

**Source:** TSG CN WG 1  
**Title:** CRs to Rel-5 on Work Item TEI5 towards 24.008 and 24.011  
**Agenda item:** 8.8  
**Document for:** APPROVAL

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**Introduction:**

This document contains 3 CRs, **Rel-5 to Work Item "TEI5"**, that have been agreed by **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #20 for approval.

Spec	CR	Rev	Cat	Phase	Subject	Version-Current	Version-New	Meeting-2nd-Level	Doc-2nd-Level
24.008	779		F	Rel-5	Correction of the static conditions for the bearer capability IE contents	5.7.0	5.8.0	N1-30	N1-030673
24.008	780		A	Rel-6	Correction of the static conditions for the bearer capability IE contents	6.0.0	6.1.0	N1-30	N1-030674
24.011	027	2	F	Rel-5	UE behaviour when sending SMS over GPRS	5.1.0	5.2.0	N1-30	N1-030925

San Diego, California, USA, 19 – 23 May 2003

CR-Form-v7

## CHANGE REQUEST

⌘ **24.011 CR 027** ⌘ rev **2** ⌘ 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

<b>Title:</b>	⌘ UE behaviour when sending SMS over GPRS		
<b>Source:</b>	⌘ Ericsson		
<b>Work item code:</b>	⌘ TEI5	<b>Date:</b>	⌘ 19/05/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-5
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> 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)

<b>Reason for change:</b>	⌘ A CR -S1-030237- to TS 22.060 (Stage 1) was approved in the last SA plenary. The CR introduces new requirements, which have to be included in TS 24.011.
<b>Summary of change:</b>	⌘ This CR implements the new requirements specified in TS 22.060. The CR mandates the mobile not to attempt using GPRS for SMS for a period of time based on implementations upon receipt of cause #69 or the complete lack of network response from a PLMN. During this time, the mobile shall attempt to use the circuit-switched domain. When a different PLMN is selected, the MS shall again revert to trying an SMS transfer via GPRS. If the SMS fails in both via GPRS and the circuit-switched domain, the user shall be informed.  As an implementation option, the mobile may also attempt to use the circuit-switched domain instead of GPRS upon receipt of other causes different than #69.
<b>Consequences if not approved:</b>	⌘ The specification text does not implement all requirements defined in 3GPP TS 22.060 (Stage 1 specification) and introduced by S1-030237. Furthermore, TS 24.011 will remain in conflict with requirements on the Stage 1 specification. Thus, the Stage 3 cannot be compliant with the Stage 1. In addition, when the user sends an SMS over GPRS and this fails due to the lack of network response, the MS does not attempt SMS transfer via the circuit-switched domain. The user perception is affected and the Stage 1 is not fulfilled.

<b>Clauses affected:</b>	⌘ 2.6 (new), 6.3.1 and 6.3.3.1.2.								
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications	Y	N		X		X	⌘	
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	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.

\*\*\*\*\* **First change** \*\*\*\*\*

## 2.5 GSMS entity in Iu mode

It shall be possible for a PS-attached MS of any mode of operation to send and receive short messages in Iu mode.

A description of the different mode of operation UMTS MS can be found in 3GPP TS 23.060, and a brief overview is given below:

- CS/PS mode of operation MSs may be able to send and receive short messages using either the MM sublayer or the GMM sublayer;
- PS mode of operation MSs may be able to send and receive short messages using only GMM sublayer.

The GSMS entity for CS/PS mode of operation MS is shown in figure 2.3. The GSMS shall communicate with the MM entity via the GMMSMS-SAP for CS/PS mode of operation MO SMS in Iu mode, in order to ascertain which transport service to use.

The delivery path for MO SMS is selected by the MS.

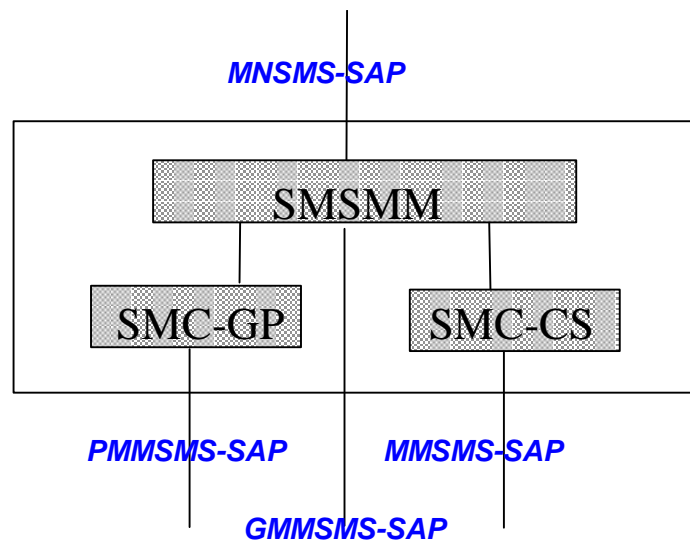


Figure 2.3/3GPP TS 24.011: GSMS entity for CS/PS mode of operation MS in Iu mode

## 2.6 MS support for SMS over GPRS

If the MS is attached to GPRS and the circuit-switched domain, and an SMS transfer via GPRS fails either due to a reception of an RP-ERROR message with cause #69 or due to the complete lack of network response, then the MS shall take the following actions:

- The MS shall use the circuit-switched domain instead of GPRS for SMS transfer for an implementation dependent time. When a different PLMN is selected, if the MS preferred method is the sending of SMS over GPRS, the MS shall revert to trying an SMS transfer via GPRS.
- If the SMS transfer failed in both GPRS and the circuit-switched domain, the user shall be informed.

As an implementation option, the MS may also use the circuit-switched domain instead of GPRS for SMS transfer due to a reception of an RP-ERROR message with a cause different than #69.

\*\*\*\*\* **Last change** \*\*\*\*\*

### 6.3.1 TPDU relaying

When the SMR entity is in the Idle state and receives a request from SM-TL to relay a TPDU, it forms and transfers the RP-DATA message (containing the TPDU), sets the timer TR1\* and enters the state Wait for RP-ACK.

Retransmission of RP data units by the CM-sublayer is described in clause 5.

When the SMR entity is in the "Wait for RP-ACK" state, the following situations may occur:

- a) reception of an RP-ACK or RP-ERROR message (containing the same reference number as the transmitted RP-DATA message);
- b) reception of an error indication from the CM-sublayer;
- c) the timer TR1\* expires.

In case a) or b), the timer TR1\* is reset, a report indication is passed to SM-TL, a request to release the CM-connection is passed to CM-sublayer, and the SMR entity enters the Idle state.

In case a) when the SMR entity in the MS receives an RP-ERROR message, the MS shall then take one of the followings actions depending upon the received RP-ERROR cause:

#69 "Requested facility not implemented"

If this RP-ERROR cause was received in reaction to an SMS transfer via GPRS, the MS shall proceed as specified in the subclause 2.6. ~~should not use GPRS for SMS transfer for an implementation dependent time. During this time, the MS may attempt SMS transfers via the circuit switched domain.~~

In case c), a request to abort the CM-connection is passed to the CM-sublayer, a report indication is passed to SM-TL, and the SMR entity enters the Idle state.

When the SMR entity is in the Idle state and receives an MNSMS-EST-Ind containing a valid RP-DATA message, it passes the SMS-TPDU to the SM-TL, starts timer TR2\*, and enters the state "Wait to Send RP-ACK".

When the SMR entity in the SGSN is in the Idle state and receives an MNSMS-EST-Ind containing a valid RP-DATA message, but the delivery of SMS via GPRS is not activated, the network shall return an RP-ERROR message with cause #69 "Requested facility not implemented" and remain in the Idle state.

When the SMR entity is in the state "Wait to Send RP-ACK" and the SMR entity receives the SM-RL-Report-Request, the timer TR2\* is reset, the RP-message (RP-ACK or RP-ERROR) is generated and relayed to the peer entity, a CM-connection release request is passed to the CM-sublayer, and the SMR entity enters the Idle state.

When the SMR entity is in the state "Wait to Send RP-ACK" and the SMR entity receives an error indication from the CM-sublayer, the timer TR2\* is reset, a report indication is passed to the SM-TL and the SMR entity enters the Idle state.

When the SMR entity is in the state "Wait to send RP-ACK" and the timer TR2\* expires, the SMR entity passes a CM-connection abort request to the CM-sublayer, a report indication is passed to the SM-TL, and the SMR entity enters the Idle state.

## 6.3.2 [Void]

## 6.3.3 Notification relaying

### 6.3.3.1 MS side

#### 6.3.3.1.1 Idle state

When the SMR entity in the MS in the Idle state receives a request from the SM-TL to relay a notification to the network, it forms and transfers the RP-SMMA message, starts timer TR1M, and enters the state Wait for RP-ACK.

#### 6.3.3.1.2 Wait for RP-ACK state

When the SMR entity in the MS is in the Wait for RP-ACK state and it receives either:

- an RP-ACK (containing the same reference number as the last transmitted RP-SMMA message); or
- an RP-ERROR (containing the same reference number as the last transmitted RP-SMMA message) with a permanent failure indication; or
- an error indication from the CP-sublayer;

then the MS shall reset timer TR1M, pass a report indication to SM-TL, give a CM-connection release request to the CM-sublayer, and enter the Idle state. If set, timer TRAM and the RETRANS flag are also reset.

If the SMR entity in the MS is in the Wait for RP-ACK state and receives an RP-ERROR message, the MS shall then take one of the following actions depending upon the received RP-ERROR cause:

#69 "Requested facility not implemented"

If this RP-ERROR cause was received in reaction to an SMS transfer via GPRS, the MS [shall proceed as specified in the subclause 2.6](#), ~~should not use GPRS for SM transfer for an implementation dependent time. During this time, the MS may attempt SMS transfers via the circuit switched domain.~~

When the SMR entity in the MS is in the Wait for RP-ACK state and either:

- it receives an RP-ERROR (containing the same reference number as the last transmitted RP-SMMA message) with a temporary failure indication; or
- timer TR1M expires;

then the MS shall examine the RETRANS flag:

- if the RETRANS flag is set (i.e. no more transmissions of the RP-SMMA message are permitted) then:
  - the MS shall pass a report indication to SM-TL, give a CM-connection release request to the CM-sublayer, reset the RETRANS flag, reset TR1M, and enter the Idle state.
- If the RETRANS flag is not set (i.e. at least another transmission of the RP-SMMA message is currently permitted) then:
  - the MS shall give a CM-connection release request to the CM-sublayer, set the RETRANS flag, reset TR1M, start timer TRAM and enter the Wait for Retrans Timer state.

When the SMR entity in the MS is in the Wait for RP-ACK state and it receives an SM-RL-MEMORY-AVAILABLE-Req (SMS-MEM-NOTIF-ABORT) primitive, then the MS shall set the RETRANS flag and reenter the Wait for RP-ACK state.

### 6.3.3.1.3 Wait for RETRANS Timer state

When the SMR entity in the MS is in the Wait for Retrans Timer state and timer TRAM expires then, the MS shall form and transfer an RP-SMMA message, start timer TR1M, and enter the state Wait for RP-ACK. The RP-Message Reference in this RP-SMMA message shall be different from that in the previous RP-SMMA message.

When the SMR entity in the MS is in the Wait for Retrans Timer state and it receives an SM-RL-MEMORY-AVAILABLE-Req (SMS-MEM-NOTIF-ABORT) primitive, then the MS shall reset the RETRANS flag, reset timer TRAM, pass a report indication to SM-TL, and enter the Idle state.

## 6.3.3.2 Network side

### 6.3.3.2.1 Idle state

When the SMR entity in the network is in the Idle state and receives an MNSMS-EST-Ind containing a valid RP-SMMA message, it passes the SMS-TPDU to the SM-TL, starts timer TR2N, and enters the state "Wait to send RP-ACK".

When the SMR entity in the SGSN is in the Idle state and receives an MNSMS-EST-Ind containing a valid RP-SMMA message, but the delivery of SMS via GPRS is not activated, the network shall return an RP-ERROR message with cause #69 "Requested facility not implemented" and remain in the Idle state

## CHANGE REQUEST

⌘ **24.008 CR 779** ⌘ rev **-** ⌘ Current version: **5.7.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of the static conditions for the bearer capability IE contents		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ TEI5	<b>Date:</b>	⌘ 09/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-5
Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> 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)	

<b>Reason for change:</b>	⌘ The current version of the specification states in subclause 10.5.4.4.1: "For GSM, if the information transfer capability field (octet 3) indicates "speech", octets 4, 5, 5a, 5b, 6, 6a, 6b, 6c, 6d, 6e, 6f, 6g and 7 shall not be included." However, this statement not only applies to GSM, but also to UMTS; therefore, the condition "for GSM" should be deleted.
<b>Summary of change:</b>	⌘ Deletion of the words "For GSM".
<b>Consequences if not approved:</b>	⌘ Unnecessarily unclear specification (is it allowed in UMTS to include octets 4, ..., if octet 3 indicates "speech"?).

<b>Clauses affected:</b>	⌘ 10.5.4.5.1										
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<b>Other comments:</b>	⌘										

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#### 10.5.4.5.1 Static conditions for the bearer capability IE contents

~~For GSM, if~~ If the information transfer capability field (octet 3) indicates "speech", octets 4, 5, 5a, 5b, 6, 6a, 6b, 6c, 6d, 6e, 6f, 6g and 7 shall not be included.

If the information transfer capability field (octet 3) indicates "speech", octet 3a etc. shall be included only if the mobile station supports CTM text telephony or if it supports at least one speech version for GSM radio access other than:

- GSM full rate speech version 1; or
- GSM half rate speech version 1.

If the information transfer capability field (octet 3) indicates a value different from "speech", octets 4, 5, 6, 6a, 6b, and 6c shall be included, octets 6d, 6e, 6f and 6g are optional. In the network to MS direction in case octet 6d is included, octets 6e, 6f and 6g may be included. In the MS to network direction in case octet 6d is included octet 6e shall also be included and 6f and 6g may be included.

If the information transfer capability field (octet 3) indicates "facsimile group 3", the modem type field (octet 6c) shall indicate "none".

If the information transfer capability field (octet 3) indicates "other ITC" or the rate adaption field (octet 5) indicates "other rate adaption", octet 5a shall be included.

If the rate adaption field (octet 5) indicates "other rate adaption" and the other rate adaption field (octet 5a) indicates "V.120", octet 5b shall be included.

The modem type field (octet 6c) shall not indicate "autobauding type 1" unless the connection element field (octet 6c) indicates "non transparent".

## CHANGE REQUEST

⌘ **24.008 CR 780** ⌘ rev **-** ⌘ Current version: **6.0.0** ⌘

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<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-6
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<b>Reason for change:</b>	⌘ The current version of the specification states in subclause 10.5.4.4.1: "For GSM, if the information transfer capability field (octet 3) indicates "speech", octets 4, 5, 5a, 5b, 6, 6a, 6b, 6c, 6d, 6e, 6f, 6g and 7 shall not be included."  However, this statement not only applies to GSM, but also to UMTS; therefore, the condition "for GSM" should be deleted.
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