3GPP TSG CN Plenary
Meeting #11, Palm Springs, U.S.A
14th - 16th March 2001

Tdoc NP-010205
[rev from Tdoc NP-010157]

Source: **TSG CN WG 1**

Title: **CRs to R99 on Work Item TEI**

Agenda item: **7.6**

Document for: **APPROVAL**

Introduction:

This document contains **8** CRs on **R99** Work Item **"TEI"**, that have been agreed by **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting **#11** for approval.

Tdoc	Title	Spec	CR#	Rev	CAT	Rel	C_Ver
N1-010334	To remove the use of GSM as the default access technology in PLMN search.	23.122	017		F	R99	3.5.0
N1-010447	Deletion of cause 'unsynchronousPDP' in RABMAS-SAP	24.007	035		F	R99	3.6.0
N1-010445	unsynchronised PDP contexts - MS less (2)	24.008	343	4	F	R99	3.6.0
N1-010446	unsynchronised PDP contexts - MS less (2)	24.008	344	4	A	Rel-4	4.1.1
N1-010423	Correction related to Cause of no CLI	24.008	351	3	F	R99	3.6.0
N1-010424	Correction related to Cause of no CLI	24.008	365	2	A	Rel-4	4.1.1
N1-010468	MS behaviour for "RB Release followed by RB setup"	24.008	373	1	F	R99	3.6.0
N1-010469	MS behaviour for "RB Release followed by RB setup"	24.008	385	1	A	Rel-4	4.1.1

3GPP TSG-CN1 Meeting #16
26 Feb. to 01 March 2001, Sophia France.

Tdoc N1-010334

CR-Form-v3

CHANGE REQUEST

⌘ **23.122** **CR** **017** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

*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:	⌘	To remove the use of GSM as the default access technology in PLMN search.
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	20/2/01
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(essential 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:	⌘	This CR is to remove the requirement that multi-band Terminals which are unable to find the RPLMN access technology field should start their search for a network using GSM technology. This procedure would not be appropriate in either Korea or Japan therefore the terminal's action in this situation should be manufacturer specific. The need for this change was agreed in the last UE in Idle Mode ad-hoc meeting held in Helsinki.
Summary of change:	⌘	4.4.3.1 Removal of text requiring the default use of GSM technology at switch on or when recovering from loss of coverage.
Consequences if not approved:	⌘	The Terminal wastes time searching for a Network using an access technology e.g. GSM, in countries where the use of that technology is inappropriate e.g. in the case of SIM roamers in Japan or Korea.

Clauses affected:	⌘	4.4.3.1		
Other specs affected:	⌘	☒ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	31.102
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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

4.4.3.1 At switch-on or recovery from lack of coverage

At switch on, or following recovery from lack of coverage, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and if necessary (in the case of recovery from lack of coverage, see subclause 4.5.2) attempts to perform a Location Registration. ~~The MS shall start its search using the access technology type stored in the "RPLMN Last Used Access Technology" data field on the SIM. If the "RPLMN Last Used Access Technology" is not available then .an MS capable of GSM access technology shall start its search using GSM access technology.~~

~~On recovery from lack of coverage, the MS selects the registered PLMN (if it is available) using all access technologies that the MS is capable of and, if necessary (see subclause 4.5.2) attempts to perform a Location Registration.~~

EXCEPTION: In A/Gb mode or GSM COMPACT, an MS with voice capability, shall not search for CPBCCH carriers, unless the "RPLMN Last Used Access Technology" field is available in the SIM and indicates GSM COMPACT. In A/Gb mode or GSM COMPACT, an MS not supporting packet services shall not search for CPBCCH carriers.

If successful registration is achieved, the MS indicates the selected PLMN.

If there is no registered PLMN, or if registration is not possible due to the PLMN being unavailable or registration failure, the MS follows one of the following two procedures depending on its operating mode.

EXCEPTION: If registration is not possible on recovery from lack of coverage due to the registered PLMN being unavailable, a MS attached to GPRS services may, optionally, continue looking for the registered PLMN for an implementation dependent time.

NOTE 1: A MS attached to GPRS services should use the above exception only if one or more PDP contexts are currently active.

CR-Form-v3

CHANGE REQUEST

⌘ **24.008** **CR** **351** ⌘ rev **3** ⌘ Current version: **3.6.0** ⌘

*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 **X**

Title:	⌘	Correction related to Cause of no CLI
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	01-02-13
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
- ***F*** *(essential 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.

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R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	To comply with TSs 23.081 and 22.081
Summary of change:	⌘	CAUSE of NO CLI may be sent only when Presentation Indicator is set to 'presentation restricted' so the current text is erroneous.
Consequences if not approved:	⌘	Wrong implementations.

Clauses affected:	⌘	
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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9.3.23.1.18 Cause of No CLI

This IE may be included by the network as defined by 3GPP TS 24.081.~~only when no number digits are contained within the Calling Party BCD IE.~~

When both Calling Party BCD number IE and Cause of No CLI IE are included in SETUP message then the Cause of No CLI IE provideds additional information on why the number digits are not present.

10.5.4.30 Cause of No CLI

Cause of No CLI information element provides the mobile station the detailed reason why Calling party BCD number is not notified (See 3GPP TS 24.081). ~~only when Calling party BCD number digit is not included in SETUP message~~.

The *Cause of No CLI* information element is coded as shown in figure 10.5.118a/3GPP TS 24.008 and table 10.5.135a/3GPP TS 24.008

The *Cause of No CLI i*s a type 4 information element with the length of 3 octets.

8	7	6	5	4	3	2	1	
Cause of No CLI IEI								octet 1
Length of Cause of No CLI contents								octet 2
Cause of No CLI								octet 3

Figure 10.5.118a/3GPP TS 24.008 Cause of No CLI information element

Table 10.5.135a/3GPP TS 24.008: Cause of No CLI information element

Cause of No CLI (octet 3)								
Bits								
8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	
0	0	0	0	0	0	0	0	Unavailable
0	0	0	0	0	0	0	1	Reject by user
0	0	0	0	0	0	1	0	Interaction with other service
0	0	0	0	0	0	1	1	Coin line/payphone
Other values shall be interpreted as “Unavailable”.								

3GPP TSG-CN1 Meeting #16
Sophia Antipolis, France 26 Feb - 1 March, 2001

N1-010424
(Rev of N1-010287 Rev of N1-010178)

CR-Form-v3

CHANGE REQUEST

⌘ **24.008** **CR** **365** ⌘ rev **3** ⌘ Current version: **4.1.1** ⌘

*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 **X**

Title:	⌘	Correction related to Cause of no CLI
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	01-02-13
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
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R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	To comply with TSs 23.081 and 22.081
Summary of change:	⌘	CAUSE of NO CLI may be sent only when Presentation Indicator is set to 'presentation restricted' so the current text is erroneous.
Consequences if not approved:	⌘	Wrong implementations.

Clauses affected:	⌘			
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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0	0	0	0	0	0	0	1	Reject by user
0	0	0	0	0	0	1	0	Interaction with other service
0	0	0	0	0	0	1	1	Coin line/payphone
Other values shall be interpreted as “Unavailable”.								

3GPP TSG-CN1 Meeting #16

Tdoc N1-010445
revised N1-010225
revised N1-010199

26 Feb. to 01 March 2001, Sophia France

CR-Form-v3

CHANGE REQUEST

⌘ **24.008** **CR** **343** ⌘ rev **4** ⌘ Current version: **3.6.0** ⌘

*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 **X**

Title:	⌘	Handling of unsynchronised PDP contexts - MS less (2)
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	27.02.2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
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R98 *(Release 1998)*
R99 *(Release 1999)*
REL-4 *(Release 4)*
REL-5 *(Release 5)*

Reason for change: ⌘

The problem of unsynchronized PDP contexts is explained in tdoc N1-001364. The case 'MS has less PDP contexts in state active then network' is the most likly case and is resolved by CR269r2 (tdoc N1-001406) which needs changes in 25.331 and 25.413 (still to be done).

The current solution was designed der the assumption that the changes shall be restricted to a minimum and that Service Request shall not be used since it is a MM message.It does currently not regard selective re-establishment.

Further discussions on selective re-establishment and active re-synchronization as well as several questions why Service Request message was not considered as possible solution triggered the re-consideration of the solution.

The usage of Service Request/RAU message for resolving the situation has some advantages:

- less signalling messages over air interface and within network as with the pasive re-synchronization
- possibility to enhance it easily to a backward compatible solution for selective re-establishment
- no involment of RR-layer to resolve SM issues
- Service Request handles already SM issues via Service Type 'data' and 'paging response'

Summary of change: ⌘ Insertion of a new IE in Service Request and RAU message

Consequences if not approved: ⌘ Solution suitable for R99 (CR269r2) but not used in further releases is implemented instead future proof version.

Clauses affected:	⌘			
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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4.7.5.1.3 Normal and periodic routing area updating procedure accepted by the network

If the routing area updating request has been accepted by the network, a ROUTING AREA UPDATE ACCEPT message shall be sent to the MS. The network may assign a new P-TMSI and/or a new P-TMSI signature for the MS. If a new P-TMSI and/or P-TMSI signature have been assigned to the MS, it/they shall be included in the ROUTING AREA UPDATE ACCEPT message together with the routing area identification.

In GSM the Cell Notification information element shall be included in the ROUTING AREA UPDATE ACCEPT message in order to indicate the ability of the network to support the Cell Notification.

The network shall change to state GMM-COMMON-PROCEDURE-INITIATED and shall start the supervision timer T3350 as described in section 4.7.6.

If the LAI or PLMN identity contained in the ROUTING AREA UPDATE ACCEPT message is a member of any of the "forbidden" lists then any such entry shall be deleted.

In UMTS, the network should prolong the PS signalling connection if the mobile station has indicated a follow-on request pending in ROUTING AREA UPDATE REQUEST. The network may also prolong the PS signalling connection without any indication from the mobile terminal.

If the PDP context status information element is included in ROUTING AREA UPDATE REQUEST message, then the network should deactivate all those PDP contexts locally (without peer to peer signalling between the MS and network), which are not in SM state PDP-INACTIVE on network side but are indicated by the MS as being in state PDP-INACTIVE.

Upon receipt of a ROUTING AREA UPDATE ACCEPT message, the MS stores the received routing area identification, stops timer T3330, shall reset the routing area updating attempt counter and sets the GPRS update status to GU1 UPDATED. If the message contains a P-TMSI, the MS shall use this P-TMSI as new temporary identity for GPRS services and shall store the new P-TMSI. If no P-TMSI was included by the network in the ROUTING AREA UPDATING ACCEPT message, the old P-TMSI shall be kept. Furthermore, the MS shall store the P-TMSI signature if received in the ROUTING AREA UPDATING ACCEPT message. If no P-TMSI signature was included in the message, the old P-TMSI signature, if available, shall be deleted.

In GSM, if the ROUTING AREA UPDATE ACCEPT message contains the Cell Notification information element, then the MS shall start to use the LLC NULL frame to perform cell updates.

A ROUTING AREA UPDATE COMPLETE message shall be returned to the network if the ROUTING AREA UPDATE ACCEPT message contained:

- a P-TMSI; and/or
- Receive N-PDU Numbers (see 04.65 [78] and 3GPP TS 25.322).

In this case the Receive N-PDU Numbers values valid in the MS, shall be included in the ROUTING AREA UPDATE COMPLETE message.

NOTE: In UMTS, after a routing area updating procedure, the mobile station can initiate Service Request procedure to request the resource reservation for the active PDP contexts if the resources have been released by the network or send upper layer message (e.g. ACTIVATE PDP CONTEXT REQUEST) to the network via the existing PS signaling connection.

After that in UMTS, if the mobile station has indicated follow-on request pending and has a CM application request pending, it shall send an appropriate message (for example ACTIVATE PDP CONTEXT REQUEST) to the network.

**** Next Modification ****

4.7.13 Service Request procedure (UMTS only)

The purpose of this procedure is to transfer the PMM mode from PMM-IDLE to PMM-CONNECTED mode, and/or to assign radio access bearer in case of PDP contexts are activated without radio access bearer assigned. In latter case, the PMM mode may be PMM-IDLE mode or may alternatively be the PMM-CONNECTED mode if the MS requires radio access bearer re-establishment. This procedure is used for;

- the initiation of CM layer service (e.g. SM or SMS) procedure from the MS in PMM-IDLE mode.
- the network to transfer down link signalling,
- uplink (in PMM-IDLE or PMM CONNECTED) and downlink (only in PMM-IDLE) user data.

For downlink transfer of signalling or user data in PMM-IDLE mode, the trigger is given from the network by the paging request procedure, which is out of scope of this specification.

For pending downlink user data in PMM-CONNECTED mode, the re-establishment of radio access bearers for all active PDP contexts is done without paging.

Service type can take either of the following values, "signalling", "data" or "paging response". Each of the values shall be selected according to the criteria to initiate the Service request procedure.

The criteria to invoke the Service request procedure are when;

a) the MS has any signalling message (e.g. for SM or SMS), that requires security protection, to be sent to the network in PMM-IDLE mode (i.e., no secure PS signalling connection has been established). In this case, the service type shall be set to "signalling".

b) the MS, either in PMM-IDLE or PMM-CONNECTED mode, has pending user data to be sent and no radio access bearer is established for the corresponding PDP context. The procedure is initiated by an indication from the lower layers (see 3GPP TS 24.007). In this case, the service type shall be set to "data".

c) the MS receives a paging request for PS domain from the network in PMM-IDLE mode. In this case, the service type shall be set to "paging response".

After completion of a Service request procedure but before re-establishment of radio access bearer, if the PDP context status information element is included, then the network should deactivate all those PDP contexts locally (without peer to peer signalling between the MS and the network), which are not in SM state PDP-INACTIVE on network side but are indicated by the MS as being in state PDP-INACTIVE.

After completion of a Service request procedure, the pending service is resumed and uses then the connection established by the procedure. If the service type is indicating "data", then the radio access bearers for all the activated PDP contexts are re-established. The selective re-assignment capability is not supported for the simplicity of the function.

~~If the network tries to re-establish radio access bearers for which no active PDP contexts exists, then the MS shall request the lower layer to reject the setup of all radio access bearers. The reject message has to include the indication of which of the PDP contexts are still active (NSAPI in SM corresponds to RAB ID in RRC) and the reject cause has to indicate "unsynchronousPDP".~~

~~The network shall retry the re-establishment of those radio access bearers for which a corresponding active PDP context exists when the MS did reject the previous re-establishment with the cause indicating "unsynchronousPDP". The indication of which PDP contexts are still active is delivered by the MS in the reject message.~~

~~Th network shall deactivate all those PDP contexts locally, which have not been indicated as still active by the MS during the procedure described in the two paragraphs above.~~

4.7.13.1 Service Request procedure initiation

The MS initiates the Service request procedure by sending a SERVICE REQUEST message. The timer T3317 shall be started after the SERVICE REQUEST message has been sent and state GMM-SERVICE-REQUEST-INITIATED is entered. The message SERVICE REQUEST shall contain the P-TMSI and the Service type shall indicate either data, signalling or paging response.

**** Next Modification ****

4.7.13.6 Abnormal cases on the network side

The following abnormal cases can be identified:

a) Lower layer failure

If a low layer failure occurs before the security mode control procedure is completed, a SERVICE ACCEPT or SERVICE REJECT message has been sent to the MS, the network enters/stays in PMM-IDLE.

b) Protocol error

If the SERVICE REQUEST message is received with a protocol error, the network shall return a SERVICE REJECT message with one of the following reject causes:

#96: Mandatory information element error;

#99: Information element non-existent or not implemented;

#100: Conditional IE error;

#111: Protocol error, unspecified.

The network stays in PMM-IDLE mode.

c.) More than one SERVICE REQUEST received and the procedure has not been completed (i.e., the security mode control procedure has not been completed or SERVICE ACCEPT, SERVICE REJECT message has not been sent),

- If one or more of the information elements in the SERVICE REQUEST message differs from the ones received within the previous SERVICE REQUEST message, the previously initiated Service request procedure shall be aborted and the new Service request procedure shall be progressed ;
- If the information elements do not differ, then the network shall continue with the previous Service request procedure and shall not treat any further this SERVICE REQUEST message.

d) ATTACH REQUEST received before the security mode control procedure has been completed or an SERVICE ACCEPT or an SERVICE REJECT message has been sent.

If an ATTACH REQUEST message is received and the security mode control procedure has not been completed or an SERVICE ACCEPT or an SERVICE REJECT message has not been sent, the network may initiate the GMM common procedures, e.g. the GMM authentication and ciphering procedure. The network may e.g. after a succesful GMM authentication and ciphering procedure execution, abort the Service request procedure, the GMM context and PDP contexts, if any, are deleted and the new ATTACH REQUEST is progressed.

e) ROUTING AREA UPDATE REQUEST message received before the security mode control procedure has been completed or an SERVICE ACCEPT or an SERVICE REJECT message has been sent

If an ROUTING AREA UPDATE REQUEST message is received and the security mode control procedure has not been completed or an SERVICE ACCEPT or an SERVICE REJECT message has not been sent, the network may initiate the GMM common procedures, e.g. the GMM authentication and ciphering procedure. The network may e.g. after a successful GMM authentication and ciphering procedure execution, abort the Service request procedure and progress the routing area update procedure.

f) If the Service Type indicates 'data' and the network fails to re-establish some or all RAB(s) then the SGSN may determines if PDP Context Modification or PDP Context Deactivation should be initiated.
The appropriate action depends on the QoS profile of the PDP Context and is an operator choice.

~~g) If the Service Type indicates 'data' and the network fails to re-establish some or all radio access bearers then the network (initiated by SGSN) shall deactivate all those PDP contexts locally for which the cause is indicating "unsynchronousPDP".~~

**** Next Modification ****

9.4.14 Routing area update request

This message is sent by the MS to the network either to request an update of its location file or to request an IMSI attach for non-GPRS services. See table 9.4.14/3GPP TS 24.008.

Message type: ROUTING AREA UPDATE REQUEST

Significance: dual

Direction: MS to network

Table 9.4.14/3GPP TS 24.008: ROUTING AREA UPDATE REQUEST message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Skip indicator	Skip indicator 10.3.1	M	V	1/2
	Routing area update request message identity	Message type 10.4	M	V	1
	Update type	Update type 10.5.5.18	M	V	1/2
	GPRS ciphering key sequence number	Ciphering key sequence number 10.5.1.2	M	V	1/2
	Old routing area identification	Routing area identification 10.5.5.15	M	V	6
	MS Radio Access capability	MS Radio Access capability 10.5.5.12a	M	LV	6 - 52
19	Old P-TMSI signature	P-TMSI signature 10.5.5.8	O	TV	4
17	Requested READY timer value	GPRS Timer 10.5.7.3	O	TV	2
27	DRX parameter	DRX parameter 10.5.5.6	O	TV	3
9-	TMSI status	TMSI status 10.5.5.4	O	TV	1
18	P-TMSI	Mobile identity 10.5.1.4	O	TLV	7
31	MS network capability	MS network capability 10.5.5.12	O	TLV	4-10
32	PDP context status	PDP context status 10.5.7.1	O	TLV	4

9.4.14.1 Old P-TMSI signature

This IE is included by the MS if it was received from the network in an ATTACH ACCEPT or ROUTING AREA UPDATE ACCEPT message.

9.4.14.2 Requested READY timer value

This IE may be included if the MS wants to indicate a preferred value for the READY timer.

9.4.14.3 DRX parameter

This IE shall be included if the MS changes the access network from GSM to UMTS, or the MS wants to indicate new DRX parameters to the network.

9.4.14.4 TMSI status

This IE shall be included if the MS performs a combined routing area update and no valid TMSI is available.

9.4.14.5 P-TMSI (UMTS only)

This IE shall be included by the MS.

9.4.14.6 MS network capability

This IE shall be included by the MS to indicate it’s capabilities to the network.

9.4.14.7 PDP context status

This IE should be included by the MS .

**** Next Modification ****

9.4.20 Service Request (UMTS only)

This message is sent by the MS to transfer to establish logical association between the MS and the network. See table 9.4.20/3GPP TS 24.008.

Message type: Service Request

Significance: dual

Direction: MS to network

Table 9.4.20/3GPP TS 24.008: Contents of Service Request message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Skip indicator	Skip indicator 10.3.1	M	V	1/2
	Service Request	Message type 10.4	M	V	1
	Ciphering key sequence number	Ciphering key sequence number 10.5.1.2	M	V	1/2
	Service type	Service type 10.5.5.20	M	V	1/2
	P-TMSI	Mobile station identity 10.5.1.4	M	LV	6
32	PDP context status	PDP context status 10.5.7.1	O	TLV	4

9.4.20.1 PDP context status

This IE should be included by the MS.

**** New Text ****

10.5.7.1 ~~Void~~PDP context status

The purpose of the *PDP context status* information element is to indicate the state of each PDP context which can be identified by NSAPI.

The *PDP context status* information element is a type 4 information element with 4 octets length.

The *PDP context status* information element is coded as shown in figure 10.5.x/TS 24.008 and table 10.5.x/TS 24.008.

8	7	6	5	4	3	2	1	
PDP context status IEI								octet 1
Length of PDP context status contents								Octet 2
NSAPI (7)	NSAPI (6)	NSAPI (5)	NSAPI (4)	NSAPI (3)	NSAPI (2)	NSAPI (1)	NSAPI (0)	octet 3
NSAPI (15)	NSAPI (14)	NSAPI (13)	NSAPI (12)	NSAPI (11)	NSAPI (10)	NSAPI (9)	NSAPI (8)	octet 4

Figure 10.5.x/TS 24.008 *PDP context status* information element

Table 10.5.x/TS 24.008: *PDP context status* information element

NSAPI(x) shall be coded as follows:

NSAPI(0) - NSAPI(4):
are coded as '0' and shall be treated as spare in this version of the protocol.
NSAPI(5) – NSAPI(15):
0 indicates that the SM state of the corresponding PDP context is PDP-INACTIVE.
1 indicates that the SM state of the corresponding PDP context is not PDP-INACTIVE.

3GPP TSG-CN1 Meeting #16

Tdoc N1-010446
revised N1-010226
revised N1-010200

26 Feb. to 01 March 2001, Sophia France

CR-Form-v3

CHANGE REQUEST

⌘ **24.008** **CR** **344** ⌘ rev **4** ⌘ Current version: **4.1.1** ⌘

*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 **X**

Title:	⌘	Handling of unsynchronised PDP contexts - MS less (2)
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	27.02.2001
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(essential 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 problem of unsynchronized PDP contexts is explained in tdoc N1-001364. The case 'MS has less PDP contexts in state active then network' is the most likly case and is resolved by CR269r2 (tdoc N1-001406) which needs changes in 25.331 and 25.413 (still to be done).

The current solution was designed der the assumption that the changes shall be restricted to a minimum and that Service Request shall not be used since it is a MM message.It does currently not regard selective re-establishment.

Further discussions on selective re-establishment and active re-synchronization as well as several questions why Service Request message was not considered as possible solution triggered the re-consideration of the solution.

The usage of Service Request/RAU message for resolving the situation has some advantages:

- less signalling messages over air interface and within network as with the pasive re-synchronization
- possibility to enhance it easily to a backward compatible solution for selective re-establishment
- no involment of RR-layer to resolve SM issues
- Service Request handles already SM issues via Service Type 'data' and 'paging response'

Summary of change: ⌘ Insertion of a new IE in Service Request and RAU message

Consequences if not approved: ⌘ Solution suitable for R99 (CR269r2) but not used in further releases is implemented instead future proof version.

Clauses affected:	⌘			
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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

4.7.5.1.3 Normal and periodic routing area updating procedure accepted by the network

If the routing area updating request has been accepted by the network, a ROUTING AREA UPDATE ACCEPT message shall be sent to the MS. The network may assign a new P-TMSI and/or a new P-TMSI signature for the MS. If a new P-TMSI and/or P-TMSI signature have been assigned to the MS, it/they shall be included in the ROUTING AREA UPDATE ACCEPT message together with the routing area identification.

In GSM the Cell Notification information element shall be included in the ROUTING AREA UPDATE ACCEPT message in order to indicate the ability of the network to support the Cell Notification.

The network shall change to state GMM-COMMON-PROCEDURE-INITIATED and shall start the supervision timer T3350 as described in section 4.7.6.

If the LAI or PLMN identity contained in the ROUTING AREA UPDATE ACCEPT message is a member of any of the "forbidden" lists then any such entry shall be deleted.

In UMTS, the network should prolong the PS signalling connection if the mobile station has indicated a follow-on request pending in ROUTING AREA UPDATE REQUEST. The network may also prolong the PS signalling connection without any indication from the mobile terminal.

If the PDP context status information element is included in ROUTING AREA UPDATE REQUEST message, then the network shall deactivate all those PDP contexts locally (without peer to peer signalling between the MS and network), which are not in SM state PDP-INACTIVE on network side but are indicated by the MS as being in state PDP-INACTIVE.

Upon receipt of a ROUTING AREA UPDATE ACCEPT message, the MS stores the received routing area identification, stops timer T3330, shall reset the routing area updating attempt counter and sets the GPRS update status to GU1 UPDATED. If the message contains a P-TMSI, the MS shall use this P-TMSI as new temporary identity for GPRS services and shall store the new P-TMSI. If no P-TMSI was included by the network in the ROUTING AREA UPDATING ACCEPT message, the old P-TMSI shall be kept. Furthermore, the MS shall store the P-TMSI signature if received in the ROUTING AREA UPDATING ACCEPT message. If no P-TMSI signature was included in the message, the old P-TMSI signature, if available, shall be deleted.

In GSM, if the ROUTING AREA UPDATE ACCEPT message contains the Cell Notification information element, then the MS shall start to use the LLC NULL frame to perform cell updates.

A ROUTING AREA UPDATE COMPLETE message shall be returned to the network if the ROUTING AREA UPDATE ACCEPT message contained:

- a P-TMSI; and/or
- Receive N-PDU Numbers (see 04.65 [78] and 3GPP TS 25.322).

In this case the Receive N-PDU Numbers values valid in the MS, shall be included in the ROUTING AREA UPDATE COMPLETE message.

NOTE: In UMTS, after a routing area updating procedure, the mobile station can initiate Service Request procedure to request the resource reservation for the active PDP contexts if the resources have been released by the network or send upper layer message (e.g. ACTIVATE PDP CONTEXT REQUEST) to the network via the existing PS signaling connection.

After that in UMTS, if the mobile station has indicated follow-on request pending and has a CM application request pending, it shall send an appropriate message (for example ACTIVATE PDP CONTEXT REQUEST) to the network.

**** Next Modification ****

4.7.13 Service Request procedure (UMTS only)

The purpose of this procedure is to transfer the PMM mode from PMM-IDLE to PMM-CONNECTED mode, and/or to assign radio access bearer in case of PDP contexts are activated without radio access bearer assigned. In latter case, the PMM mode may be PMM-IDLE mode or may alternatively be the PMM-CONNECTED mode if the MS requires radio access bearer re-establishment. This procedure is used for;

- the initiation of CM layer service (e.g. SM or SMS) procedure from the MS in PMM-IDLE mode.
- the network to transfer down link signalling,
- uplink (in PMM-IDLE or PMM CONNECTED) and downlink (only in PMM-IDLE) user data.

For downlink transfer of signalling or user data in PMM-IDLE mode, the trigger is given from the network by the paging request procedure, which is out of scope of this specification.

For pending downlink user data in PMM-CONNECTED mode, the re-establishment of radio access bearers for all active PDP contexts is done without paging.

Service type can take either of the following values, "signalling", "data" or "paging response". Each of the values shall be selected according to the criteria to initiate the Service request procedure.

The criteria to invoke the Service request procedure are when;

a) the MS has any signalling message (e.g. for SM or SMS), that requires security protection, to be sent to the network in PMM-IDLE mode (i.e., no secure PS signalling connection has been established). In this case, the service type shall be set to "signalling".

b) the MS, either in PMM-IDLE or PMM-CONNECTED mode, has pending user data to be sent and no radio access bearer is established for the corresponding PDP context. The procedure is initiated by an indication from the lower layers (see 3GPP TS 24.007). In this case, the service type shall be set to "data".

c) the MS receives a paging request for PS domain from the network in PMM-IDLE mode. In this case, the service type shall be set to "paging response".

After completion of a Service request procedure but before re-establishment of radio access bearer, if the PDP context status information element is included, then the network shall deactivate all those PDP contexts locally (without peer to peer signalling between the MS and the network), which are not in SM state PDP-INACTIVE on network side but are indicated by the MS as being in state PDP-INACTIVE.

After completion of a Service request procedure, the pending service is resumed and uses then the connection established by the procedure. If the service type is indicating "data", then the radio access bearers for all the activated PDP contexts are re-established. The selective re-assignment capability is not supported for the simplicity of the function.

~~If the network tries to re-establish radio access bearers for which no active PDP contexts exists, then the MS shall request the lower layer to reject the setup of all radio access bearers. The reject message has to include the indication of which of the PDP contexts are still active (NSAPI in SM corresponds to RAB ID in RRC) and the reject cause has to indicate "unsynchronousPDP".~~

~~The network shall retry the re-establishment of those radio access bearers for which a corresponding active PDP context exists when the MS did reject the previous re-establishment with the cause indicating "unsynchronousPDP". The indication of which PDP contexts are still active is delivered by the MS in the reject message.~~

~~Th network shall deactivate all those PDP contexts locally, which have not been indicated as still active by the MS during the procedure described in the two paragraphs above.~~

4.7.13.1 Service Request procedure initiation

The MS initiates the Service request procedure by sending a SERVICE REQUEST message. The timer T3317 shall be started after the SERVICE REQUEST message has been sent and state GMM-SERVICE-REQUEST-INITIATED is entered. The message SERVICE REQUEST shall contain the P-TMSI and the Service type shall indicate either data, signalling or paging response.

**** Next Modification ****

4.7.13.6 Abnormal cases on the network side

The following abnormal cases can be identified:

a) Lower layer failure

If a low layer failure occurs before the security mode control procedure is completed, a SERVICE ACCEPT or SERVICE REJECT message has been sent to the MS, the network enters/stays in PMM-IDLE.

b) Protocol error

If the SERVICE REQUEST message is received with a protocol error, the network shall return a SERVICE REJECT message with one of the following reject causes:

#96: Mandatory information element error;

#99: Information element non-existent or not implemented;

#100: Conditional IE error;

#111: Protocol error, unspecified.

The network stays in PMM-IDLE mode.

c.) More than one SERVICE REQUEST received and the procedure has not been completed (i.e., the security mode control procedure has not been completed or SERVICE ACCEPT, SERVICE REJECT message has not been sent),

- If one or more of the information elements in the SERVICE REQUEST message differs from the ones received within the previous SERVICE REQUEST message, the previously initiated Service request procedure shall be aborted and the new Service request procedure shall be progressed ;
- If the information elements do not differ, then the network shall continue with the previous Service request procedure and shall not treat any further this SERVICE REQUEST message.

d) ATTACH REQUEST received before the security mode control procedure has been completed or an SERVICE ACCEPT or an SERVICE REJECT message has been sent.

If an ATTACH REQUEST message is received and the security mode control procedure has not been completed or an SERVICE ACCEPT or an SERVICE REJECT message has not been sent, the network may initiate the GMM common procedures, e.g. the GMM authentication and ciphering procedure. The network may e.g. after a succesful GMM authentication and ciphering procedure execution, abort the Service request procedure, the GMM context and PDP contexts, if any, are deleted and the new ATTACH REQUEST is progressed.

e) ROUTING AREA UPDATE REQUEST message received before the security mode control procedure has been completed or an SERVICE ACCEPT or an SERVICE REJECT message has been sent

If an ROUTING AREA UPDATE REQUEST message is received and the security mode control procedure has not been completed or an SERVICE ACCEPT or an SERVICE REJECT message has not been sent, the network may initiate the GMM common procedures, e.g. the GMM authentication and ciphering procedure. The network may e.g. after a successful GMM authentication and ciphering procedure execution, abort the Service request procedure and progress the routing area update procedure.

f) If the Service Type indicates 'data' and the network fails to re-establish some or all RAB(s) then the SGSN may determines if PDP Context Modification or PDP Context Deactivation should be initiated.
The appropriate action depends on the QoS profile of the PDP Context and is an operator choice.

~~g) If the Service Type indicates 'data' and the network fails to re-establish some or all radio access bearers then the network (initiated by SGSN) shall deactivate all those PDP contexts locally for which the cause is indicating "unsynchronousPDP".~~

**** Next Modification ****

9.4.14 Routing area update request

This message is sent by the MS to the network either to request an update of its location file or to request an IMSI attach for non-GPRS services. See table 9.4.14/3GPP TS 24.008.

Message type: ROUTING AREA UPDATE REQUEST

Significance: dual

Direction: MS to network

Table 9.4.14/3GPP TS 24.008: ROUTING AREA UPDATE REQUEST message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Skip indicator	Skip indicator 10.3.1	M	V	1/2
	Routing area update request message identity	Message type 10.4	M	V	1
	Update type	Update type 10.5.5.18	M	V	1/2
	GPRS ciphering key sequence number	Ciphering key sequence number 10.5.1.2	M	V	1/2
	Old routing area identification	Routing area identification 10.5.5.15	M	V	6
	MS Radio Access capability	MS Radio Access capability 10.5.5.12a	M	LV	6 - 52
19	Old P-TMSI signature	P-TMSI signature 10.5.5.8	O	TV	4
17	Requested READY timer value	GPRS Timer 10.5.7.3	O	TV	2
27	DRX parameter	DRX parameter 10.5.5.6	O	TV	3
9-	TMSI status	TMSI status 10.5.5.4	O	TV	1
18	P-TMSI	Mobile identity 10.5.1.4	O	TLV	7
31	MS network capability	MS network capability 10.5.5.12	O	TLV	4-10
32	PDP context status	PDP context status 10.5.7.1	O	TLV	4

9.4.14.1 Old P-TMSI signature

This IE is included by the MS if it was received from the network in an ATTACH ACCEPT or ROUTING AREA UPDATE ACCEPT message.

9.4.14.2 Requested READY timer value

This IE may be included if the MS wants to indicate a preferred value for the READY timer.

9.4.14.3 DRX parameter

This IE shall be included if the MS changes the access network from GSM to UMTS, or the MS wants to indicate new DRX parameters to the network.

9.4.14.4 TMSI status

This IE shall be included if the MS performs a combined routing area update and no valid TMSI is available.

9.4.14.5 P-TMSI (UMTS only)

This IE shall be included by the MS.

9.4.14.6 MS network capability

This IE shall be included by the MS to indicate it’s capabilities to the network.

9.4.14.7 PDP context status

This IE shall be included by the MS.

**** Next Modification ****

9.4.20 Service Request (UMTS only)

This message is sent by the MS to transfer to establish logical association between the MS and the network. See table 9.4.20/3GPP TS 24.008.

Message type: Service Request

Significance: dual

Direction: MS to network

Table 9.4.20/3GPP TS 24.008: Contents of Service Request message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Skip indicator	Skip indicator 10.3.1	M	V	1/2
	Service Request	Message type 10.4	M	V	1
	Ciphering key sequence number	Ciphering key sequence number 10.5.1.2	M	V	1/2
	Service type	Service type 10.5.5.20	M	V	1/2
	P-TMSI	Mobile station identity 10.5.1.4	M	LV	6
32	PDP context status	PDP context status 10.5.7.1	O	TLV	4

9.4.20.1 PDP context status

This IE shall be included by the MS.

**** New Text ****

10.5.7.1 ~~Void~~PDP context status

The purpose of the *PDP context status* information element is to indicate the state of each PDP context which can be identified by NSAPI.

The *PDP context status* information element is a type 4 information element with 4 octets length.

The *PDP context status* information element is coded as shown in figure 10.5.x/TS 24.008 and table 10.5.x/TS 24.008.

8	7	6	5	4	3	2	1	
PDP context status IEI								octet 1
Length of PDP context status contents								Octet 2
NSAPI (7)	NSAPI (6)	NSAPI (5)	NSAPI (4)	NSAPI (3)	NSAPI (2)	NSAPI (1)	NSAPI (0)	octet 3
NSAPI (15)	NSAPI (14)	NSAPI (13)	NSAPI (12)	NSAPI (11)	NSAPI (10)	NSAPI (9)	NSAPI (8)	octet 4

Figure 10.5.x/TS 24.008 *PDP context status* information element

Table 10.5.x/TS 24.008: *PDP context status* information element

NSAPI(x) shall be coded as follows:

NSAPI(0) - NSAPI(4):
are coded as '0' and shall be treated as spare in this version of the protocol.
NSAPI(5) – NSAPI(15):
0 indicates that the SM state of the corresponding PDP context is PDP-INACTIVE.
1 indicates that the SM state of the corresponding PDP context is not PDP-INACTIVE.

3GPP TSG-CN1 Meeting #16
26 Feb. to 01 March 2001, Sophia France.

Tdoc N1-0100447

CR-Form-v3

CHANGE REQUEST

⌘ **24.007** **CR** **035** ⌘ rev **-** ⌘ Current version: **3.6.0** ⌘

*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:	⌘	Deletion of cause 'unsynchronousPDP' in RABMAS-SAP
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	28.02.2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(essential 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 cause and the appropriate handling has been introduced for passive PDP context re-synchronization which has been dropped in favour of the active re-synchronization
Summary of change:	⌘	Delete cause 'unsynchronousPDP' and allow reject only when all PDP conctext related to radio bearers whose setup has actually been requested
Consequences if not approved:	⌘	Inconsistent 24.007 and 24.008 specification

Clauses affected:	⌘			
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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

Service primitives for RABMAS-SAP (UMTS only)

Table 9.3.3: Primitives and parameters at RABMAS-SAP

PRIMITIVE	PARAMETER (message, info elements of message, other parameters)	REFERENCE
RABMAS-RAB-ESTABLISH-IND	RAB ID list	9.3.3.1
RABMAS-RAB-ESTABLISH-RES	-	9.3.3.2
RABMAS-RAB-ESTABLISH-REJ	~~RAB-ID list, Cause~~	9.3.3.3
RABMAS-RAB-RELEASE-IND	RAB ID list	9.3.3.4
RABMAS-RAB-RELEASE-RES	-	9.3.3.5
RABMAS-STATUS-IND	Cause	9.3.3.6

9.3.3.1 RABMAS-RAB-ESTABLISH-IND

Indication from the Access Stratum layer that radio access bearer setup for the indicated list of RAB IDs (contains NSAPI) has commenced.

9.3.3.2 RABMAS-RAB-ESTABLISH-RES

Response (to RABMAS-RAB-ESTABLISH-IND) used by the RABM entity to inform the Access Stratum sublayer that the indicated NSAPI (in RAB ID) is currently or has been activated by the SM ~~layer and it is ok to set up the radio access bearer~~.

9.3.3.3 RABMAS-RAB-ESTABLISH-REJ

Response (to RABMAS-RAB-ESTABLISH-IND) used by the RABM entity to inform the Access Stratum sublayer that all ~~or some~~ of the NSAPIs, indicated by RAB ID list in the received RABMAS-RAB-ESTABLISH-IND, have not been activated by the SM-layer and the attempt to setup the radio access bearers shall be rejected.

~~The parameter RAB-ID list contains those RAB-IDs for which a corresponding active PDP context(NSAPI) exits on the MS side. The parameter cause has to be set to 'unsynchronousPDP'.~~

9.3.3.4 RABMAS-RAB-RELEASE-IND

Indication from the Access Stratum layer that a radio access bearer for the indicated NSAPI has been released.

9.3.3.5 RABMAS-RAB-RELEASE-RES

Response used by the RABM entity to inform the Access Stratum sublayer that the indicated RAB ID has been released in the RABM.

9.3.3.6 RABMAS-STATUS-IND

Indication used by the AS sublayer to transfer failures to the RABM.

3GPP TSG-CN1 Meeting #16
26 Feb. to 01 March 2001, Sophia France.

Tdoc N1-010468
(Rev. of Tdoc N1-010372)

CR-Form-v3

CHANGE REQUEST

⌘ **24.008** **CR** **373** ⌘ rev **1** ⌘ Current version: **3.6.0** ⌘

*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:	⌘	MS behavior in case release of RAB is followed by setup of RAB
Source:	⌘	TSG_CN WG1
Work item code:	⌘	TEI
Date:	⌘	2001-02-23
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(essential 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: ⌘

When user requests e.g. call holding followed by the data call establishment, a re-configuration of the user plane (Radio Access Bearer, RAB)is needed.

Standards should allow that such re-configuration of RAB is performed in two steps: release of RAB (by releasing all radio bearers associated with the RAB) followed by establishment of a new RAB. This is in line with RRC specification (TS 25.331).

According to the RRC specification, if all Radio Bearers are released for a Radio Access Bearer, RRC layer will inform upper layer that the Radio Access Bearer is released. The current specification does not describe how mobile station shall react if this is indicated by lower layers (RRC), and CC entity has not been released. Considering above case, it should be specified whether the CC entity should initiate the call clearing procedure or should wait until call clearing of CC level is performed.

Summary of change: ⌘ It is proposed how the MS shall react if RRC layer inform upper layer that the Radio Access Bearer is released.

Consequences if not approved: ⌘ Mobile station may initiate call release, e.g. when the call holding followed by a data call establishment is required.

Clauses affected: ⌘ 5.2

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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

Modified Section

5.2 Call establishment procedures

Establishment of a call is initiated by request of upper layer in either the mobile station or the network; it consists of:

- the establishment of a CC connection between the mobile station and the network;
- the activation of the codec or interworking function.

Whenever it is specified in 3GPP TS 24.008, section 5 that the mobile station shall attach the user connection, this means that the mobile station shall activate the codec or interworking function as soon as an appropriate channel is available. The mobile station shall de-activate the codec or interworking function whenever an appropriate channel is no longer available. As soon as an appropriate channel is (again) available, the codec or interworking function shall be re-activated. If a new order to attach the user connection is received, the new order shall supersede the previous one.

A channel shall be considered as appropriate if it is consistent with the possibly negotiated bearer capability applicable for the actual phase of the call. The mobile station shall not consider a channel as not appropriate because the type of the channel (full rate/half rate) is not the preferred one. If:

- the user connection has to be attached but no appropriate channel is available for a contiguous time of 30 seconds; or if
- the codec or interworking function is de-activated for a contiguous time of 30 seconds;

then the mobile station may initiate call clearing.

Upon request of upper layers to establish a call, restricting conditions for the establishment of the call are examined. These restricting conditions concern the states of parallel CC entities and are defined elsewhere. If these restricting conditions are fulfilled, the call establishment is rejected. Otherwise a CC entity in state U0, "null", is selected to establish the call. It initiates the establishment by requesting the MM sublayer to establish an MM connection.

In Iu mode, if the lower layers indicate the release of a radio access bearer, where as the corresponding call is still active, the MS shall not automatically initiate the release of that call.

3GPP TSG-CN1 Meeting #16
26 Feb. to 01 March 2001, Sophia France.

Tdoc N1-010469
(Rev. of Tdoc N1-010373)

CR-Form-v3

CHANGE REQUEST

⌘ **24.008** **CR** **385** ⌘ rev **1** ⌘ Current version: **4.1.1** ⌘

*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:	⌘	MS behavior in case release of RAB is followed by setup of RAB
Source:	⌘	Ericsson
Work item code:	⌘	TSG_CN WG1
Date:	⌘	2001-02-23
Category:	⌘	**A**
Release:	⌘	R4

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Other specs affected: ⌘
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⌘

Other comments: ⌘	

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