In this case a stop of CPCH transmission can take place for the release of CPCH transmission prior to NF_max. The stop of CPCH transmission is indicated by the PHY-DATA-REQ primitive indicating the 'end of transmission' event by setting zero sized Transport Block as indicated by TFI.

On request from RRC at the network side, for example, for reacting on temporary overload conditions, an emergency stop of CPCH transmission can take place. The emergency stop is indicated by the PHY-STATUS-IND primitive.

Note also that in the case of transmit power restrictions that are also indicated via PHY-STATUS-IND primitive, restrictions on Transport Format selections may apply at any time during CPCH transmission.

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Oahu, HI, USA, 22-26 May 2000

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25.303	CR	033	Current Version:	3.3.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG-RAN #8	for approval	X	strategic		(for SMG use only)
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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: TSG-RAN WG2 **Date:** 18.5.2000

Subject: Out-of-synch corrections

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	[X]	**Release:**	Phase 2	[ ]
A	Corresponds to a correction in an earlier release	[ ]		Release 96	[ ]
B	Addition of feature	[ ]		Release 97	[ ]
C	Functional modification of feature	[ ]		Release 98	[ ]
D	Editorial modification	[ ]		Release 99	[X]
				Release 00	[ ]

Reason for change: Detection of lost uplink transmission (out-of-sync) has been unfinalized within RAN. As the important conclusions between RAN WG1 and RAN WG3 have been made, TS 25.303 is proposed to be aligned to these decisions.

Clauses affected: 6.2.3.1, 6.2.3.3

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

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6.2.3.1 UE-Originated DCH Activation

Figure 14 illustrates an example of a procedure for a switch from common channels (CELL_FACH) to dedicated (CELL_DCH) channels.

In the UE the traffic volume measurement function decides to send a MEASUREMENT REPORT message to the network. In the network this measurement report could trigger numerous different actions. For example the network could do a change of transport format set, channel type switching or, if the system traffic is high, no action at all. In this case a switch from CELL_FACH to CELL_DCH is initiated.

Whether the report should be sent with acknowledged or unacknowledged data transfer is configured by the network.

First, the modifications on L1 are requested and confirmed on the network side with CPHY-RL-Setup primitives.

The RRC layer on the network side sends a PHYSICAL CHANNEL RECONFIGURATION message to its peer entity in the UE (acknowledged or unacknowledged transmission optional to the network). This message is sent on DCCH mapped to FACH. The message includes information about the new physical channel, such as codes and the period of time for which the DCH is activated (note).

NOTE: This message does not include new transport formats. If a change of these is required due to the change of transport channel, this is done with the separate procedure Transport Channel Reconfiguration. This procedure only handles the change of transport channel.

When the UE has detected synchronisation on the new dedicated channel L2 is configured on the UE side and a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message can be sent on DCCH mapped on DCH to RRC in the network. Triggered by either the NW CPHY_sync_ind or the L3 complete message, the RNC-L1 and L2 configuration changes are executed in the NW.

When applying the FAUSCH, the "DCCH: RACH: MEASUREMENT REPORT" is replaced by a "DCCH: FAUSCH: DCH REQUEST" message that is transmitted on the FAUSCH in unacknowledged mode. In this case rather than giving a measurement report for the NW to process, the FAUSCH indicates a request for a DCH of predefined capacity.

Figure 14: UE-Originated DCH Activation

6.2.3.3 UE-terminated DCH Release

Figure 16 illustrates an example of a procedure for a switch from dedicated (CELL_DCH) to common (CELL_FACH) channels. All DCHs used by a UE are released and all dedicated logical channels are transferred to CELL_FACH instead. Triggering of this procedure could for example be an inactivity timer.

A switch from DCH to common channels is decided and a PHYSICAL CHANNEL RECONFIGURATION message is sent (acknowledged or unacknowledged data transfer is a network option) from the RRC layer in the network to the UE. This message is sent on DCCH mapped on DCH.

NOTE 1: This message does not include new transport formats. If a change of these is required due to the change of transport channel, this is done with the separate procedure Transport Channel Reconfiguration. This procedure only handles the change of transport channel.

~~NOTE 2: If~~ If the loss of L1 sync is used to detect in the NW that the UE has released the DCH:s, as is one possibility in the figure, then there may be a need to configure the Node B-L1 to a short timeout for detecting loss of sync. This is presented by the CPHY ~~out~~Out ~~of~~ ~~sync~~Sync ~~configure~~ Config primitives in the figure. ~~TSG-RAN WG2 is seeking guidance from TSG-RAN WG1 relating to the time required for reliable out-of-sync detection.~~

After reception the UE reconfigures L1 and L2 to release old DCH resources. The PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the network is here sent on DCCH mapped on RACH (message acknowledgement on FACH). This message triggers a normal release of L1 and L2 resources in the network associated with the dedicated channel. ~~If the L3 COMPLETE message doesn't exist, the CPHY-Out-Of-Sync-IND from the physical layer must be applied.~~

NOTE ~~3~~2: When a Switch to CELL_FACH is done it is important to free the old code as fast as possible so that it can be reused. Therefore instead of waiting for the Physical Channel Rreconfiguration Complete message the network can reconfigure L1 and L2 when the acknowledged data confirmation arrives and the network is sure that the UE has received the Physical Channel Reconfiguration message. To be even more certain that the UE has released the old DCH resources the network can wait until after the Out of sync Indication from L1.
These steps including a timer starting when the Physical Channel Reconfiguration is sent, gives the network four different indications that the released DCH is really released, and that resources can be reused.

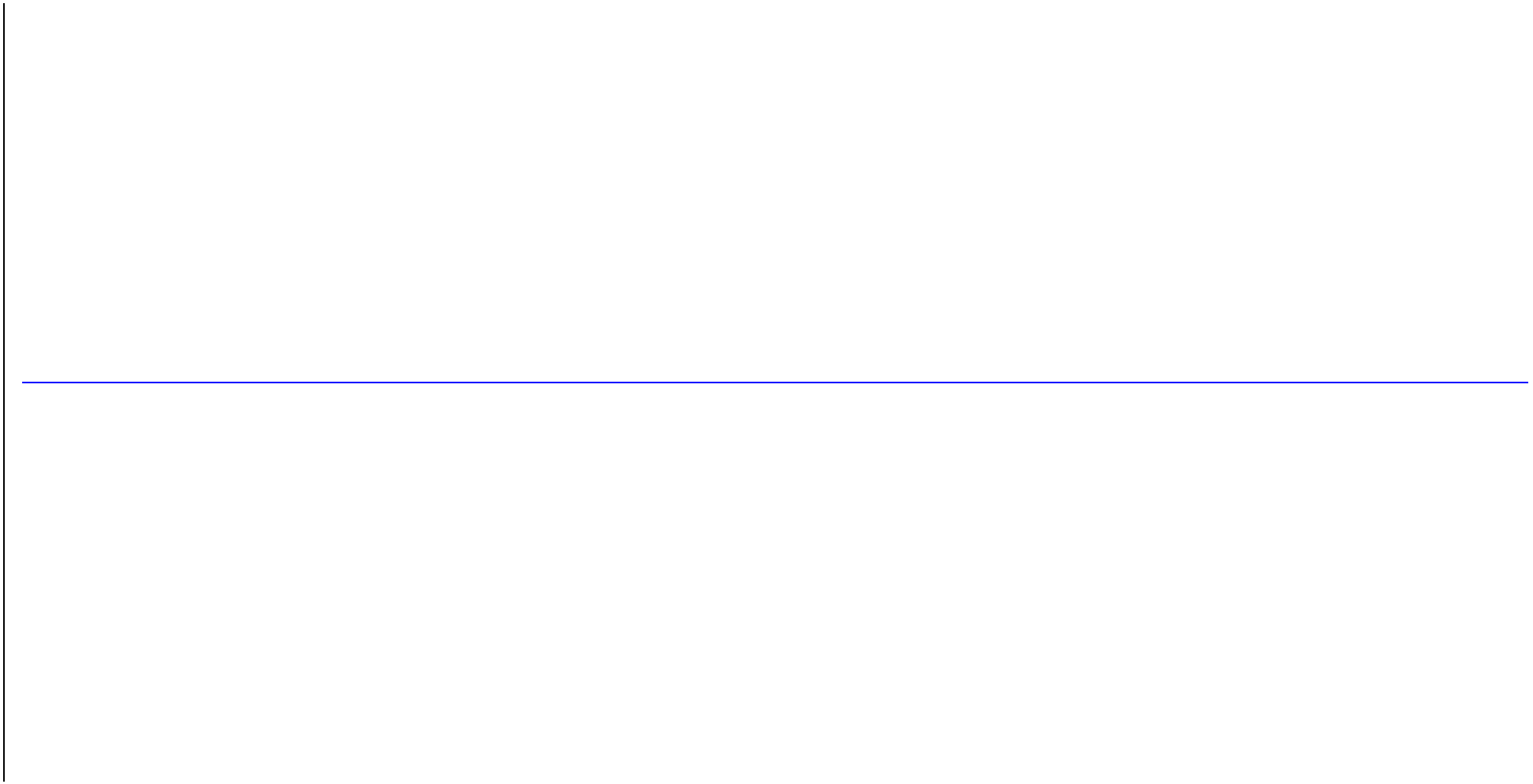

Figure 16: UE-terminated DCH Release

3GPP RAN WG2 #13
Hawaii, USA, May 22th – May 26th, 2000

Document R2-001143
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.303	CR	034	Current Version:	3.3.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG-RAN #8	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)*	(U)SIM		ME		UTRAN / Radio	X	Core Network	

Source: TSG-RAN WG2 **Date:** May 16th 2000

Subject: Traffic volume monitoring

Work item:

Category: *(only one category Shall be marked With an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification	X		Release 99	X
				Release 00	

Reason for change: This document proposes editorial changes to 25.303

Clauses affected: 7

Other specs Affected:

Other 3G core specifications		→ List of CRs:	
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

<--------- double-click here for help and instructions on how to create a CR.

7 Traffic volume monitoring

An algorithm will be defined for the UE to trigger a message to the NW based on transmitter buffer status.

Figure 42 illustrates the example of message sequence of traffic volume monitoring procedure. RRC in UE gets the parameters necessary for traffic volume measurement from Measurement Control message or System information message sent by RRC in UTRAN. RRC in UE passes the MAC the parameters for traffic volume measurement with the CMAC-Measurement-REQ. Meanwhile, RLC passes the data to MAC with buffer status. There are two ways MAC indicates the traffic volume measurement report to RRC, periodic and event-triggered. If it is periodic report, the MAC reports the measurement result to RRC periodically. If it is event-triggered, MAC in UE reports the measurement result to RRC when the result is beyond the ~~speficied~~specified threshold value. After that, based on the measurement report from MAC and reporting criteria received from UTRAN, RRC makes a decision whether it should send Measurement Report Message to UTRAN. When RRC in UTRAN receives the Measurement Report Message, it takes a proper action based on the measurement report from UE. It can be bearer reconfiguration, transport channel reconfiguration, physical channel reconfiguration or transport channel combination control procedure. The report mode, periodic and event-triggered, can be used exclusively, or simultaneously as shown in Figure 1.

Figure 42: Traffic Volume Measurement Report Procedure