3GPP TSG_CN **Tdoc NP-000440**
Plenary Meeting #9, Oahu, Hawaii
20th – 22nd September 2000.

Source: **TSG_N WG 1**

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

"Correction Crs of GSM Maintenance"

Agenda item: **8.4.1**

Document for: **APPROVAL**

Introduction:

This document contains 6 CRs on R99 Work Item TEI, that has been agreed by TSG_N WG1, and is forwarded to TSG_N Plenary meeting #9 for approval.

Spec	CR	Rev	Doc-2nd-	Phase	Subject	Cat	Ver_C	Ver_N
04.11	A019		N1-000939	PH2	Corrections of CP/RP-DATA IE lengths	F	4.10.1	4.11.0
04.11	A020		N1-000940	R96	Corrections of CP/RP-DATA IE lengths	A	5.2.1	5.3.0
04.11	A021		N1-000941	R97	Corrections of CP/RP-DATA IE lengths	A	6.0.1	6.1.0
04.11	A022		N1-000942	R98	Corrections of CP/RP-DATA IE lengths	A	7.0.0	7.1.0
24.008	242		N1-000912	R99	Wrong reference after 04.08 split	F	3.4.1	3.5.0
24.011	008		N1-000943	R99	Corrections of CP/RP-DATA IE lengths	A	3.3.0	3.4.0

3GPP/SMG Meeting TSGN1 #13
Vancouver, Canada, 14.-18. August 2000

***Document* N1-000912**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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24.008	CR	242	Current Version:	3.4.1

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

For submission to:	TSGN #9	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic	X	

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		Core Network	X

Source: TSGN1 **Date:** 9.8.2000

Subject: Wrong reference after 04.08 split

Work item: TEI

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: There is an incorrect reference to 04.18 and 25.331 in 24.008. Actually the reference should point to another section of 24.008

Clauses affected: 4.3.2.5

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:

help.doc

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

NOTE: In some specifications the term KSI (Key Set Identifier) might be used instead of the term ciphering key sequence number.

4.3.2.5 Authentication not accepted by the network

If authentication fails, i.e. if the response is not valid, the network may distinguish between the two different ways of identification used by the mobile station:

- the TMSI was used;
- the IMSI was used.

If the TMSI has been used, the network may decide to initiate the identification procedure. If the IMSI given by the mobile station then differs from the one the network had associated with the TMSI, the authentication should be restarted with the correct parameters. If the IMSI provided by the MS is the expected one (i.e. authentication has really failed), the network should proceed as described below.

If the IMSI has been used, or the network decides not to try the identification procedure, an AUTHENTICATION REJECT message should be transferred to the mobile station.

After having sent this message, all MM connections in progress (if any) are released and the network should initiate the RR connection release procedure described in section 3.5.of 04.18 (GSM) or in TS 25.331 (UMTS).

Upon receipt of an AUTHENTICATION REJECT message, the mobile station shall set the update status in the SIM to U2 ROAMING NOT ALLOWED, delete from the SIM the stored TMSI, LAI and ciphering key sequence number. The SIM shall be considered as invalid until switching off or the SIM is removed.

If the AUTHENTICATION REJECT message is received in the state IMSI DETACH INITIATED the mobile station shall follow section 4.3.4.3 ~~of 04.18 (GSM) or in TS 25.331 (UMTS)~~.

If the AUTHENTICATION REJECT message is received in any other state the mobile station shall abort any MM specific, MM connection establishment or call re-establishment procedure, stop any of the timers T3210 or T3230 (if running), release all MM connections (if any), start timer T3240 and enter the state WAIT FOR NETWORK COMMAND, expecting the release of the RR connection. If the RR connection is not released within a given time controlled by the timer T3240, the mobile station shall abort the RR connection. In both cases, either after a RR connection release triggered from the network side or after a RR connection abort requested by the MS-side, the MS enters state MM IDLE, substate NO IMSI. If the MS has a separate ongoing RR connection to a different core network node, it shall consider this separate connection as still being good.

4.3.2.5.1 Authentication not accepted by the MS

In a UMTS authentication challenge, the authentication procedure is extended to allow the MS to check the authenticity of the core network. Thus allowing, for instance, detection of false base station.

A R99 GSM-only MS connected to a R99 core network (even using the GSM radio access) shall support a UMTS authentication challenge.

Following a UMTS authentication challenge, the MS may reject the core network, on the grounds of an incorrect AUTN parameter (see TS 33.102). This parameter contains two possible causes for authentication failure:

a) MAC code failure

   If the MS considers the MAC code (supplied by the core network in the AUTN parameter) to be invalid, it shall send an AUTHENTICATION FAILURE message to the network, with the reject cause 'MAC failure'. The MS shall then follow the procedure described in section 4.3.2.6 (c).

b) SQN failure

   If the MS considers the SQN (supplied by the core network in the AUTN parameter) to be out of range, it shall send a AUTHENTICATION FAILURE message to the network, with the reject cause 'Synch failure' and a re-synchronization token AUTS provided by the SIM (see TS 33.102). The MS shall then follow the procedure described in section 4.3.2.6 (d).

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Vancouver/Canada, 14-18 August 2000

Document N1-000939
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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04.11	CR	A019	Current Version:	4.10.1

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

For submission to:	CN#9	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	X	UTRAN / Radio		Core Network	X

Source: TSGN1 **Date:** 09-08-2000

Subject: Corrections of CP/RP-DATA IE lengths

Work item: TEI

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

F	Correction	X	**Release:**	Phase 2	X
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	
				Release 00	

Reason for change:

This CR proposes the corrections of inconsistency on the length of RP-User Data.

1) The payload of CP-DATA message is up to 248 octets. To satisfy this limit the length of RP-User data in the RP-DATA message shall be 233 octets. Consequently the length of value part of RP-User data shall be 232 octets (clause 7.3.1, 8.2.5.3).
2) The length of the value part of RP-User data in RP-ERROR shall be the same as RP-DATA's (Clause 7.3.4).

Additionally a editorial correction of CP-User data length is proposed (clause 8.1.4.1).

Clauses affected: 7.3.1; 7.3.4; 8.1.4.1; 8.2.5.3;

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	24.011
Other GSM core specifications	X	→ List of CRs:	04.11
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

According to the 03.40v4.13.0, the contents of RP-DATA e.g. SMS-DELIVER and SMS-SUBMIT are up to 170 octets approximately. Therefore this correction does not make any problems. If the correction is not agreed, the extension of the length of TPDUs may cause accidental message shortening in some NW.


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

7.2 Messages for short message or notification transfer on CM

This section describes the functional definition and content of the messages sent between two SMC entities.

There are three messages defined: CP-DATA, CP-ACK and CP-ERROR.

7.2.1 CP-DATA

The CP-DATA message is sent between an MSC and an MS, in both directions. The message contains the user data to be relayed between the CM-users, and associated parameters. See table 7.1/ GSM 04.11.

Table 7.1/GSM 04.11: CP-DATA message content

	Information element	Reference	Presence	Format	Length
	Protocol discriminator	TS GSM 04.07	M	V	1/2 octet
	Transaction identifier	TS GSM 04.07	M	V	1/2 octet
	Message type	Section 8.1.3	M	V	1 octet
	CP-User data	Section 8.1.4.1	M	LV	≤ 249 octets

*** omitted ***

7.3 Messages for short message and notification transfer on SM-RL

This section describes the functional definition and content of the messages sent between two SMR entities.

There are 4 messages defined: RP-DATA, RP-SMMA, RP-ACK and RP-ERROR.

7.3.1 RP-DATA

A phase 2 entity shall not reject a RP-DATA message where both address elements have a length greater than 0.

7.3.1.1 RP-DATA (Network to Mobile Station)

This message is sent in MSC -> MS direction. The message is used to relay the TPDUs. The information elements are in line with TS GSM 03.40. See table 7.4/GSM 04.11.

Table 7.4/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Section 8.2.2	M	V	3 bits
	RP-Message Reference	Section 8.2.3	M	V	1 octet
	RP-Originator Address	Section 8.2.5.1	M	LV	1-12 octets
	RP-Destination Address	Section 8.2.5.2	M	LV	1 octet
	RP-User Data	Section 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

7.3.1.2 RP-DATA (Mobile Station to Network)

This message is sent in MS -> MSC direction. The message is used to relay the TPDUs. The information elements are in line with TS GSM 03.40. See table 7.5/GSM 04.11.

Table 7.5/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Section 8.2.2	M	V	3 bits
	RP-Message Reference	Section 8.2.3	M	V	1 octet
	RP-Originator Address	Section 8.2.5.1	M	LV	1 octet
	RP-Destination Address	Section 8.2.5.2	M	LV	1-12 octets
	RP-User Data	Section 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

*** omitted ***

7.3.3 RP-ACK

This message is sent between the MSC and the mobile station in both directions and used to relay the acknowledgement of a RP-DATA or RP-SMMA message reception. The information elements are in line with TS GSM 03.40. See table 7.7/GSM 04.11.

Table 7.7/GSM 04.11: RP-ACK message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Section 8.2.2	M	V	3 bits
	RP-Message Reference	Section 8.2.3	M	V	1 octet

7.3.4 RP-ERROR

This message is sent between the MSC and the mobile station in both directions and used to relay an error cause from an erroneous short message or notification transfer attempt. The information elements are in line with TS GSM 03.40. See table 7.8/GSM 04.11.

The contents of the cause field are given in Section 8.2.5.4.

Table 7.8/GSM 04.11: RP-ERROR message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Section 8.2.2	M	V	3 bits
	RP-Message Reference	Section 8.2.3	M	V	1 octet
	RP-Cause	Section 8.2.5.4	M	LV	2-3 octets
	RP-User Data	Section 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

*** omitted ***

8.1 CP-messages

*** omitted ***

8.1.4 Other required information elements

8.1.4.1 CP-User data element

The CP-User data element is used to carry the RPDU. It has an information element identifier, a length indicator and a data field. The data field will contain the RPDUs. The maximum length of the data field is ~~255~~ 248 octets. The layout is indicated in figure 8.2/GSM 04.11.

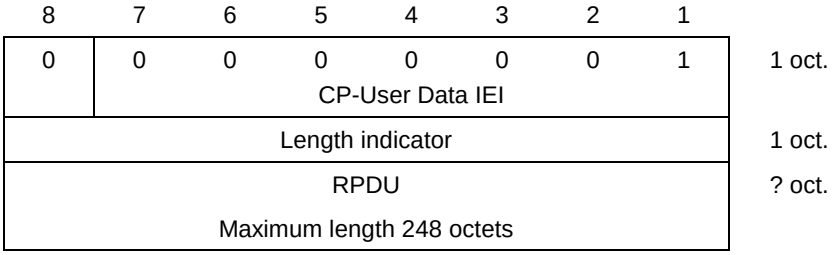

Figure 8.2/GSM 04.11: CP-User data element layout

*** omitted ***

8.2 RP-messages

*** omitted ***

8.2.5 Other required information elements

*** omitted ***

8.2.5.3 RP-User data element

The RP-User data field contains the TPDU and is mandatory in a RP-DATA message. RP-User data is also optionally carried in an RP-Error message. In a RP DATA message, ~~The~~ the element has a variable length, up to ~~239~~ 233 octets and in a RP ERROR message the length is up to 234 octets~~, the first octet sent being a length indicator~~.

RP-User data in an RP-Error message is conveyed as diagnostic information within the 'SM-DeliveryFailureCause' response to a MAP Forward-Short-Message procedure (see TS GSM 09.02). The diagnostic information may be sent in both directions, and shall always be forwarded by the MSC if it is received.

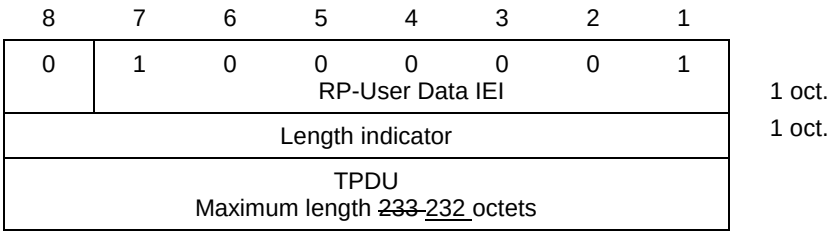

Figure 8.7/GSM 04.11: RP-User data element layout

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

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04.11	CR	A020	Current Version:	5.2.1

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

For submission to:	CN#9	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	X	UTRAN / Radio		Core Network	X

Source: TSGN1 **Date:** 09-08-2000

Subject: Corrections of CP/RP-DATA IE lengths

Work item: TEI

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

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

Reason for change:

This CR proposes the corrections of inconsistency on the length of RP-User Data.

1) The payload of CP-DATA message is up to 248 octets. To satisfy this limit the length of RP-User data in the RP-DATA message shall be 233 octets. Consequently the length of value part of RP-User data shall be 232 octets (clause 7.3.1, 8.2.5.3).
2) The length of the value part of RP-User data in RP-ERROR and RP-ACK shall be the same as RP-DATA's (Clause 7.3.3, 7.3.4).

Additionally a editorial correction of CP-User data length is proposed (clause 8.1.4.1).

Clauses affected: 7.3.1; 7.3.3; 7.3.4; 8.1.4.1; 8.2.5.3;

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	24.011
Other GSM core specifications	X	→ List of CRs:	04.11
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

According to the 03.40v5.8.1, the contents of RP-DATA e.g. SMS-DELIVER and SMS-SUBMIT are up to 170 octets approximately. Therefore this correction does not make any problems. If the correction is not agreed, the extension of the length of TPDUs may cause accidental message shortening in some NW.


help.doc

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

7.2 Messages for short message or notification transfer on CM

This subclause describes the functional definition and content of the messages sent between two SMC entities.

There are three messages defined: CP-DATA, CP-ACK and CP-ERROR.

7.2.1 CP-DATA

The CP-DATA message is sent between an MSC and an MS, in both directions. The message contains the user data to be relayed between the CM-users, and associated parameters. See table 7.1/ GSM 04.11.

Table 7.1/GSM 04.11: CP-DATA message content

	Information element	Reference	Presence	Format	Length
	Protocol discriminator	GSM 04.07	M	V	1/2 octet
	Transaction identifier	GSM 04.07	M	V	1/2 octet
	Message type	Subclause 8.1.3	M	V	1 octet
	CP-User data	Subclause 8.1.4.1	M	LV	≤ 249 octets

*** omitted ***

7.3 Messages for short message and notification transfer on SM-RL

This subclause describes the functional definition and content of the messages sent between two SMR entities.

There are 4 messages defined: RP-DATA, RP-SMMA, RP-ACK and RP-ERROR.

7.3.1 RP-DATA

A phase 2 entity shall not reject a RP-DATA message where both address elements have a length greater than 0.

7.3.1.1 RP-DATA (Network to Mobile Station)

This message is sent in MSC -> MS direction. The message is used to relay the TPDUs. The information elements are in line with GSM 03.40. See table 7.4/GSM 04.11.

Table 7.4/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1-12 octets
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1 octet
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

7.3.1.2 RP-DATA (Mobile Station to Network)

This message is sent in MS -> MSC direction. The message is used to relay the TPDUs. The information elements are in line with GSM 03.40. See table 7.5/GSM 04.11.

Table 7.5/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1 octet
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1-12 octets
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

*** omitted ***

7.3.3 RP-ACK

This message is sent between the MSC and the mobile station in both directions and used to relay the acknowledgement of a RP-DATA or RP-SMMA message reception. The information elements are in line with GSM 03.40. See table 7.7/GSM 04.11.

Table 7.7/GSM 04.11: RP-ACK message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

7.3.4 RP-ERROR

This message is sent between the MSC and the mobile station in both directions and used to relay an error cause from an erroneous short message or notification transfer attempt. The information elements are in line with GSM 03.40. See table 7.8/GSM 04.11.

The contents of the cause field are given in subclause 8.2.5.4.

Table 7.8/GSM 04.11: RP-ERROR message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Cause	Subclause 8.2.5.4	M	LV	2-3 octets
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234octets

*** omitted ***

8.1 CP-messages

*** omitted ***

8.1.4 Other required information elements

8.1.4.1 CP-User data element

The CP-User data element is used to carry the RPDU. It has an information element identifier, a length indicator and a data field. The data field will contain the RPDUs. The maximum length of the data field is ~~255~~248 octets. The layout is indicated in figure 8.2/GSM 04.11.

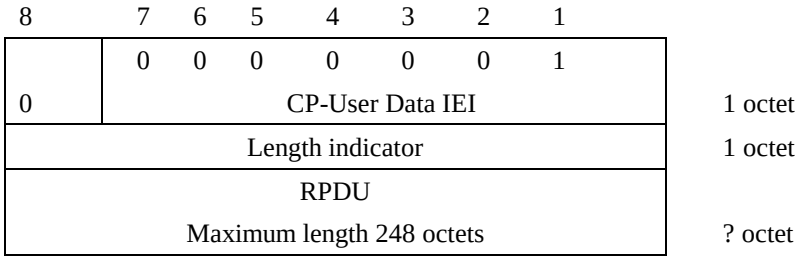

Figure 8.2/GSM 04.11: CP-User data element layout

*** omitted ***

8.2 RP-messages

*** omitted ***

8.2.5 Other required information elements

*** omitted ***

8.2.5.3 RP-User data element

The RP-User data field contains the TPDU and is mandatory in a RP-DATA message. RP-User data is also optionally carried in an RP-Error message. In a RP DATA message, ~~The~~ the element has a variable length, up to ~~239~~ 233 octets, and in a RP ERROR and in a RP ACK message the length is up to 234 octets~~ the first octet sent being a length indicator~~.

RP-User data in an RP-Error message is conveyed as diagnostic information within the "SM-DeliveryFailureCause" response to a MAP Forward-Short-Message procedure (see GSM 09.02). The diagnostic information may be sent in both directions, and shall always be forwarded by the MSC if it is received.

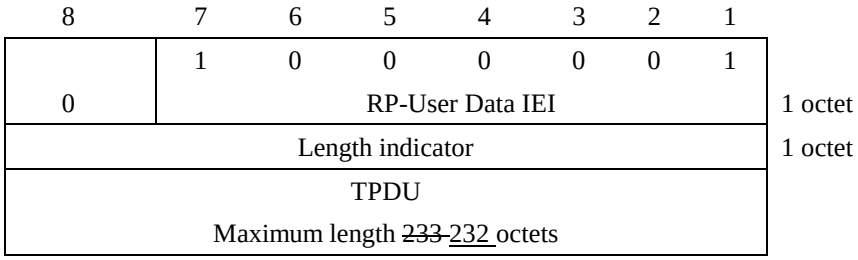

Figure 8.7/GSM 04.11: RP-User data element layout

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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.

04.11	CR	A021	Current Version:	6.0.1

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

For submission to:	CN#9	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	X	UTRAN / Radio		Core Network	X

Source: TSGN1 **Date:** 09-08-2000

Subject: Corrections of CP/RP-DATA IE lengths

Work item: TEI

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

F	Correction	
A	Corresponds to a correction in an earlier release	X
B	Addition of feature	
C	Functional modification of feature	
D	Editorial modification	

Release:

Phase 2	
Release 96	
Release 97	X
Release 98	
Release 99	
Release 00	

Reason for change:

This CR proposes the corrections of inconsistency on the length of RP-User Data.

1) The payload of CP-DATA message is up to 248 octets. To satisfy this limit the length of RP-User data in the RP-DATA message shall be 233 octets. Consequently the length of value part of RP-User data shall be 232 octets (clause 7.3.1, 8.2.5.3).
2) The length of the value part of RP-User data in RP-ERROR and RP-ACK shall be the same as RP-DATA's (Clause 7.3.3, 7.3.4).

Additionally a editorial correction of CP-User data length is proposed (clause 8.1.4.1).

Clauses affected: 7.3.1; 7.3.3; 7.3.4; 8.1.4.1; 8.2.5.3;

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	24.011
Other GSM core specifications	X	→ List of CRs:	04.11
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

According to the 03.40v6.1.0, the contents of RP-DATA e.g. SMS-DELIVER and SMS-SUBMIT are up to 170 octets approximately. Therefore this correction does not make any problems. If the correction is not agreed, the extension of the length of TPDUs may cause accidental message shortening in some NW.


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

7.2 Messages for short message or notification transfer on CM

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7.2.1 CP-DATA

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Table 7.1/GSM 04.11: CP-DATA message content

	Information element	Reference	Presence	Format	Length
	Protocol discriminator	GSM 04.07	M	V	1/2 octet
	Transaction identifier	GSM 04.07	M	V	1/2 octet
	Message type	Subclause 8.1.3	M	V	1 octet
	CP-User data	Subclause 8.1.4.1	M	LV	≤ 249 octets

*** omitted ***

7.3 Messages for short message and notification transfer on SM-RL

This subclause describes the functional definition and content of the messages sent between two SMR entities.

There are 4 messages defined: RP-DATA, RP-SMMA, RP-ACK and RP-ERROR.

7.3.1 RP-DATA

A phase 2 entity shall not reject a RP-DATA message where both address elements have a length greater than 0.

7.3.1.1 RP-DATA (Network to Mobile Station)

This message is sent in MSC -> MS direction. The message is used to relay the TPDUs. The information elements are in line with GSM 03.40. See table 7.4/GSM 04.11.

Table 7.4/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1-12 octets
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1 octet
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

7.3.1.2 RP-DATA (Mobile Station to Network)

This message is sent in MS -> MSC direction. The message is used to relay the TPDUs. The information elements are in line with GSM 03.40. See table 7.5/GSM 04.11.

Table 7.5/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1 octet
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1-12 octets
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

*** omitted ***

7.3.3 RP-ACK

This message is sent between the MSC and the mobile station in both directions and used to relay the acknowledgement of a RP-DATA or RP-SMMA message reception. The information elements are in line with GSM 03.40. See table 7.7/GSM 04.11.

Table 7.7/GSM 04.11: RP-ACK message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

7.3.4 RP-ERROR

This message is sent between the MSC and the mobile station in both directions and used to relay an error cause from an erroneous short message or notification transfer attempt. The information elements are in line with GSM 03.40. See table 7.8/GSM 04.11.

The contents of the cause field are given in subclause 8.2.5.4.

Table 7.8/GSM 04.11: RP-ERROR message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Cause	Subclause 8.2.5.4	M	LV	2-3 octets
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

*** omitted ***

8.1 CP-messages

*** omitted ***

8.1.4 Other required information elements

8.1.4.1 CP-User data element

The CP-User data element is used to carry the RPDU. It has an information element identifier, a length indicator and a data field. The data field will contain the RPDUs. The maximum length of the data field is ~~255~~ 248 octets. The layout is indicated in figure 8.2/GSM 04.11.

8	7	6	5	4	3	2	1
	0	0	0	0	0	0	1

0	CP-User Data IEI	1 octet
Length indicator		1 octet
RPDU Maximum length 248 octets		? octet

Figure 8.2/GSM 04.11: CP-User data element layout

*** omitted ***

8.2 RP-messages

*** omitted ***

8.2.5 Other required information elements

*** omitted ***

8.2.5.3 RP-User data element

The RP-User data field contains the TPDU and is mandatory in a RP-DATA message. RP-User data is also optionally carried in an RP-Error message. In a RP DATA message, ~~The~~ the element has a variable length, up to ~~239~~ 233 octets, and in a RP ERROR and in a RP ACK message the length is up to 234 octets~~the first octet sent being a length indicator~~.

RP-User data in an RP-Error message is conveyed as diagnostic information within the "SM-DeliveryFailureCause" response to a MAP Forward-Short-Message procedure (see GSM 09.02). The diagnostic information may be sent in both directions, and shall always be forwarded by the MSC if it is received.

8	7	6	5	4	3	2	1	
	1	0	0	0	0	0	1	
0	RP-User Data IEI							1 octet
Length indicator								1 octet
TPDU Maximum length ~~233~~ 232 octets								

Figure 8.7/GSM 04.11: RP-User data element layout

3GPP-CN1 Meeting #13
Vancouver/Canada, 14-18 August 2000

Document N1-000942
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.

04.11	CR	A022	Current Version:	7.0.0

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

For submission to:	CN#9	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	X	UTRAN / Radio		Core Network	X

Source: TSGN1 **Date:** 09-08-2000

Subject: Corrections of CP/RP-DATA IE lengths

Work item: TEI

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

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

Reason for change:

This CR proposes the corrections of inconsistency on the length of RP-User Data.

1) The payload of CP-DATA message is up to 248 octets. To satisfy this limit the length of RP-User data in the RP-DATA message shall be 233 octets. Consequently the length of value part of RP-User data shall be 232 octets (clause 7.3.1, 8.2.5.3).
2) The length of the value part of RP-User data in RP-ERROR and RP-ACK shall be the same as RP-DATA's (Clause 7.3.3, 7.3.4).

Additionally a editorial correction of CP-User data length is proposed (clause 8.1.4.1).

Clauses affected: 7.3.1; 7.3.3; 7.3.4; 8.1.4.1; 8.2.5.3;

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	24.011
Other GSM core specifications	X	→ List of CRs:	04.11
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

According to the 03.40v7.4.0, the contents of RP-DATA e.g. SMS-DELIVER and SMS-SUBMIT are up to 170 octets approximately. Therefore this correction does not make any problems. If the correction is not agreed, the extension of the length of TPDUs may cause accidental message shortening in some NW.


help.doc

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

7.2 Messages for short message or notification transfer on CM

This subclause describes the functional definition and content of the messages sent between two SMC entities.

There are three messages defined: CP-DATA, CP-ACK and CP-ERROR.

7.2.1 CP-DATA

The CP-DATA message is sent between an MSC and an MS, in both directions. The message contains the user data to be relayed between the CM-users, and associated parameters. See table 7.1/ GSM 04.11.

Table 7.1/GSM 04.11: CP-DATA message content

	Information element	Reference	Presence	Format	Length
	Protocol discriminator	GSM 04.07	M	V	1/2 octet
	Transaction identifier	GSM 04.07	M	V	1/2 octet
	Message type	Subclause 8.1.3	M	V	1 octet
	CP-User data	Subclause 8.1.4.1	M	LV	≤ 249 octets

*** omitted ***

7.3 Messages for short message and notification transfer on SM-RL

This subclause describes the functional definition and content of the messages sent between two SMR entities.

There are 4 messages defined: RP-DATA, RP-SMMA, RP-ACK and RP-ERROR.

7.3.1 RP-DATA

A phase 2 entity shall not reject a RP-DATA message where both address elements have a length greater than 0.

7.3.1.1 RP-DATA (Network to Mobile Station)

This message is sent in MSC -> MS direction. The message is used to relay the TPDUs. The information elements are in line with GSM 03.40. See table 7.4/GSM 04.11.

Table 7.4/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1-12 octets
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1 octet
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

7.3.1.2 RP-DATA (Mobile Station to Network)

This message is sent in MS -> MSC direction. The message is used to relay the TPDUs. The information elements are in line with GSM 03.40. See table 7.5/GSM 04.11.

Table 7.5/GSM 04.11: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1 octet
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1-12 octets
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

*** omitted ***

7.3.3 RP-ACK

This message is sent between the MSC and the mobile station in both directions and used to relay the acknowledgement of a RP-DATA or RP-SMMA message reception. The information elements are in line with GSM 03.40. See table 7.7/GSM 04.11.

Table 7.7/GSM 04.11: RP-ACK message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

7.3.4 RP-ERROR

This message is sent between the MSC and the mobile station in both directions and used to relay an error cause from an erroneous short message or notification transfer attempt. The information elements are in line with GSM 03.40. See table 7.8/GSM 04.11.

The contents of the cause field are given in subclause 8.2.5.4.

Table 7.8/GSM 04.11: RP-ERROR message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Cause	Subclause 8.2.5.4	M	LV	2-3 octets
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

*** omitted ***

8.1 CP-messages

*** omitted ***

8.1.4 Other required information elements

8.1.4.1 CP-User data element

The CP-User data element is used to carry the RPDU. It has an information element identifier, a length indicator and a data field. The data field will contain the RPDUs. The maximum length of the data field is ~~255~~ 248 octets. The layout is indicated in figure 8.2/GSM 04.11.

8	7	6	5	4	3	2	1	
	0	0	0	0	0	0	1	
0	CP-User Data IEI							1 octet

Length indicator	1 octet
RPDU Maximum length 248 octets	? octet

Figure 8.2/GSM 04.11: CP-User data element layout

*** omitted ***

8.2 RP-messages

*** omitted ***

8.2.5 Other required information elements

*** omitted ***

8.2.5.3 RP-User data element

The RP-User data field contains the TPDU and is mandatory in a RP-DATA message. RP-User data is also optionally carried in an RP-Error message. In a RP DATA message, ~~The~~ the element has a variable length, up to ~~239~~ 233 octets, and in a RP ERROR and in a RP ACK message the length is up to 234 octets~~the first octet sent being a length indicator~~.

RP-User data in an RP-Error message is conveyed as diagnostic information within the "SM-DeliveryFailureCause" response to a MAP Forward-Short-Message procedure (see GSM 09.02). The diagnostic information may be sent in both directions, and shall always be forwarded by the MSC if it is received.

8	7	6	5	4	3	2	1	
	1	0	0	0	0	0	1	
0	RP-User Data IEI							1 octet
Length indicator								1 octet
TPDU Maximum length ~~233~~ 232 octets								

Figure 8.7/GSM 04.11: RP-User data element layout

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Vancouver/Canada, 14-18 August 2000

Document N1-000943
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.

24.011	**CR**	**008**	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:	CN#9	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	X	UTRAN / Radio		Core Network	X

Source: TSGN1 **Date:** 09-08-2000

Subject: Corrections of CP/RP-DATA IE lengths

Work item: TEI

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

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release	X		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:

This CR proposes the corrections of inconsistency on the length of RP-User Data.

1) The payload of CP-DATA message is up to 248 octets. To satisfy this limit the length of RP-User data in the RP-DATA message shall be 233 octets. Consequently the length of value part of RP-User data shall be 232 octets (clause 7.3.1, 8.2.5.3).
2) The length of the value part of RP-User data in RP-ERROR and RP-ACK shall be the same as RP-DATA's (Clause 7.3.3, 7.3.4).

Additionally a editorial correction of CP-User data length is proposed (clause 8.1.4.1).

Clauses affected: 7.3.1; 7.3.3; 7.3.4; 8.1.4.1; 8.2.5.3;

Other specs affected:

Other 3G core specifications		→ List of CRs:	
Other GSM core specifications	X	→ List of CRs:	04.11
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

According to the 23.040v3.5.0, the contents of RP-DATA e.g. SMS-DELIVER and SMS-SUBMIT are up to 170 octets approximately. Therefore this correction does not make any problems. If the correction is not agreed, the extension of the length of TPDUs may cause accidental message shortening in some NW.


help.doc

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

7.2 Messages for short message or notification transfer on CM

This subclause describes the functional definition and content of the messages sent between two SMC entities.

There are three messages defined: CP-DATA, CP-ACK and CP-ERROR.

7.2.1 CP-DATA

The CP-DATA message is sent between an MSC and an MS, in both directions. The message contains the user data to be relayed between the CM-users, and associated parameters. See table 7.1/ TS 24.011.

Table 7.1/TS 24.011: CP-DATA message content

	Information element	Reference	Presence	Format	Length
	Protocol discriminator	TS 24.007	M	V	1/2 octet
	Transaction identifier	TS 24.007	M	V	1/2 octet
	Message type	Subclause 8.1.3	M	V	1 octet
	CP-User data	Subclause 8.1.4.1	M	LV	≤ 249 octets

*** omitted ***

7.3 Messages for short message and notification transfer on SM-RL

This subclause describes the functional definition and content of the messages sent between two SMR entities.

There are 4 messages defined: RP-DATA, RP-SMMA, RP-ACK and RP-ERROR.

7.3.1 RP-DATA

A phase 2 entity shall not reject a RP-DATA message where both address elements have a length greater than 0.

7.3.1.1 RP-DATA (Network to Mobile Station)

This message is sent in MSC -> MS direction. The message is used to relay the TPDUs. The information elements are in line with TS 23.040. See table 7.4/TS 24.011.

Table 7.4/TS 24.011: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1-12 octets
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1 octet
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

7.3.1.2 RP-DATA (Mobile Station to Network)

This message is sent in MS -> MSC direction. The message is used to relay the TPDUs. The information elements are in line with TS 23.040. See table 7.5/TS 24.011.

Table 7.5/TS 24.011: RP-DATA message content

	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Originator Address	Subclause 8.2.5.1	M	LV	1 octet
	RP-Destination Address	Subclause 8.2.5.2	M	LV	1-12 octets
	RP-User Data	Subclause 8.2.5.3	M	LV	≤ ~~234~~ 233 octets

*** omitted ***

7.3.3 RP-ACK

This message is sent between the MSC and the mobile station in both directions and used to relay the acknowledgement of a RP-DATA or RP-SMMA message reception. The information elements are in line with TS 23.040. See table 7.7/TS 24.011.

Table 7.7/TS 24.011: RP-ACK message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

7.3.4 RP-ERROR

This message is sent between the MSC and the mobile station in both directions and used to relay an error cause from an erroneous short message or notification transfer attempt. The information elements are in line with TS 23.040. See table 7.8/TS 24.011.

The contents of the cause field are given in subclause 8.2.5.4.

Table 7.8/TS 24.011: RP-ERROR message content

IEI	Information element	Reference	Presence	Format	Length
	RP-Message Type	Subclause 8.2.2	M	V	3 bits
	RP-Message Reference	Subclause 8.2.3	M	V	1 octet
	RP-Cause	Subclause 8.2.5.4	M	LV	2-3 octets
41	RP-User Data	Subclause 8.2.5.3	O	TLV	≤ ~~240~~ 234 octets

8.1 CP-messages

*** omitted ***

8.1.4 Other required information elements

8.1.4.1 CP-User data element

The CP-User data element is used to carry the RPDU. It has an information element identifier, a length indicator and a data field. The data field will contain the RPDUs. The maximum length of the data field is ~~255~~ 248 octets. The layout is indicated in figure 8.2/TS 24.011.

8	7	6	5	4	3	2	1	
	0	0	0	0	0	0	1	
0	CP-User Data IEI							1 octet
Length indicator								1 octet
RPDU								

Maximum length 248 octets	? octet

Figure 8.2/TS 24.011: CP-User data element layout

*** omitted ***

8.2 RP-messages

*** omitted ***

8.2.5 Other required information elements

*** omitted ***

8.2.5.3 RP-User data element

The RP-User data field contains the TPDU and is mandatory in a RP-DATA message. RP-User data is also optionally carried in an RP-Error message. In a RP DATA message, ~~The~~ the element has a variable length, up to ~~239~~ 233 octets and in a RP ERROR and in a RP ACK message the length is up to 234 octets~~, the first octet sent being a length indicator~~.

RP-User data in an RP-Error message is conveyed as diagnostic information within the "SM-DeliveryFailureCause" response to a MAP Forward-Short-Message procedure (see TS 29.002). The diagnostic information may be sent in both directions, and shall always be forwarded by the MSC if it is received.

8	7	6	5	4	3	2	1	
	1	0	0	0	0	0	1	
0	RP-User Data IEI							1 octet
Length indicator								1 octet
TPDU Maximum length ~~233~~ 232 octets								

Figure 8.7/TS 24.011: RP-User data element layout