3GPP TSG-T (Terminals) Meeting #25
Palm Springs, CA, USA
8 - 10 September 2004

TP-040183

Agenda Item: 5.3.3
Source: T3
Title: CRs to TS 31.111
Document for: approval

This document contains the following change requests that are approved by 3GPP TSG T3 and forwarded to 3GPP TSG T#25 for approval:

Doc-2nd-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Workitem
T3-040548	31.111	110	-	R99	Correction of possible terminal responses versus proactive commands in relation to the display of icons	F	3.12.0	3.13.0	TEI
T3-040550	31.111	115	-	Rel-6	Modifications in the reference	D	6.2.0	6.3.0	TEI
T3-040551	31.111	116	-	Rel-6	Alignement with requirements regarding USSD usage	F	6.2.0	6.3.0	USSD
T3-040552	31.111	122	-	Rel-6	Description of the USSD flow	F	6.2.0	6.3.0	USSD
T3-040555	31.111	117	-	R99	Essential corrections in content and coding of BC Repeat indicator	F	3.12.0	3.13.0	TEI
T3-040556	31.111	118	-	Rel-4	Essential corrections in content and coding of BC Repeat indicator	A	4.11.0	4.12.0	TEI
T3-040557	31.111	119	-	Rel-5	Essential corrections in content and coding of BC Repeat indicator	A	5.6.0	5.7.0	TEI
T3-040558	31.111	120	-	Rel-6	Essential corrections in content and coding of BC Repeat indicator	A	6.2.0	6.3.0	TEI
T3-040563	31.111	121	-	Rel-6	Add the Network measurement information for UTRAN in PROVIDE LOCAL INFORMATION functionality.	C	6.2.0	6.3.0	TEI
T3-040594	31.111	111	-	Rel-6	MMS Management by USAT	B	6.2.0	6.3.0	TEI
T3-040595	31.111	112	-	Rel-6	Correction of wording for call control	D	6.2.0	6.3.0	TEI
T3-040596	31.111	113	-	Rel-6	Alignement with SCP TS 102 223	B	6.2.0	6.3.0	TEI
T3-040602	31.111	114	-	Rel-6	Disallow SMS/SS/USSD transmission in the case where UICC responds with an error status code in Envelope Confirmation.	F	6.2.0	6.3.0	TEI

3GPP TSG-T3 Meeting #32
New York, USA, 10th – 13th April 2004

Tdoc ⌘T3-040548
(revised T3-040420)

CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** **110** ⌘ **rev** **-** ⌘ Current version: **3.12.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	CR 31.111 R99: Correction of possible terminal responses versus proactive commands in relation to the display of icons
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11/08/2004
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	3GPP TS 31.111, cl. 6.5.4 defines "If the SIM provides an icon identifier with a proactive command, then the ME shall inform the SIM if the icon could not be displayed by sending the general result "Command performed successfully, but requested icon could not be displayed". In contradiction cl. 6.11 (Proactive commands versus possible Terminal response) does not allow this return value for the proactive commands RUN AT COMMAND, LAUNCH BROWSER and SET UP IDLE MODE TEXT. 3GPP TS 31.111, cl. 6.6.31 does not define icon support for GET CHANNEL STATUS while cl. 6.11 allows the usage of "Command performed successfully, but requested icon could not be displayed" in combination with GET CHANNEL STATUS.
Summary of change:	⌘	Cl. 6.11 (Proactive commands versus possible Terminal response) adjusted to allow the return value "Command performed successfully, but requested icon could not be displayed" in combination with the proactive commands RUN AT COMMAND, LAUNCH BROWSER and SET UP IDLE MODE TEXT and to prevent the usage of "Command performed successfully, but requested icon could not be displayed" in combination with GET CHANNEL STATUS.
Consequences if not approved:	⌘	Inconsistency between the cl. 6.5.4 and 6.11 in relation with the proactive commands RUN AT COMMAND, LAUNCH BROWSER and SET UP IDLE MODE TEXT. Besides of this MEs can't use the same handling as for other proactive commands in case of problems to display icons. Furthermore it is not clear which return value shall be used in the terminal response if an icon can't be displayed. In case of the usage of an other error code it is unclear, how a SAT application has to handle this return code, because the result might be treated as

	worse than “requested icon could not be displayed” and the SAT application might therefore abort the execution of the proactive seesion in the worst case.

Clauses affected:	⌘	6.11			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

6.11 Proactive commands versus possible Terminal response

The following table shows for each proactive command the possible terminal response returned (marked by a "●" character).

Table 6.1: Proactive commands versus possible Terminal response (continued overleaf…)

		PROACTIVE COMMAND																			
	TERMINAL RESPONSE	REFRESH '01'	MORE TIME '02'	POLL INTERVAL '03'	POLLING OFF '04'	SETUP EVENT LIST '05'	SET UP CALL '10'	SEND SS '11'	SEND USSD '12'	SEND SMS '13'	SEND DTMF '14'	LAUNCH BROWSER '15'	PLAY TONE '20'	DISPLAY TEXT '21'	GET INKEY '22'	GET INPUT '23'	SELECT ITEM '24'	SET UP MENU '25'	PROVIDE LOCAL INFO '26'	TIMER MANAGEMENT '27'	SETUP IDLE MODE TEXT '28'
00	Command performed successfully	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
01	Command performed with partial comprehension	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
02	Command performed, with missing information	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
03	REFRESH performed with additional EFs read	●																			
04	Command performed succesfully, but requested icon could not be displayed						●	●	●	●	●	●	●	●	●	●	●	●			●
05	Command performed, but modified by call control by USIM						●	●	●												
06	Command performed successfully, limited service																		●		
07	Command performed with modification																				
08	REFRESH performed but indicated USIM was not active	●																			
10	Proactive UICC session terminated by the user						●				●		●	●	●	●	●				
11	Backward move in the proactive UICC session requested by the user													●	●	●	●				
12	No response from user													●	●	●	●				
13	Help information required by the user																				
14	USSD or SS Transaction terminated by user						●	●	●						●	●	●				
20	ME currently unable to process command	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
21	Network currently unable to process command						●	●	●	●		●									
22	User did not accept the proactive command						●					●									
23	User cleared down call before connection or network release						●														
24	Action in contradiction with the current timer state																			●	
25	Interaction with call control by USIM, temporary problem						●	●	●												
26	Launch browser generic error											●									
30	Command beyond MEs capabilities	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
31	Command type not understood by ME	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
32	Command data not understood by ME	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
33	Command number not known by ME	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
34	SS Return Error						●	●													
35	SMS RPERROR									●											
36	Error, required values are missing	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
37	USSD return error								●												
38	Multiple Card command error																				
39	Interaction with call/SM control by USIM, permanent problem						●	●	●	●											
3A	Bearer Independent Protocol error																				

Table 6.1: Proactive commands versus possible Terminal response

		PROACTIVE COMMAND													
		CARD APDU	POWER ON CARD	POWER OFF CARD	GET READ-ER STATUS	RUN AT COMM-AND	LANG NOTIFI CA TION	OPEN CHANN EL	CLOSE CHANN EL	RECEIVE DATA	SEND DATA	GET CHANN EL STATUS			
TERMINAL RESPONSE		'30'	'31'	'32'	'33'	'34'	'35'	'40'	'41'	'42'	'43'	'44'			
00	Command performed successfully	•	•	•	•	•	•	•	•	•	•	•			
01	Command performed with partial comprehension	•	•	•	•	•	•	•	•	•	•	•			
02	Command performed, with missing information	•	•	•	•	•	•	•	•	•	•	•			
03	REFRESH performed with additional EFs read														
04	Command performed succesfully, but requested icon could not be displayed					•		•	•	•	•	•			
05	Command performed, but modified by call control by USIM														
06	Command performed successfully, limited service														
07	Command performed with modification							•							
08	REFRESH performed but indicated USIM was not active							•							
10	Proactive UICC session terminated by the user							•	•	•	•	•			
11	Backward move in the proactive UICC session requested by the user														
12	No response from user														
13	Help information required by the user														
14	USSD or SS Transaction terminated by user														
20	ME currently unable to process command	•	•	•	•	•	•	•	•	•	•	•			
21	Network currently unable to process command							•			•				
22	User did not accept the proactive command							•							
23	User cleared down call before connection or network release														
24	Action in contradiction with the current timer state														
25	Interaction with call control by USIM, temporary problem							•							
26	Launch browser generic error														
30	Command beyond MEs capabilities	•	•	•	•	•	•	•	•	•	•	•			
31	Command type not understood by ME	•	•	•	•	•	•	•	•	•	•	•			
32	Command data not understood by ME	•	•	•	•	•	•	•	•	•	•	•			
33	Command number not known by ME	•	•	•	•	•	•	•	•	•	•	•			
34	SS Return Error														
35	SMS RPERROR														
36	Error, required values are missing	•	•	•	•	•	•	•	•	•	•	•			
37	USSD return error														
38	Multiple Card command error	•	•	•	•										
39	Interaction with call/SM control by USIM, permanent problem														
3A	Bearer Independent Protocol error							•	•	•	•				

3GPP TSG T WG3 Meeting #32
New York, USA, 10th – 13th August 2004

T3-040550
(revised from T3-040492)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **115** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Modifications in the reference
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	12/08/2004
Category:	⌘	**D**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Disused references and a nonessential note
Summary of change:	⌘	Replaced disused references by “Void” and Note removed, added reference in the definition and abbreviation chapter.
Consequences if not approved:	⌘	Disused references, a nonessential note within the specification and missed references in the definition and abbreviation chapter.

Clauses affected:	⌘	2; 3.1; 3.2.

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

Other comments: ⌘

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

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

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

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

2 References

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- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

[1] 3GPP TS 22.002: "Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)".

[2] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".

[3] 3GPP TS 22.042: "Network Identity and Time Zone (NITZ); Service description; Stage 1".

[4] 3GPP TS 23.038: "Alphabets and language-specific information".

[5] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[6] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[7] 3GPP TS 23.122: "Non-Access Stratum functions related to Mobile Station (MS) in idle mode".

[8] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[9] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".

[10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[11] 3GPP TS 24.080: "Mobile radio layer 3 supplementary services specification; Formats and coding".

[12] 3GPP TS 27.007: "AT command set for 3G User Equipment (UE)".

[13] 3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics".

[14] 3GPP TS 31.102: "Characteristics of the USIM application".

[15] Void.~~3GPP TS 31.110: "Numbering system for telecommunication IC card applications".~~

[16] Void.~~ISO/IEC 7816-3 (1997): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols".~~

[17] Void.~~ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".~~

[18] Void.~~ISO/IEC 7816-6 (1995): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".~~

[19] Void.~~ISO 639 (1988): "Codes for the representation of names of languages".~~

[20] Void.

~~[20] GSM 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features".~~

[21] Void.~~3GPP TS 42.017: "Subscriber Identity Modules; Functional characteristics".~~

[22] 3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".

[23] 3GPP TS 23.048: "Security Mechanisms for the (U)SIM application toolkit; Stage 2".

[24] Void.~~IETF RFC 1738: "Uniform Resource Locators (URL).~~

[25] Void.~~IETF RFC 768: "User Datagram Protocol".~~

[26] Void.~~IETF RFC 793: "Transmission Control Protocol".~~

[27] 3GPP TS 44.018: "Mobile radio interface Layer 3 specification; Radio Resource Control Protocol".

[28] Void.~~"Specification of the Bluetooth system; Profiles part" http://www.virelex.com/bluetooth/specification.asp;~~

[29] Void.~~TIA/EIA-136-123 (April 2001): "Third Generation Wireless - Digital Control Channel Layer 3".~~

[30] 3GPP TS 23.003: "Numbering, addressing and identification".

[31] Void.~~TIA/EIA/IS-820: "Removable User Identity Module (R-UIM) for TIA/EIA Spread Spectrum Standards".~~

[32] ETSI TS 102 223: "Smart Cards; Card Application Toolkit".

[33] 3GPP TR 21.905: "Vocabulary for 3GPP specifications".

[34] 3GPP TS 22.101: "Service aspects; Service principles".

[35] 3GPP TS 25.401: "UTRAN overall description".

[36] 3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 102 223 [32] and TR 21.905 [33] apply.

3.2 Abbreviations

For the purpose of the present document, the abbreviations given in TS 102 223 [32] and TR 21.905 [33] and the following apply:

ADN	Abbreviated Dialling Number
CB	Cell Broadcast
CBMID	Cell Broadcast Message IDentifier
EGPRS	EDGE General Packet Radio Service
FDN	Fixed Dialling Number
GGSN	Gateway GPRS Support Node
GPRS	General Packet Radio Service
GSM	Global System for Mobile communications
PDP	Packet Data Protocol, e.g., Ip or X25 or PPP
RFU	Reserved for Future Use
SS	Supplementary Service
SSC	Supplementary Service Control string
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Service Data

3GPP TSG-T3 Meeting #32
New York, USA, 10 - 13 August 2004

Tdoc ⌘ T3-040551

CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** 116 ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

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Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title: ⌘	Alignement with requirements regarding USSD usage	
Source: ⌘	T3	
Work item code: ⌘	USSD	***Date:*** ⌘ 13/08/2004
Category: ⌘	**F**	***Release:*** ⌘ Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘

In the TS 22.090 it is stated that a USSD message which arrives to the ME shall be able to arrive to the UICC:

"***6.3.2 Action at the mobile station***

The MS shall pass the message to the ME, to the SIM/USIM or to the TE as indicated in the message."

Another requirement exists in the TS 23.090:

"***5.2.5 Handling of unstructured SS operation at the MS***

(…)If the data coding schemes corresponds to the application mode :

- *For a USSD request, the MS shall pass the message to the application addressed in the ME, SIM or TE, and await application response . If the application responds, the MS shall pass the response to the MSC, maintaining the transaction. If the application releases the transaction, the MS shall release the transaction.*
- *For a USSD notification, the MS shall pass the message to the application addressed in the ME, SIM or TE, and send back a response."*

But in the present TS 31.111, there is no way to transfer the USSD message to the SIM as asked by these requirements.

In order to permit a dialogue between the nework and the UICC when it begins a USSD dialogue; it shall be possible for the ME to inform the UICC that a

		FACILITY message containing some information requests has been sent by the Network.
Summary of change:	⌘	To be able to transfer the message to the card, an envelope command is introduced. The SEND USSD command is modified, and should now treat a Facility message containing a USSD request.
Consequences if not approved:	⌘	Inconsistancy with the requirements will remain.

Clauses affected:	⌘	2 – 5.2 – 6.4.12 – 7.x(new) – 8.17 – 9.1				
Other specs affected:	⌘	**Y**	**N**		⌘	31.102
		X		Other core specifications		
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘	Linked to T3-040603 on 31.102				

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[2] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".

…

[35] 3GPP TS 25.401: "UTRAN overall description".

[36] 3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

[XX] 3GPP TS 24.090: "Unstructured Supplementary Service Data (USSD) - Stage 3".

[…]

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

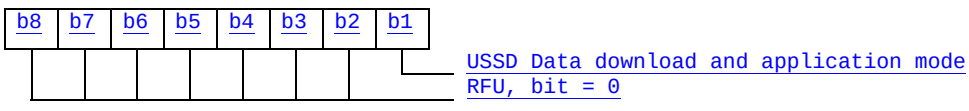
Command parameters/data:

Description	Clause	M/O/C	Length
Profile	-	M	lgth

- Profile:

[…]

nth byte:



Subsequent bytes:

- See TS 102 223 [32].

Response parameters/data:

- None.

[…]

6.4.12 SEND USSD

6.4.12.X MMI Mode

Upon receiving this command, the ME shall decide if it is able to execute the command. Examples are given below, but the list is not exhaustive:

- if the command is rejected because the ME is busy on a USSD transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on USSD transaction);
- if the command is rejected because the ME is busy on a SS transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on SS transaction).

If the ME is able to send the USSD request, the ME shall:

- send the USSD immediately, without need to alert the user first;
- optionally, the UICC may include in this command an alpha-identifier. The use of this alpha-identifier by the ME is described below:
  - if the alpha identifier is provided by the UICC and is not a null data object, the ME shall use it to inform the user. This is also an indication that the ME should not give any other information to the user on the fact that the ME is sending a USSD request. If an icon is provided by the UICC, the icon indicated in the command may be used by the ME to inform the user, in addition to, or instead of the alpha identifier, as indicated with the icon qualifier (see clause 6.5.4);
  - if the alpha identifier is provided by the UICC and is a null data object (i.e. length = '00' and no value part), this is an indication that the ME should not give any information to the user on the fact that the ME is sending a USSD request;
  - if the alpha identifier is not provided by the UICC, the ME may give information to the user concerning what is happening.
- once the USSD transaction is initiated, a dialogue between the network and the user may occur which involves the MMI of the ME. If an alpha identifier was initially provided by the UICC, this alpha identifier may be discarded during this dialogue;
- once a RELEASE COMPLETE message containing the USSD Return Result message not containing an error has been received from the network, the ME shall inform the UICC that the command has been successfully executed, using TERMINAL RESPONSE. This command shall include the text contained in the USSD Return Result in a Text String data object. If a null alpha identifier was provided by the UICC, the ME should not give any information to the user at the reception of a USSD Return Result message;
- if the UE clears the transaction by sending a RELEASE COMPLETE upon request of the user, the ME shall inform the UICC using TERMINAL RESPONSE (USSD transaction terminated by user);
- if the USSD operation is rejected because the network cannot support or is not allowing mobile initiated USSD, the ME informs the UICC using TERMINAL RESPONSE (USSD Return Result error code). If a null alpha identifier was provided by the UICC, the ME should not give any information to the user at the reception of a USSD Return Result message;

- if the USSD request is unsuccessfully received by the network, the ME shall inform the UICC using TERMINAL RESPONSE (network currently unable to process command), and not retry to send the request. If a null alpha identifier was provided by the UICC, the ME should not give any information to the user at the reception of a USSD Return Result message.

6.4.12.Y Application Mode

A USSD is considered as Application Mode (Send USSD used for the transport of Data to the network) if the service "data download via USSD and USSD application mode" is allocated and activated in the USIM Service Table (see TS 31.102 [14]) and the DCS coding within the USSD string TLV is set to 8 bit data.

Upon receiving this command, the ME shall decide if it is able to execute the command. Examples are given below, but the list is not exhaustive:

- if the command is rejected because the ME is busy on a USSD transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on USSD transaction);

- if the command is rejected because the ME is busy on a SS transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on SS transaction).

If the ME is able to send the USSD request then the ME shall:

- send the USSD immediately, without need to alert the user first;

- optionally, the UICC may include in this command an alpha-identifier. The use of this alpha-identifier by the ME is described below:

  - if the alpha identifier is provided by the UICC and is not a null data object, the ME shall use it to inform the user. This is also an indication that the ME should not give any other information to the user on the fact that the ME is sending a USSD request. If an icon is provided by the UICC, the icon indicated in the command may be used by the ME to inform the user, in addition to, or instead of the alpha identifier, as indicated with the icon qualifier (see clause 6.5.4);

  - if the alpha identifier is provided by the UICC and is a null data object (i.e. length = '00' and no value part), this is an indication that the ME should not give any information to the user on the fact that the ME is sending a USSD request;

  - if the alpha identifier is not provided by the UICC, the ME may give information to the user concerning what is happening.

- once a FACILITY (including RELEASE COMPLETE) message containing a USSD Request message has been received from the network, the ME shall inform the UICC that the network requests more information , using the command ENVELOPE (USSD Data Download). This command shall include the text contained in the USSD Request in a Text String data object. If a null alpha identifier was provided by the UICC, the ME should not give any information to the user at the reception of a USSD Request message

[…]

7.x USSD Data Download

7.x.1 Procedure

If the service "data download via USSD and USSD application mode" is allocated and activated in the USIM Service Table (see TS 31.102 [14]), then the ME shall follow the procedure below:

When the ME receives a USSD packet it shall pass the message transparently to the USIM using the ENVELOPE (USSD DOWNLOAD) if the Data Coding Scheme of the USSD message (as defined in the General Data Coding Indication described for the CBS / USSD DSC in TS 23.038 [4]) indicate the USIM as the target:

- The ME shall wait for an acknowledgement from the USIM:

- if the UICC responds with '90 00', the ME shall acknowledge the receipt of USSD message to the network using a FACILITY message. The ME will supply the response data from the UICC in the USSD String of the return result component of the FACILITY message it will send back to the network (see TS 24.090 [XX]). The alphabet and language indicators shall be those used in the original message.

- If the USIM responds with '93 00', the ME shall either retry the command or send back a FACILITY message to the network. The ME will supply the status word followed by the response data from the UICC in the USSD String of the return result component of the FACILITY message it will send back to the network (see TS 24.090 [XX]). The alphabet and language indicators shall be those used in the original message.

- if the UICC responds with '62 XX' or '63 XX', the ME shall acknowledge the receipt of the USSD message to the network using a FACILITY message. The ME will supply the status word followed by the response data from the UICC in the USSD String of the return result component of the FACILITY message it will send back to the network (see TS 24.090 [XX]). The alphabet and language indicators shall be those used in the original message.

If the service "data download via USSD and USSD application mode " is not allocated and activated in the USIM Service Table, and the ME receives a USSD message with a Data Coding Scheme indicating that the destination is the card (as defined above), the ME shall return a FACILITY message to the network. The ME will supply the status word '6D 00' (i.e. Instruction code not supported or invalid) in the USSD String of the return result component of the FACILITY message it will send back to the network (see TS 24.090 [XX]). The alphabet and language indicators shall be those used in the original message.

7.x.2 Structure of ENVELOPE (USSD Data Download)

Direction: ME to UICC

The command header is specified in TS 31.101 [13].

Command parameters/data:

Description	Section	M/O	Min	Length
USSD Download tag	9.1	M	Y	1
Length (A+B)	-	M	Y	1 or 2
Device identities	8.7	M	Y	A
USSD string	8.17	M	Y	B

- Device identities: the ME shall set the device identities to:
  Source: Network
  Destination: UICC

Response parameters/data:

It is permissible for the UICC not to provide response data. If the UICC provides response data, the following data is returned.

Byte(s)	Description	Length
1-X (X≤182)	UICC response	X

[…]

8.17 USSD string

Byte(s)	Description	Length
1	USSD string tag	1
2 to (Y-1)+2	Length (X)	Y
(Y-1)+3	Data coding scheme	1
(Y-1)+4 to (Y-1)+X+2	USSD string	X-1

The Data coding scheme is coded as for Cell Broadcast defined in 3GPP TS 23.038 [4]. The coding of the USSD string is defined in 3GPP TS 22.030 [2].

Note: the MMI mode uses a 7 bit character set, the Application mode uses a 8 bit character set.

[…]

9.1 BER-TLV tags in ME to UICC direction

Description	Length of tag	Value
SMS-PP download tag	1	'D1'
Cell Broadcast download tag	1	'D2'
MO Short message control tag	1	'D5'
USSD download tag	1	'xx'

3GPP TSG-T3 Meeting #32
New York, USA, 10 - 13 August 2004

Tdoc ⌘ T3-040552

CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** **122** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Description of the USSD flow
Source:	⌘	T3
Work item code:	⌘	USSD
Date:	⌘	11/08/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	It might not be easy to find the information in the USSD specifications and to understand the USSD flow between Network, ME and UICC
Summary of change:	⌘	An informative annex is created, with several examples of USSD flows
Consequences if not approved:	⌘	Misunderstanding might happen on how USSD works

Clauses affected:	⌘	Annex X (new)

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

Other comments: ⌘

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

Annex X (informative): USSD information flow between the Network, the ME and the UICC

X.1 MMI Mode

Mobile initiated USSD operation, Nentwork does not request further information

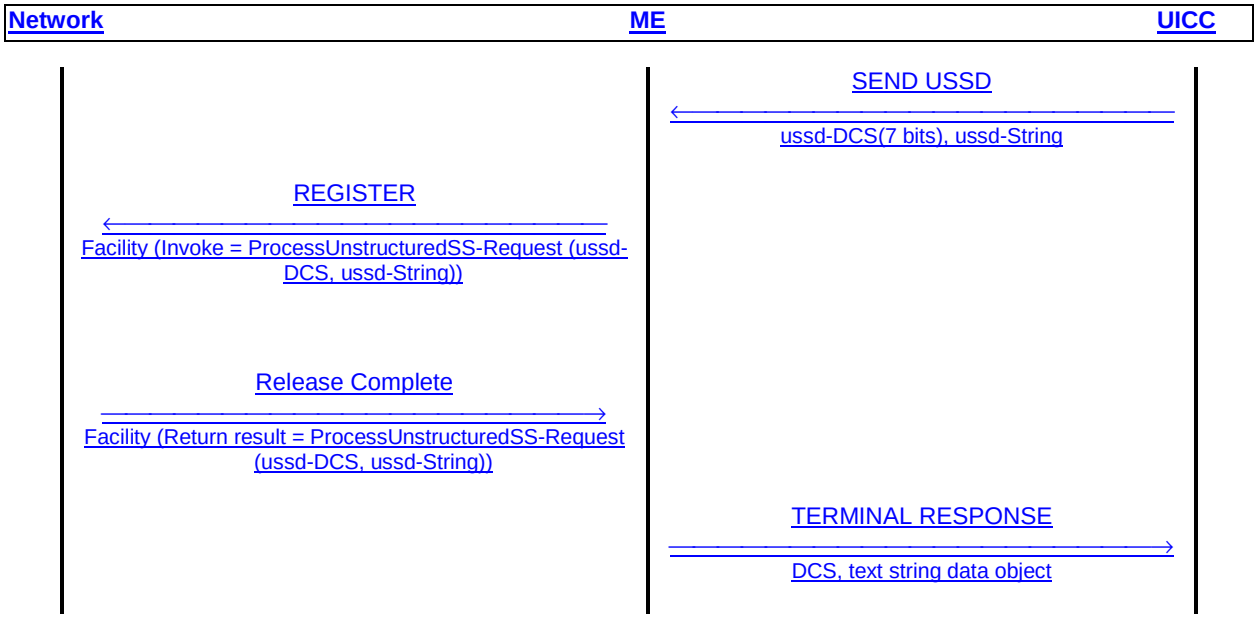


Figure X.1

Mobile initiated USSD operation, Network requests further information

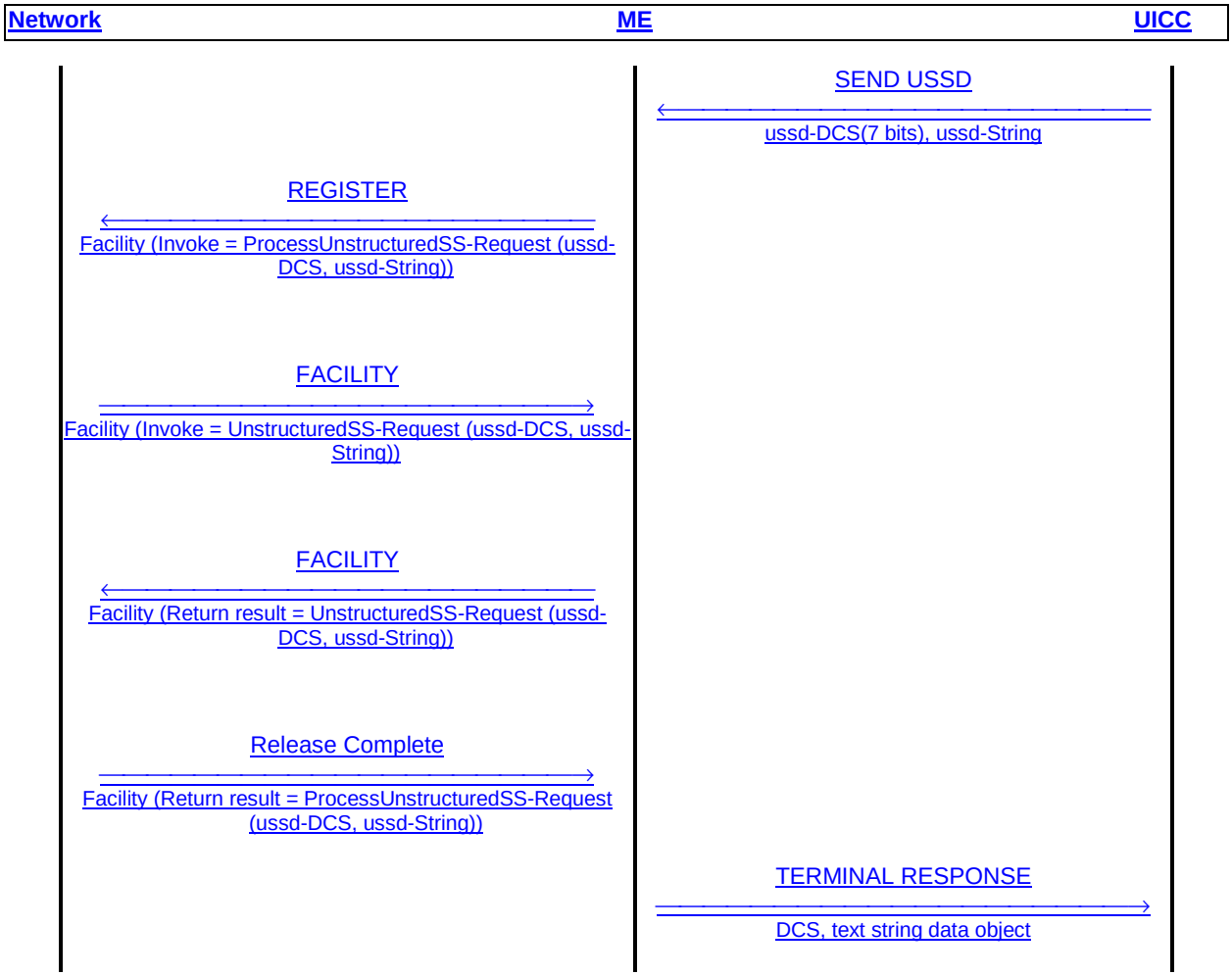


Figure X.2

X.2 Application Mode

Mobile initiated USSD operation, Network does not request further information

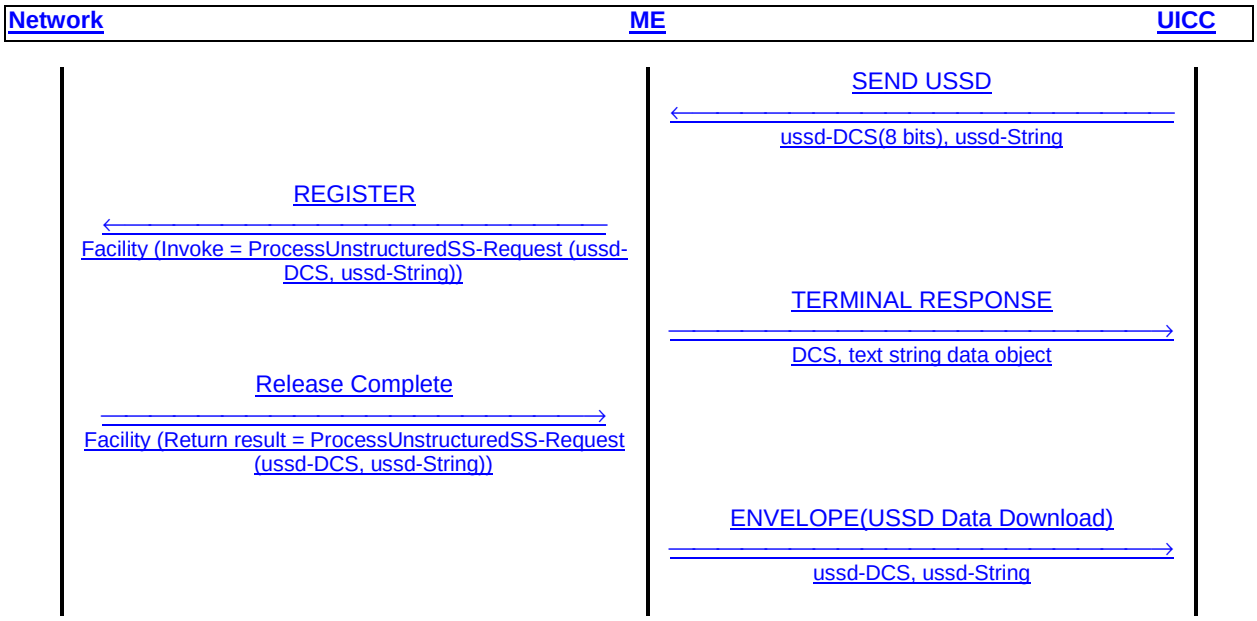


Figure X.3

Mobile initiated USSD operation, Network requests further information

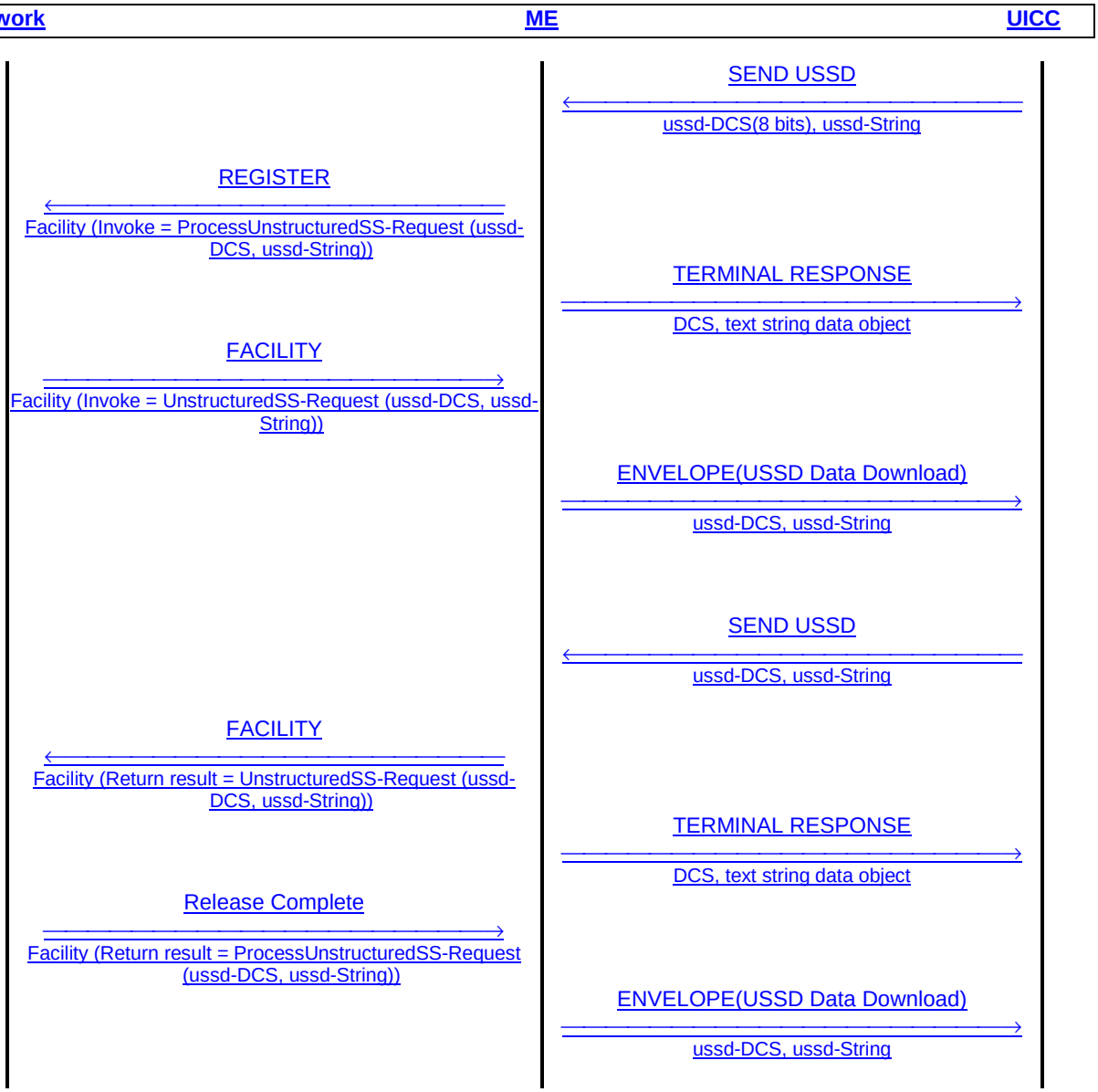


Figure X.4

X.3 USSD Data Download

Network initiated USSD operation

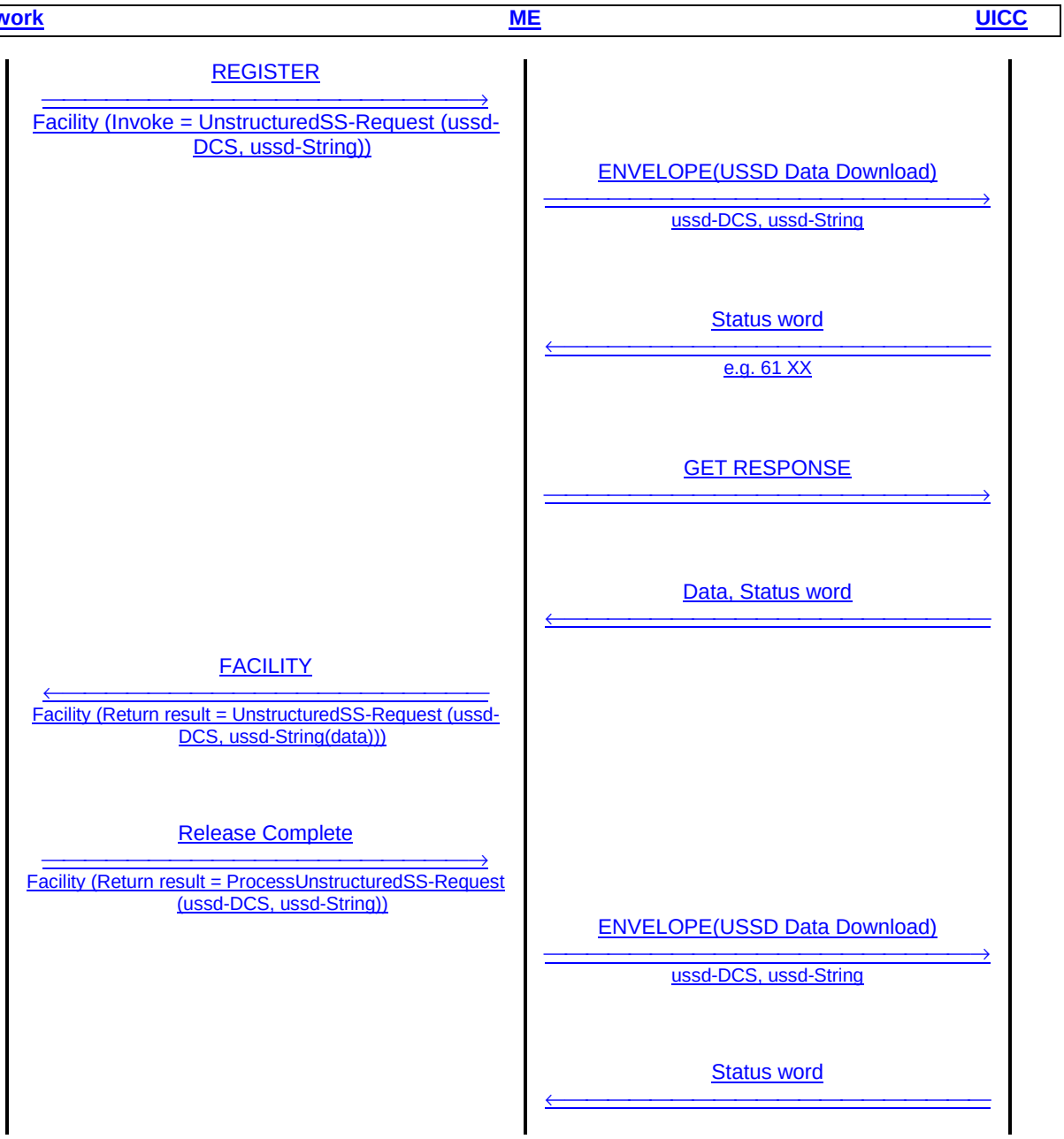


Figure X.5

3GPP TSG T WG3 Meeting #32
New York, USA, 10th – 13th August 2004

T3-040555
(revised from T3-040501)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **117** ⌘ **rev** **-** ⌘ Current version: **3.12.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Essential corrections in content and coding of BC Repeat indicator
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	12/08/2004
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	(1) The coding of sequential mode in BC repeat indicator was used in R98 and older releases. It was removed from TS 24.008 in R99. (2) A new mode was added in TS 24.008 R99
Summary of change:	⌘	Deleted the description of modes and the corresponding codings in this specification
Consequences if not approved:	⌘	Inconsistence of TS 31.111 and TS 24.008 (TS 04.08) and therefore a high risk of misinterpretation of the specification: - sequential mode was removed in TS 24.008 (TS 04.08) but is mentioned in TS 31.111 - fallback mode (coded as '02') was added in TS 24.008 but is not mentioned in TS 31.111
Clauses affected:	⌘	7.3.1.6; 8.42.

Other specs affected:	Y	N			
⌘	X		Other core specifications	⌘	TS 11.14; TS 51.014
		X	Test specifications		
		X	O&M Specifications		

Other comments:	⌘	

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

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

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

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

7.3.1.6 Structure of ENVELOPE (CALL CONTROL)

Direction: ME to UICC.

The command header is specified in TS 31.101 [13].

[…]

Response parameters/data.

It is permissible for the UICC to provide no response data, by responding with SW1 / SW2 = '90 00'. If the UICC does not provide any response data, then this shall have the same meaning as "allowed, no modification".

Description	Clause	M/O/C	Min	Length
Call control result	-	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Address or SS string or USSD string	8.1, 8.14 or 8.17	O	N	A
Capability configuration parameters 1	8.4	O	N	B
Subaddress	8.3	O	N	C
Alpha identifier	8.2	O	N	D
BC repeat indicator	8.42	C	N	E
Capability configuration parameters 2	8.4	O	N	F

- Call control result:
  - contents: the command that the UICC gives to the ME concerning whether to allow, bar or modify the proposed call (or supplementary service operation);
  - Coding:
    - '00' = Allowed, no modification;
    - '01' = Not allowed;
    - '02' = Allowed with modifications.
- Address or SS string or USSD string: Only one data object may be included if the UICC requests the call (or supplementary service or USSD operation) details to be modified:
  - for a call set-up, if the address data object is not present, then the ME shall assume the Dialling number is not to be modified;
  - if the SS string data object or address data object is present and the ME receives wild values according to 3GPP TS 31.102 [14], then the ME shall not process the command.
  - for a supplementary service, if the SS string data object is not present, then the ME shall assume that SS is not to be modified;
  - for a USSD operation, if the USSD string data object is not present, then the ME shall assume that the USSD operation is not to be modified.
- Capability configuration parameters: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. The first capability configuration parameters corresponds to the bearer capability 1 information element of a mobile originating SETUP message, as defined in 3G 24.008 [9]. The second capability configuration parameters corresponds to the bearer capability 2 information element of a mobile originating SETUP message, as defined in 3G 24.008 [9]. If the capability configuration parameters are not present, then the ME shall assume the parameters are not to be modified.

- Subaddress: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. If the subaddress is not present, then the ME shall assume the called party subaddress is not to be modified. If the subaddress supplied by the USIM application is a null data object, then the ME shall not provide a called party subaddress to the network. A null data object shall have length = '00' and no value part.

- Alpha identifier: this data object is only required if the UICC requests a particular indication to be given to the user. The handling of this data object by the ME is described in clause 7.3.1.3. The comprehension required flag of this data object shall be set to '0'.

- BC repeat indicator: indicates how the ~~2~~ associated bearers shall be interpreted. ~~The two modes to manage the bearers are the "alternate way" or "sequential way".~~ The change of bearer occurs on a network event. This BC repeat indicator is conditioned to the presence of the second capability configuration parameters and is coded as defined in 3G 24.008 [9].

It is mandatory for the UICC to provide at least one of the optional data objects if it has set the Call control result to "allowed with modifications".

8 SIMPLE-TLV data objects

[…]

8.42 BC Repeat indicator

Byte(s)	Description	Length
1	BC repeat indicator tag	1
2	Length	1
3	BC repeat indicator values	1

- Contents & coding: The BC repeat indicator is structured exactly as defined in 3G 24.008 [08]~~, which may be alternate mode or sequential mode~~.

~~Coding:~~

~~'01' = Alternate mode;~~

~~'03' = Sequential mode.~~

3GPP TSG T WG3 Meeting #32
New York, USA, 10th – 13th August 2004

T3-040556
(revised from T3-040502)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **118** ⌘ **rev** **-** ⌘ Current version: **4.11.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Essential corrections in content and coding of BC Repeat indicator
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	12/08/2004
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 (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)
Rel-7 (Release 7)

Reason for change:	⌘	(1) The coding of sequential mode in BC repeat indicator was used in R98 and older releases. It was removed from TS 24.008 in R99. (2) A new mode was added in TS 24.008 R99
Summary of change:	⌘	Deleted the description of modes and the corresponding codings in this specification
Consequences if not approved:	⌘	Inconsistence of TS 31.111 and TS 24.008 and therefore a high risk of misinterpretation of the specification: - sequential mode was removed in TS 24.008 but is mentioned in TS 31.111 - fallback mode (coded as '02') was added in TS 24.008 R99 and later releases but is not mentioned in TS 31.111
Clauses affected:	⌘	7.3.1.6; 8.42.

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

Other comments: ⌘

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

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

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

7.3.1.6 Structure of ENVELOPE (CALL CONTROL)

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

[…]

Response parameters/data.

It is permissible for the UICC to provide no response data, by responding with SW1/SW2 = '90 00'. If the UICC does not provide any response data, then this shall have the same meaning as "allowed, no modification".

Description	Clause	M/O/C	Min	Length
Call control result	-	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Address or SS string or USSD string	8.1, 8.14 or 8.17	O	N	A
Capability configuration parameters 1	8.4	O	N	B
Subaddress	8.3	O	N	C
Alpha identifier	8.2	O	N	D
BC repeat indicator	8.42	C	N	E
Capability configuration parameters 2	8.4	O	N	F

- Call control result:

  Contents:

  - The command that the UICC gives to the ME concerning whether to allow, bar or modify the proposed call (or supplementary service operation);

  Coding:

  - '00' = Allowed, no modification;
  - '01' = Not allowed;
  - '02' = Allowed with modifications.

- Address or SS string or USSD string: Only one data object may be included if the UICC requests the call (or supplementary service or USSD operation) details to be modified:

  - for a call set-up, if the address data object is not present, then the ME shall assume the Dialling number is not to be modified;
  - if the SS string data object or address data object is present and the ME receives wild values according to 3GPP TS 31.102 [14], then the ME shall not process the command.
  - for a supplementary service, if the SS string data object is not present, then the ME shall assume that SS is not to be modified;
  - for a USSD operation, if the USSD string data object is not present, then the ME shall assume that the USSD operation is not to be modified.

- Capability configuration parameters: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. The first capability configuration parameters corresponds to the bearer capability 1 information element of a mobile originating SETUP message, as defined in 3GPP TS 24.008 [9]. The second capability configuration parameters corresponds to the bearer capability 2 information element of a mobile originating SETUP message, as defined in 3GPP TS 24.008 [9]. If the capability configuration parameters are not present, then the ME shall assume the parameters are not to be modified.

- Subaddress: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. If the subaddress is not present, then the ME shall assume the called party subaddress is not to be modified. If the subaddress supplied by the USIM application is a null data object, then the ME shall not provide a called party subaddress to the network. A null data object shall have length = '00' and no value part.

- Alpha identifier: this data object is only required if the UICC requests a particular indication to be given to the user. The handling of this data object by the ME is described in clause 7.3.1.3. The comprehension required flag of this data object shall be set to '0'.

- BC repeat indicator: indicates how the ~~2~~ associated bearers shall be interpreted. ~~The two modes to manage the bearers are the "alternate way" or "sequential way".~~ The change of bearer occurs on a network event. This BC repeat indicator is conditioned to the presence of the second capability configuration parameters and is coded as defined in 3GPP TS 24.008 [9].

It is mandatory for the UICC to provide at least one of the optional data objects if it has set the Call control result to "allowed with modifications".

[…]

8 SIMPLE-TLV data objects

The coding of the TLV objects is as described in TS 102 223 [32], except when stated otherwise in the present document.

[…]

8.42 BC Repeat indicator

Byte(s)	Description	Length
1	BC repeat indicator tag	1
2	Length	1
3	BC repeat indicator values	1

Contents & coding:

- The BC repeat indicator is structured exactly as defined in TS 24.008 [08]~~, which may be alternate mode or sequential mode~~.

~~Coding:~~

~~'01' = Alternate mode;~~

~~'03' = Sequential mode.~~

3GPP TSG T WG3 Meeting #32
New York, USA, 10th – 13th August 2004

T3-040557
(revised from T3-040503)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **119** ⌘ **rev** **-** ⌘ Current version: **5.6.0** ⌘

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

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Essential corrections in content and coding of BC Repeat indicator
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	12/08/2004
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	(1) The coding of sequential mode in BC repeat indicator was used in R98 and older releases. It was removed from TS 24.008 in R99. (2) A new mode was added in TS 24.008 R99 (3) Another new mode was added in TS 24.008 Rel-5
Summary of change:	⌘	Deleted the description of modes and the corresponding codings in this specification
Consequences if not approved:	⌘	Inconsistence of TS 31.111 and TS 24.008 and therefore a high risk of misinterpretation of the specification: - sequential mode was removed in TS 24.008 but is mentioned in TS 31.111 - fallback mode (coded as '02') was added in TS 24.008 R99 and later releases but is not mentioned in TS 31.111 - Service change and fallback mode (coded as '04') was added in TS 24.008 Rel-5 but is not mentioned in TS 31.111
Clauses affected:	⌘	7.3.1.6; 8.42.

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

Other comments:	⌘	

How to create CRs using this form:

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

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

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

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

7.3.1.6 Structure of ENVELOPE (CALL CONTROL)

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

[…]

Response parameters/data.

It is permissible for the UICC to provide no response data, by responding with SW1/SW2 = '90 00'. If the UICC does not provide any response data, then this shall have the same meaning as "allowed, no modification".

Description	Clause	M/O/C	Min	Length
Call control result	-	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Address or SS string or USSD string or PDP context activation parameters	8.1, 8.14 or 8.17 or 8.72	O	N	A
Capability configuration parameters 1	8.4	O	N	B
Subaddress	8.3	O	N	C
Alpha identifier	8.2	O	N	D
BC repeat indicator	8.42	C	N	E
Capability configuration parameters 2	8.4	O	N	F

- Call control result:

  Contents:

  - The command that the UICC gives to the ME concerning whether to allow, bar or modify the proposed call (or supplementary service operation);

  Coding:

  - '00' = Allowed, no modification;
  - '01' = Not allowed;
  - '02' = Allowed with modifications.

- Address or SS string or USSD string or PDP context activation parameters: Only one data object may be included if the UICC requests the call (or supplementary service or USSD operation or PDP context activation) details to be modified:

  - for a call set-up, if the address data object is not present, then the ME shall assume the Dialling number is not to be modified;
  - if the SS string data object or address data object is present and the ME receives wild values according to 3GPP TS 31.102 [14], then the ME shall not process the command.
  - for a supplementary service, if the SS string data object is not present, then the ME shall assume that SS is not to be modified;
  - for a USSD operation, if the USSD string data object is not present, then the ME shall assume that the USSD operation is not to be modified.
  - for a PDP context activation, if the PDP context activation parameters object is not present, then the ME shall assume that the PDP context activation is not to be modified.

- Capability configuration parameters: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. The first capability configuration parameters corresponds to the bearer capability 1 information element of a mobile originating SETUP message, as defined in 3GPP TS 24.008 [9]. The second capability configuration parameters corresponds to the bearer capability 2 information element of a mobile originating SETUP message, as defined in 3GPP TS 24.008 [9]. If the

capability configuration parameters are not present, then the ME shall assume the parameters are not to be modified.

- Subaddress: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. If the subaddress is not present, then the ME shall assume the called party subaddress is not to be modified. If the subaddress supplied by the USIM application is a null data object, then the ME shall not provide a called party subaddress to the network. A null data object shall have length = '00' and no value part.

- Alpha identifier: this data object is only required if the UICC requests a particular indication to be given to the user. The handling of this data object by the ME is described in clause 7.3.1.3. The comprehension required flag of this data object shall be set to '0'.

- BC repeat indicator: indicates how the ~~2~~ associated bearers shall be interpreted. ~~The two modes to manage the bearers are the "alternate way" or "sequential way".~~ The change of bearer occurs on a network event. This BC repeat indicator is conditioned to the presence of the second capability configuration parameters and is coded as defined in 3GPP TS 24.008 [9].

It is mandatory for the UICC to provide at least one of the optional data objects if it has set the Call control result to "allowed with modifications".

[…]

8 SIMPLE-TLV data objects

The coding of the TLV objects is as described in TS 102 223 [32], except when stated otherwise in the present document.

[…]

8.42 BC Repeat indicator

Byte(s)	Description	Length
1	BC repeat indicator tag	1
2	Length	1
3	BC repeat indicator values	1

Contents & coding:

- The BC repeat indicator is structured exactly as defined in 3GPP TS 24.008 [08]~~, which may be alternate mode or sequential mode~~.

~~Coding:~~

~~'01' = Alternate mode;~~

~~'03' = Sequential mode.~~

3GPP TSG T WG3 Meeting #32
New York, USA, 10th – 13th August 2004

T3-040558
(revised from T3-040504)

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **120** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Essential corrections in content and coding of BC Repeat indicator
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	12/08/2004
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	(1) The coding of sequential mode in BC repeat indicator was used in R98 and older releases. It was removed from TS 24.008 in R99. (2) A new mode was added in TS 24.008 R99 (3) Another new mode was added in TS 24.008 Rel-5
Summary of change:	⌘	Deleted the description of modes and the corresponding codings in this specification
Consequences if not approved:	⌘	Inconsistence of TS 31.111 and TS 24.008 and therefore a high risk of misinterpretation of the specification: - sequential mode was removed in TS 24.008 but is mentioned in TS 31.111 - fallback mode (coded as '02') was added in TS 24.008 R99 and later releases but is not mentioned in TS 31.111 - Service change and fallback mode (coded as '04') was added in TS 24.008 Rel-5 but is not mentioned in TS 31.111
Clauses affected:	⌘	7.3.1.6; 8.42.

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

Other comments: ⌘ .

How to create CRs using this form:

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

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

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

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

7.3.1.6 Structure of ENVELOPE (CALL CONTROL)

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

[…]

Response parameters/data.

It is permissible for the UICC to provide no response data, by responding with SW1/SW2 = '90 00'. If the UICC does not provide any response data, then this shall have the same meaning as "allowed, no modification".

Description	Clause	M/O/C	Min	Length
Call control result	-	M	Y	1
Length (A+B+C+D+E+F)	-	M	Y	1 or 2
Address or SS string or USSD string or PDP context activation parameters	8.1, 8.14 or 8.17 or 8.72	O	N	A
Capability configuration parameters 1	8.4	O	N	B
Subaddress	8.3	O	N	C
Alpha identifier	8.2	O	N	D
BC repeat indicator	8.42	C	N	E
Capability configuration parameters 2	8.4	O	N	F

- Call control result:

  Contents:

  - The command that the UICC gives to the ME concerning whether to allow, bar or modify the proposed call (or supplementary service operation);

  Coding:

  - '00' = Allowed, no modification;
  - '01' = Not allowed;
  - '02' = Allowed with modifications.

- Address or SS string or USSD string or PDP context activation parameters: Only one data object may be included if the UICC requests the call (or supplementary service or USSD operation or PDP context activation) details to be modified:

  - for a call set-up, if the address data object is not present, then the ME shall assume the Dialling number is not to be modified;
  - if the SS string data object or address data object is present and the ME receives wild values according to 3GPP TS 31.102 [14], then the ME shall not process the command.
  - for a supplementary service, if the SS string data object is not present, then the ME shall assume that SS is not to be modified;
  - for a USSD operation, if the USSD string data object is not present, then the ME shall assume that the USSD operation is not to be modified.
  - for a PDP context activation, if the PDP context activation parameters object is not present, then the ME shall assume that the PDP context activation is not to be modified.

- Capability configuration parameters: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. The first capability configuration parameters corresponds to the bearer capability 1 information element of a mobile originating SETUP message, as defined in 3GPP TS 24.008 [9]. The second capability configuration parameters corresponds to the bearer capability 2 information element of a mobile originating SETUP message, as defined in 3GPP TS 24.008 [9]. If the

capability configuration parameters are not present, then the ME shall assume the parameters are not to be modified.

- Subaddress: Only used for a call set-up, this data object is only required if the USIM application requests the call details to be modified. If the subaddress is not present, then the ME shall assume the called party subaddress is not to be modified. If the subaddress supplied by the USIM application is a null data object, then the ME shall not provide a called party subaddress to the network. A null data object shall have length = '00' and no value part.

- Alpha identifier: this data object is only required if the UICC requests a particular indication to be given to the user. The handling of this data object by the ME is described in clause 7.3.1.3. The comprehension required flag of this data object shall be set to '0'.

- BC repeat indicator: indicates how the ~~2~~ associated bearers shall be interpreted. ~~The two modes to manage the bearers are the "alternate way" or "sequential way".~~ The change of bearer occurs on a network event. This BC repeat indicator is conditioned to the presence of the second capability configuration parameters and is coded as defined in 3GPP TS 24.008 [9].

It is mandatory for the UICC to provide at least one of the optional data objects if it has set the Call control result to "allowed with modifications".

[…]

8 SIMPLE-TLV data objects

The coding of the TLV objects is as described in TS 102 223 [32], except when stated otherwise in the present document.

[…]

8.42 BC Repeat indicator

Byte(s)	Description	Length
1	BC repeat indicator tag	1
2	Length	1
3	BC repeat indicator values	1

Contents & coding:

- The BC repeat indicator is structured exactly as defined in 3GPP TS 24.008 [08]~~, which may be alternate mode or sequential mode~~.

~~Coding:~~

~~'01' = Alternate mode;~~

~~'03' = Sequential mode.~~

3GPP TSG T WG3 Meeting#32
New York, USA, 10th - 13th August 2004

Tdoc ⌘ T3-040563

CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** 121 ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Add the Network measurement information for UTRAN in PROVIDE LOCAL INFORMATION functionality.
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	18/06/2004
Category:	⌘	**C**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	In the SCP TS 102.223, the Network measurement information in PROVIDE LOCAL INFORMATION is NAA dependant. In the 3GPP TS 31.111, the network measurement information is described for GERAN and not for UTRAN.
Summary of change:	⌘	Add network measurement information link with the 3GPP TS 25.331 for UTRAN in PROVIDE LOCAL INFORMATION.
Consequences if not approved:	⌘	

Clauses affected:	⌘	2 –5.2- 6.4.15 – 6.6.15 – 6.8.7 – 8.22 – 8.xx (new) – 9.3			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	
		N	Test specifications		
		N	O&M Specifications		
Other comments:	⌘				

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

[1] 3GPP TS 22.002: "Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)".

[2] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".

[3] 3GPP TS 22.042: "Network Identity and Time Zone (NITZ); Service description; Stage 1".

[4] 3GPP TS 23.038: "Alphabets and language-specific information".

[5] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[6] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[7] 3GPP TS 23.122: "Non-Access Stratum functions related to Mobile Station (MS) in idle mode".

[8] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

[9] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".

[10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[11] 3GPP TS 24.080: "Mobile radio layer 3 supplementary services specification; Formats and coding".

[12] 3GPP TS 27.007: "AT command set for 3G User Equipment (UE)".

[13] 3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics".

[14] 3GPP TS 31.102: "Characteristics of the USIM application".

[15] 3GPP TS 31.110: "Numbering system for telecommunication IC card applications".

[16] ISO/IEC 7816-3 (1997): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols".

[17] ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".

[18] ISO/IEC 7816-6 (1995): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".

[19] ISO 639 (1988): "Codes for the representation of names of languages".

[20] GSM 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features".

[21] 3GPP TS 42.017: "Subscriber Identity Modules; Functional characteristics".

[22] 3GPP TS 22.001: "Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".

[23] 3GPP TS 23.048: "Security Mechanisms for the (U)SIM application toolkit; Stage 2".

[24] IETF RFC 1738: "Uniform Resource Locators (URL)".

[25] IETF RFC 768: "User Datagram Protocol".

[26] IETF RFC 793: "Transmission Control Protocol".

[27] 3GPP TS 44.018: "Mobile radio interface Layer 3 specification; Radio Resource Control Protocol".

[28] "Specification of the Bluetooth system; Profiles part" http://www.virelex.com/bluetooth/specification.asp;

[29] TIA/EIA-136-123 (April 2001): "Third Generation Wireless - Digital Control Channel Layer 3".

[30] 3GPP TS 23.003: "Numbering, addressing and identification".

[31] TIA/EIA/IS-820: "Removable User Identity Module (R-UIM) for TIA/EIA Spread Spectrum Standards".

[32] ETSI TS 102 223: "Smart Cards; Card Application Toolkit".

[33] 3GPP TR 21.905: "Vocabulary for 3GPP specifications".

[34] 3GPP TS 22.101: "Service aspects; Service principles".

[35] 3GPP TS 25.401: "UTRAN overall description".

[36] 3GPP TS 25.413: "UTRAN Iu interface RANAP signalling".

[xx] 3GPP TS 25.331: "Radio Resource Control (RRC) Protocol Specification".

[yy] 3GPP TS 25.133: "Requirements for support of radio resource management".

[…]

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

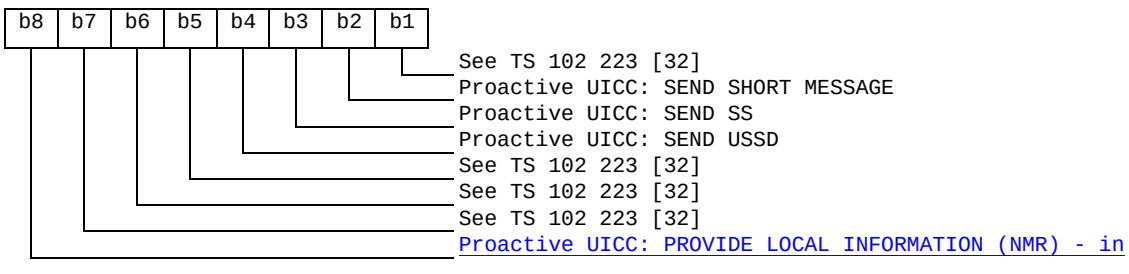
The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data:

Description	Clause	M/O/C	Length
Profile	-	M	lgth

[…]

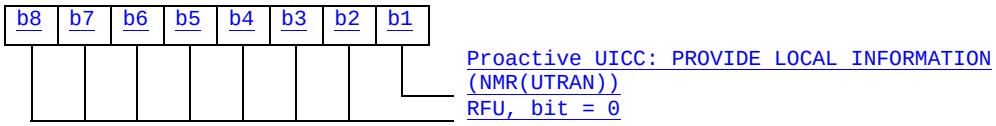
Fourth byte (Proactive UICC):



3GPP terms, this indicates support for GERANSee TS 102 223 [32]

[…]

nth byte:



Subsequent bytes:

- See TS 102 223 [32].

Response parameters/data:

- None.

[…]

6.4.15 PROVIDE LOCAL INFORMATION

This command requests the ME to send current local information to the UICC. At present, this information is restricted to:

- location information: the mobile country code (MCC), mobile network code (MNC), location area code (LAC) and cell ID of the current serving cell;
- the IMEI of the ME;
- the Network Measurement Results (and the BCCH channel list, suitable only for GSM access network if connected to GERAN);
- the current date, time and time zone;
- the current ME language setting;
- the Timing Advance, suitable only for GSM access networkGERAN;
- the current access technology.

The ME shall return the requested local information within a TERMINAL RESPONSE.

Where location information or Network Measurement Results has been requested and no service is currently available, then the ME shall return TERMINAL RESPONSE (ME currently unable to process command - no service).

Where location information or Network Measurement Results has been requested and the ME is on limited service (e.g. emergency calls only), the ME shall return the data requested in the TERMINAL RESPONSE with the general result (Limited Service).

Where Network Measurement Results has been requested and the ME is connected to a different access technology to the one requested (e.g. UTRAN Measurement Qualifier included when ME is connected to a GERAN), then the ME shall return TERMINAL RESPONSE (ME currently unable to process command - no service).

Network Measurement Results are available on a per access technology basis and indicated as such in the Terminal Profile.

- Network Measurement Results for a GERAN:

  ~~NMR are only available if the ME is connected to a GSM access network.~~ If the NMR are requested and a call is in progress, the value of all the returned parameters provided by the ME in the response to the command will be valid. The NMR returned when a call is in progress from MEs supporting multiband operation, shall be according to the value of the multiband reporting parameter as defined in 3GPP TS 44.018 [27]. If a call is not in progress (i.e. ME is in idle mode) some of the returned parameters (e.g. RXQUAL) may be invalid. In idle mode, MEs supporting multiband operation shall ignore the value of the multiband reporting parameter and the NMR returned shall be as defined in TS 44.018 [27] when the multiband reporting parameter equals zero.

  NOTE 1: When in idle mode, the only information element on which it is possible to rely on is the RXLEV-FULL-SERVING-CELL, which contains the value of the received signal strength on the BCCH of the current serving cell.

  NOTE 2: Network Measurement Results are defined in 3GPP TS 44.018 [27] as Measurement Results.

  The BCCH channel list is only available if the ME is connected to a ~~GSM access network~~GERAN.

- Network Measurement Results for a UTRAN:

  The USIM request for measurement information shall not trigger any measurement activities in ME in addition to those requested by UTRAN.

  The ME shall only report measurement results that are valid according to the current RRC state or the UTRAN configuration requested.

  NOTE 3: The returned parameters provided by the ME, in the response to the command, are subject to the ME capability, currently used radio configuration, current RRC state and the UTRAN configuration requested as defined in the 3GPP TS 25.331 [xx].

  NOTE 4: Network Measurement Results are defined in 3GPP TS 25.331 [XX] as the MEASUREMENT REPORT message.

The ME shall return the current date and time as set by the user. If available, the ME shall also return the time zone known from the network with the NITZ feature (see 3GPP TS 22.042 [3]). If the time zone information is not available, the ME shall return 'FF' for this element.

If language setting is requested, the ME shall return the currently used language.

Timing advance is only available if the ME is connected to a ~~GSM access network~~GERAN. If the Timing Advance is requested, the ME shall return the timing advance value that was received from the BTS during the last active dedicated connection (e.g. for call or SMS). Timing advance is defined in TS 44.018 [27]. An ME supporting the Timing Advance feature shall be able to store the last value of timing advance. In addition to the timing advance value, the ME shall return its current status (i.e. ME is in idle mode or not) in order for the application to be aware of potential misinterpretation of the timing advance value. Caution should be taken if using the Timing Advance value for distance measurement as reflections from the external environment (buildings etc.) may affect the accuracy.

If the access technology is requested, the ME shall return the current access technology that the ME is using.

[…]

6.6.15 PROVIDE LOCAL INFORMATION

~~See TS 102 223 [32].~~

Description	Clause	M/O/C	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device Identities	8.7	M	Y	B
UTRAN Measurement Qualifier	8.xx	C	Y	C

UTRAN Measurement Qualifier: This data object applies when the Command Qualifier in Command details is set to indicate "Network Measurement results". It shall be included to indicate to the ME that "Network Measurement Results for a UTRAN" is required. It shall be excluded to indicate to the ME that "Network Measurement Results for a GERAN" is required. It shall only be included/excluded if the ME has indicated that it supports the implied access technology via the respective Terminal Profile setting.

[…]

6.8 Structure of TERMINAL RESPONSE

[…]

6.8.7 Local information

TS 102 223 [32] applies, with the addition of the following procedure:

- Where the UICC has requested the Network Measurement Results, the TERMINAL RESPONSE shall contain
  - for GERAN: The NMR data object and the BCCH channel list data object
  - for UTRAN: The Network Measurement Results are coded as the MEASUREMENT REPORT message as defined in 3GPP TS 25.331 [xx].

~~See TS 102 223 [32].~~

NOTE: The ESN does not apply for a mobile supporting only access technologies defined by 3GPP. The support of ESN is indicated in the TERMINAL PROFILE.

[…]

8.22 Network Measurement Results

~~This information is only available when the ME is connected to a GSM access network.~~

Byte(s)	Description	Length
1	Network Measurement Results tag	1
2	~~Length = '10'~~ Length (X) of bytes following	1
3 ~~-~~ ~~18~~ to X+2	Network Measurement Results	~~16~~X

- For GERAN: The Network Measurement Results are coded as for the Measurement Results information element in 3GPP TS 44.018 [27], starting at octet 2 (the IEI is removed, as this information is duplicated by the data object tag). The Length shall be set to '10' (16 decimal).

- For UTRAN: The Network Measurement Results are coded as for the MEASUREMENT REPORT message as defined in 3GPP TS 25.331 [xx], according to the following:

  - If "intra-frequency measurements" are requested by USIM, the ME shall, in the MEASUREMENT REPORT, include IE "Intra-frequency measured results list" in IE "Measured Results". The ME shall report CPICH Ec/No, CPICH RSCP and pathloss for the up to 6 strongest (highest Ec/No value) intra-frequency cells, if available in the ME according to 3GPP TS 25.331 [xx] and 3GPP TS 25.133 [yy].

  - If "inter-frequency measurements" are requested by USIM, the ME shall, in the MEASUREMENT REPORT, include IE "inter-frequency measured results list" in IE "Measured Results". The ME shall report CPICH Ec/No, CPICH RSCP and pathloss for the up to 6 strongest (highest Ec/No value) inter-frequency cells per monitored frequency, if available in the ME according to 3GPP TS 25.331 [xx] and 3GPP TS 25.133 [yy].

  - If "inter-RAT (GSM) measurements" are requested by USIM, the ME shall, in the MEASUREMENT REPORT, include IE "inter-RAT measured results list" in IE "Measured Results". The ME shall report GSM carrier RSSI for the up to 6 strongest (highest Ec/No value) inter-RAT GSM cells (identified by the BCCH ARFCN), if available in the ME according to 3GPP TS 25.331 [xx] and 3GPP TS 25.133 [yy].

[…]

8.xx UTRAN Measurement Qualifier

This information is only available when the ME is connected to a UTRAN.

Byte(s)	Description	Length
1	UTRAN Measurement Qualifier tag	1
2	Length (1)	1
3	UTRAN Measurement Qualifier	1

UTRAN Measurement Qualifier

- Contents: Qualifier specific to the UTRAN NMR
- Coding
  - '01' Intra-frequency measurements
  - '02' Inter-frequency measurements
  - '03' Inter-RAT (GSM) measurements
  - All other values are reserved

[…]

9.3 SIMPLE-TLV tags in both directions

Description	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')	Tag (CR and Tag value)
SS string tag	1	'09'	'09' or '89'
USSD string tag	1	'0A'	'0A' or '8A'
SMS TPDU tag	1	'0B'	'0B' or '8B'
Cell Broadcast page tag	1	'0C'	'0C' or '8C'
Cause tag	1	'1A'	'1A' or '9A'
Transaction identifier tag	1	'1C'	'1C' or '9C'
BCCH channel list tag	1	'1D'	'1D' or '9D'
BC Repeat Indicator tag	1	'2A'	'2A' or 'AA'
Timing Advance tag	1	'2E'	'2E' or 'AE'
PDP context Activation parameters tag	1	‘52’	‘52’ or ‘D2’
UTRAN Measurement Qualifier tag	1	'xx'	'xx' or 'xx'

3GPP TSG-T3 Meeting #32
New York, USA, 10 - 13 August 2004

Tdoc ⌘ T3-040594

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** **111** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	MMS Management by USAT
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	08/07/2004
Category:	⌘	**B**
Release:	⌘	REL-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	This CR aims to provide the functionality in order to retrieve and submit MMs by USAT as required in TS 22.038.
Summary of change:	⌘	Introduction of 2 new commands (Retreive and Submit) in order to send and receive Multimedia Messages from the card via the MMS User Agent in the ME. The contribution also includes an additional envelope command in order to provide the status of the submission/reception of the MM by the UICC.
Consequences if not approved:	⌘	
Clauses affected:	⌘	5.2, 6.1, 6.4.xx, 6.4.yy, 6.6.xx, 6.6.yy, 6.11, 7.1.3, 8.12.1, 8.xx, 8.yy, 8.vv, 9.1, 9.3, 9.4, 10, Annex A

	Y	N			
Other specs affected: ⌘	X		Other core specifications	⌘	TS 31.102
		X	Test specifications		
		X	O&M Specifications		

Other comments:	⌘	This CR is linked to “Notification Handling for MMS Management by USAT” CR.

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

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

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

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

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data:

Description	Clause	M/O/C	Length
Profile	-	M	lgth

- Profile:

  Contents:

  - The list of USAT facilities that are supported by the ME.

  Coding:

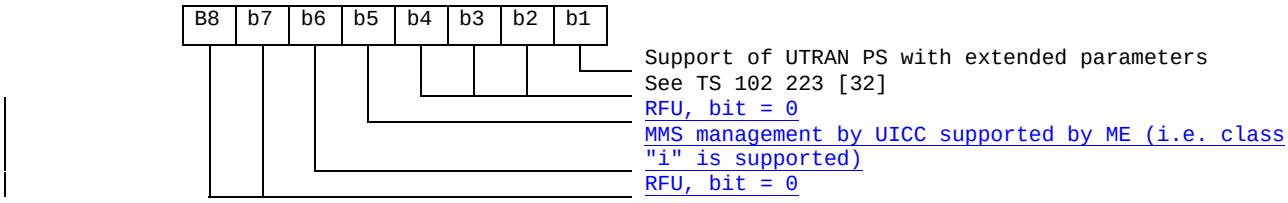
  - 1 bit is used to code each facility:
    - bit = 1: facility supported by ME.
    - bit = 0: facility not supported by ME.

[…]

Twenty-first byte (Extended Launch Browser Capability) for class "c":

- See TS 102 223 [32].

Twenty second byte:



Subsequent bytes:

- See TS 102 223 [32].

Response parameters/data:

- None.

[...]

6 Proactive UICC

6.1 Introduction

3GPP TS 31.101 [13] defines the communication protocols between the ME and the UICC, and defines a mechanism to transport "proactive" commands using these protocols. In addition to the proactive commands listed in TS 102 223 [32], an UICC supporting USAT can issue the following proactive commands:

- **SEND SS:** which sends an SS request to the network;
- **SEND USSD:** which sends a USSD string to the network;
- **RETRIEVE MULTIMEDIA MESSAGE**: which retrieves a Multimedia Message from the network (if class "i" is supported).
- **SUBMIT MULTIMEDIA MESSAGE**: which sends a Multimedia Message to the network (if class "i" is supported).

If the UICC issues an instruction to the ME to initiate a Mobile Originated transaction (e.g. SEND SMS, SEND SS, SEND USSD or SEND DTMF), then unless explicitly stated elsewhere in the present document or in 3GPP TS 31.101 [13], the content supplied by the UICC for onward transmission by the ME shall not be altered by the ME.

[...]

6.4.xx RETRIEVE MULTIMEDIA MESSAGE

This clause applies if class "i" is supported.

Upon receiving this command, the terminal shall decide if it is able to execute the command. Examples are given below, but the list is not exhaustive:

- if the command is rejected because the ME is busy on a MMS transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on MMS transaction).

- if the command is rejected because the ME is unable to process the MMS transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - unable to process MMS transaction);

If the ME is able to execute this command, the ME shall:

- Retrieve the Multimedia Message from the network using the MMS message reference provided by the UICC in the Retrieve command parameters.

- Store the Multimedia Message on the UICC. The path of the file on the UICC in which the MM shall be stored is provided by the UICC in the Retrieve command parameters.

- optionally, the UICC may include in this command an alpha-identifier. The use of this alpha-identifier by the ME is described below:

  - if the alpha identifier is provided by the UICC and is not a null data object, the ME shall use it to inform the user. This is also an indication that the ME should not give any other information to the user on the fact that the ME is retrieving an MM. If an icon is provided by the UICC, the icon indicated in the command may be used by the ME to inform the user, in addition to, or instead of the alpha identifier, as indicated with the icon qualifier (see clause 6.5.4);

  - if the alpha identifier is provided by the UICC and is a null data object (i.e. length = '00' and no value part), this is an indication that the ME should not give any information to the user on the fact that the ME is retrieving an MM;

  - if the alpha identifier is not provided by the UICC, the ME may give information to the user concerning what is happening.

The storage completion shall be indicated in the ENVELOPE (MMS Transfer Status).

6.4.yy SUBMIT MULTIMEDIA MESSAGE

This clause applies if class "i" is supported.

Upon receiving this command, the terminal shall decide if it is able to execute the command. Examples are given below, but the list is not exhaustive:

- if the command is rejected because the ME is busy on a MMS transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on MMS transaction).

- if the command is rejected because the ME is unable to process the MMS transaction, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - unable to process MMS transaction);

If the ME is able to execute this command, the ME shall:

- Get the Multimedia Message from the UICC. The path of the file on the UICC from which the MM shall be retrieved is provided by the UICC in the Submit command parameters.

- Submit the Multimedia Message to the network.

- optionally, the UICC may include in this command an alpha-identifier. The use of this alpha-identifier by the ME is described below:

- if the alpha identifier is provided by the UICC and is not a null data object, the ME shall use it to inform the user. This is also an indication that the ME should not give any other information to the user on the fact that the ME is submitting an MM. If an icon is provided by the UICC, the icon indicated in the command may be used by the ME to inform the user, in addition to, or instead of the alpha identifier, as indicated with the icon qualifier (see clause 6.5.4);

- if the alpha identifier is provided by the UICC and is a null data object (i.e. length = '00' and no value part), this is an indication that the ME should not give any information to the user on the fact that the ME is submitting an MM;

- if the alpha identifier is not provided by the UICC, the ME may give information to the user concerning what is happening.

The submission status shall be indicated in the ENVELOPE (MMS Transfer Status).

[...]

6.6.xx RETRIEVE MULTIMEDIA MESSAGE

Description	Section	M/O	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C+D+E+F+G+H+I)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device identities	8.7	M	Y	B
Alpha identifier	8.2	O	N	C
Icon identifier	8.31	O	N	D
Multimedia Message Reference	8.yy	M	Y	E
MMS Reception File	8.18	M	Y	F
MM Content Data Object tag	-	M	Y	G
Multimedia Message Identifier	8.xx	C	N	H
Text Attribute	8.72	C	N	I

Multimedia Message Reference is the "MM1_retrieve.REQ" (see 3GPP TS 23.140 [xx]) message that is needed for the retrieval of the multimedia message and it contains the URI identifying the multimedia message in the network.

MMS Reception File is a path of a file on the UICC. This path shall be used by the ME once the MM is retrieved from the network to store the MM on the UICC.

Multimedia Message Identifier is the identifier of the Multimedia Message within the MMS Reception File.

Text Attribute applies to the alpha identifier. It may be present only if the Alpha Identifier is present.

A terminal response shall be sent immediately upon reception of the command and shall not wait for any response from the network.

6.6.yy SUBMIT MULTIMEDIA MESSAGE

Description	Section	M/O	Min	Length
Proactive UICC command Tag	9.2	M	Y	1
Length (A+B+C+D+E+F+G)	-	M	Y	1 or 2
Command details	8.6	M	Y	A
Device identities	8.7	M	Y	B
Alpha identifier	8.2	O	N	C
Icon identifier	8.31	O	N	D
MMS Submission File	8.18	M	Y	E
Multimedia Message Identifier	8.xx	C	N	F
Text Attribute	8.72	C	N	G

MMS Submission File is a path of a file on the UICC. This path shall be used by the ME to get the MM from the UICC and then to submit it to the network.

Multimedia Message Identifier is the identifier of the Multimedia Message within the MMS Submission File. This Identifier is mandatory in case the MMS Submission File is able to store several MMs.

Text Attribute applies to the alpha identifier. It may be present only if the Alpha Identifier is present.

A terminal response shall be sent immediately upon reception of the command and shall not wait for any response from the network.

[...]

6.11 Proactive commands versus possible Terminal response

Table 6.1 shows for each proactive command the possible terminal response returned (marked by a "●" character), in addition to those defined in TS 102 223 [32].

Table 6.1: Proactive commands versus possible Terminal response (continued overleaf…)

		PROACTIVE COMMAND																			
		RE-FRESH	MORE TIME	POLL INTER-VAL	POLL-ING OFF	SETUP EVENT LIST	SET UP CALL	SEND SS	SEND USSD	SEND SMS	SEND DTMF	LAUNCH BROWSER	PLAY TONE	DIS-PLAY TEXT	GET INKEY	GET INPUT	SEL-ECT ITEM	SET UP MENU	PRO-VIDE LOCAL INFO	TIMER MAN-AGE-MENT	SETUP IDLE MODE TEXT
	TERMINAL RESPONSE	'01'	'02'	'03'	'04'	'05'	'10'	'11'	'12'	'13'	'14'	'15'	'20'	'21'	'22'	'23'	'24'	'25'	'26'	'27'	'28'
14	USSD or SS Transaction terminated by user						●	●	●												
2x	MMS Temporary Problem																				
34	SS Return Error						●	●													
35	SMS RPERROR									●											
37	USSD return error								●												
39	Interaction with call/SM control by USIM, permanent problem						●	●	●	●											
3y	MMS Error																				

Table 6.1: Proactive commands versus possible Terminal response

		PROACTIVE COMMAND																
		CARD APDU	POWER ON CARD	POWER OFF CARD	GET READ-ER STATUS	RUN AT COMM-AND	LANG NOTIFI CA TION	OPEN CHANN EL	CLOSE CHANN EL	RECEIVE DATA	SEND DATA	GET CHANN EL STATUS	SERVIC E SEARC H	GET SERVIC E INFORM ATION	DECLA RE SERVIC E	RETRIE VE MM	SUBMIT MM
	TERMINAL RESPONSE	**'30'**	**'31'**	**'32'**	**'33'**	**'34'**	**'35'**	**'40'**	**'41'**	**'42'**	**'43'**	**'44'**	**'45'**	**'46'**	**'47'**	'XX'	'YY'
14	USSD or SS Transaction terminated by user																
2x	MMS Temporary Problem															●	●
34	SS Return Error																
35	SMS RPERROR																
37	USSD return error																
39	Interaction with call/SM control by USIM, permanent problem																
3y	MMS Error															●	●

7.X MMS Transfer Status

7.X.1 Procedure

If the service "MMS transfer" is allocated and activated in the USIM Service Table (see 3GPP TS 31.102 [14]), then the ME shall follow the procedure below (if class "i" is supported).

- when the ME is asked by the UICC to submit a multimedia message, and after the message has been submitted by the ME to the network, the ME receives a "MM1_submit.RES" message (see 3GPP TS 23.140 [xx]) from the network. Then the ME shall send this "MM1_submit.RES" message to the UICC using the ENVELOPE (MMS Transfer Status) immediately upon it's reception;

- when the ME is asked by the UICC to retrieve a multimedia message, then the ME shall store the "MM1_retrieve.RES" message (see 3GPP TS 23.140 [xx]) in the UICC upon it's reception. Upon the completion of the storage, the ME shall notify it to the UICC using the ENVELOPE (MMS Transfer Status). The ME shall neither display the message nor alert the user;

- if the UICC responds with '93 00', the ME shall consider that the ENVELOPE (MMS Transfer Status) has not been successfully transferred to the UICC. The ME may retry the same command.

7.X.2 Structure of ENVELOPE (MMS Transfer Status)

Direction: ME to UICC.

The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data.

Description	Clause	M/O/C	Min	Length
MMS data download tag	9.1	M	Y	1
Length (A+B+C+D)	-	M	Y	1
Device identities	8.7	M	Y	A
MMS Transfer File	8.18	M	Y	B
Multimedia Message Identifier	8.xx	C	N	C
Multimedia Message Transfer Status	8.vv	C	N	D

Device identities: the terminal shall set the device identities to:

- source: network;
- destination: UICC.

MMS Transfer File: is the path of the MMS Reception File or the MMS Submission File.

Multimedia Message Identifier: is the identifier of the Multimedia Message within the MMS Transfer File. This Identifier is mandatory in case the MMS Transfer File is able to store several MMs

Multimedia Message Transfer Status: this data object shall contain:

- either the status of the submission of a Multimedia Message. It consists of the "MM1_submit.RES" message described in TS 23.140 [xx].
- Or shall not be present in the case of a retrieval.

Note: The UICC is able to identify if the envelope corresponds to a previous submit or retrieve MMS by using the MMS Tranfer File and the Multimedia Message Identifier that shall be the same between both commands.

Response parameters/data: if a request for a delivery report is included in the "MM1_retrieve.RES" message (see 3GPP TS 23.140 [xx]), Response parameter/data may contain this delivery report. It consists in the "MM1_acknowledgement.REQ" message described in TS 23.140 [xx].

[...]

8.12 Result

For the general result byte coding the following values are defined in addition to or replacement of those in TS 102 223 [32]:

- '14' = USSD or SS transaction terminated by the user.
- '2x' = MMS temporary problem;
- '34' = SS Return Error;
- '35' = SMS RP-ERROR;
- '37' = USSD Return Error;
- '39' = Interaction with call control by USIM or MO short message control by USIM, permanent problem;
- '3y' = MMS Error;
- Additional information:

  Contents:

  - For the general result "Command performed successfully", some proactive commands require additional information in the command result. This is defined in the clauses below. For the general result values '20', '21', '34', '35', '37', and '39', it is mandatory for the ME to provide a specific cause value as additional information, as defined in the clauses below. For other values, see TS 102 223 [32].

8.12.x Additional information for SUBMIT and RETREIVE MULTIMEDIA MESSAGE

This clause applies if class "i" is supported.

For the general result "MMS error", it is mandatory for the terminal to provide additional information, the first byte of which is defined below:

- '00' = No specific cause can be given;

All other values shall be interpreted by the UICC as '00'. The coding '00' shall only be used by the ME if no others apply.

[...]

8.yy Multimedia Message Reference

This clause applies if class "i" is supported.

Byte(s)	Description	Length
1	Multimedia Message Reference tag	1
2	Length (X)	1
3	Multimedia Message Reference	X

Multimedia Message Reference:

- Contents:
  - This contains Multimedia Message Reference used to retrieve the MM from the network.
- Coding:
  - The Multimedia Message Reference is the " MM1_retrieve.REQ", see TS 23.140 [xx] for further details.

8.xx Multimedia Message Identifier

This clause applies if class "i" is supported.

Byte(s)	Description	Length
1	Multimedia Message Identifier tag	1
2	Length (X)	1
3	Multimedia Message Identifier	X

Identifier of Multimedia Message:

- Contents:
  - This contains Multimedia Message Identifier to be used to retrieve a Multimedia Message. This identifier is mandatory in case the MMS Reception or Submission file can store several MMs.
- Coding:
  - The Multimedia Message identifier is coded in hexadecimal.

8.vv Multimedia Message Transfer status

This clause applies if class "i" is supported.

Byte(s)	Description	Length
1	Multimedia Message Transfer Status tag	1
2	Length (X)	1
3 to 3+X	Multimedia Message Transfer Status	X

- Contents:
  - The Multimedia Message Transfer Status is response from the network to a multimedia message submission request.
- Coding:
  - See "MM1_submit.RES" message described in TS 23.140 [xx].

9 Tag values

This clause specifies the tag values used to identify the BER-TLV and SIMPLE-TLV data objects used in the present document, in addition to those defined in TS 102 223 [32].

9.1 BER-TLV tags in ME to UICC direction

Description	Length of tag	Value
SMS-PP download tag	1	'D1'
Cell Broadcast download tag	1	'D2'
MO Short message control tag	1	'D5'
MMS Transfer status tag	1	'xx'

9.2 BER-TLV tags in UICC TO ME direction

No additional tag is defined for 3G.

9.3 SIMPLE-TLV tags in both directions

Description	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')	Tag (CR and Tag value)
SS string tag	1	'09'	'09' or '89'
USSD string tag	1	'0A'	'0A' or '8A'
SMS TPDU tag	1	'0B'	'0B' or '8B'
Cell Broadcast page tag	1	'0C'	'0C' or '8C'
Cause tag	1	'1A'	'1A' or '9A'
Transaction identifier tag	1	'1C'	'1C' or '9C'
BCCH channel list tag	1	'1D'	'1D' or '9D'
BC Repeat Indicator tag	1	'2A'	'2A' or 'AA'
Timing Advance tag	1	'2E'	'2E' or 'AE'
PDP context Activation parameters tag	1	'52'	'52' or 'D2'
Multimedia Message Reference tag	1	'xx'	'xx' or 'xx'
Multimedia Message Identifier tag	1	'yy'	'yy' or 'yy'
Multimedia Message Transfer Status tag	1	'zz'	'zz' or 'zz'

9.4 Type of Command and Next Action Indicator

The table below shows the values which shall be used for Type of Command coding (see clause 8.6) and Next Action Indicator coding (see clause 8.24) in addition to those defined in TS 102 223 [32].

Value	Name	used for Type of Command coding	used for Next Action Indicator coding
'11'	SEND SS	X	X
'12'	SEND USSD	X	X
'XX'	RETRIEVE MULTIMEDIA MESSAGE	X	X
'YY'	SUBMIT MULTIMEDIA MESSAGE	X	X

10 Allowed Type of command and Device identity combinations

Only certain types of commands can be issued with certain device identities. These combinations are defined below, in addition to TS 102 223 [32].

Command description	Source	Destination
CELL BROADCAST DOWNLOAD	Network	UICC
MO SHORT MESSAGE CONTROL	ME	UICC
SEND SS	UICC	Network
SEND USSD	UICC	Network

RETRIEVE MULTIMEDIA MESSAGE	UICC	Network
SUBMIT MULTIMEDIA MESSAGE	UICC	Network
MMS Transfer Status	Network	UICC

[...]

Annex A (normative): Support of USAT by Mobile Equipment

Support of USAT is optional for Mobile Equipment. However, if an ME states conformance with a specific 3G release, it is mandatory for the ME to support all functions of that release.

The support of USAT implies the support of CAT (TS 102 223 [32]).

The support of letter classes, which specify mainly ME hardware dependent features, is optional for the ME and may supplement the USAT functionality described in the present document. If an ME states conformance to a letter class, it is mandatory to support all functions within the respective letter class.

The table below indicates the commands and functions of the optional letter classes.

Letter classes	Command/function description
a	See TS 102 223 [32]
b	See TS 102 223 [32]
c	See TS 102 223 [32]
d	See TS 102 223 [32]
e	See TS 102 223 [32]
f	See TS 102 223 [32]
g	See TS 102 223 [32]
i	Proactive command: RETRIEVE MULTIMEDIA MESSAGE Proactive command: SUBMIT MULTIMEDIA MESSAGE Event download: MMS Transfer status

3GPP TSG-T3 Meeting #32
New York, USA, 10 - 13 August 2004

Tdoc ⌘ T3-040595

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** 112 ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Correction of wording for call control
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11/08/2004
Category:	⌘	**D**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 (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)
Rel-7 (Release 7)

Reason for change:	⌘	The current wording is inconsistent and erroneous. A similar correction was already approved in SCP TS 102 223 (see T3-040444).
Summary of change:	⌘	Add "permanent problem" to uniquely identify the terminal response, according to the error definitions in chapter 8.12
Consequences if not approved:	⌘	

Clauses affected:	⌘	7.3.1.1			
Other specs affected:	⌘	**Y**	**N**		
				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/specs/CR.htm.
Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

7.3.1.1 Procedure for mobile originated calls

If the service "call control" is available in the USIM Service Table (see 3GPP TS 31.102 [14]), then the ME shall follow the procedure described in TS 102 223 [32] with the additional rules listed here:

- when the user is dialling "112" or an emergency call code stored in EF_{ECC}, the ME shall set up an emergency call instead of passing the call set-up details to the UICC;

- if the UICC provides response data, then in addition to the response data listed by TS 102 223 [32], the response data from the UICC may indicate to the ME to send instead a supplementary service or USSD operation using the data supplied by the UICC. It is then mandatory for the ME to perform the supplementary service or USSD operation in accordance with the data from the UICC, if it is within the ME's capabilities to do so. If the UICC requires a supplementary service or USSD operation that is beyond the ME's capabilities, then the ME shall not perform the supplementary service or USSD operation at all.

- If, as a result of the procedure, the UICC supplies a number stored in EF_{ECC}, this shall not result in an emergency call.

In the case where the initial call set-up request results from a proactive command SET UP CALL:

- if the call control result is "not allowed", the ME shall inform the UICC using TERMINAL RESPONSE "interaction with call control by UICC or MO short message control by USIM, permanent problem;~~UICC,~~ action not allowed";

- if the call set-up request is changed by call control in a supplementary service or USSD operation, and if the supplementary service or USSD operation is within the ME's capabilities, then the ME shall send this request to the network. The ME shall then send back a TERMINAL RESPONSE to the SET UP CALL command at the same time it would have done for the proactive command equivalent to the action requested by call control (i.e. SEND SS or SEND USSD). However, in that case, the TERMINAL RESPONSE shall contain the response data given in the response to ENVELOPE (CALL CONTROL) and a second Result TLV identical to the one given in response to the proactive command equivalent to the action requested by call control (i.e. SEND SS or SEND USSD). The mapping between the general result in the first Result TLV and the general result in the second Result TLV is given below:

  - the general result "command performed, but modified by call control by USIM" shall be given in the first Result TLV if the general result of the second Result TLV is '0X' or '1X';

  - the general result "interaction with call control by USIM, temporary problem" shall be given in the first Result TLV if the general result of the second Result TLV is '2X';

  - the general result "interaction with call control by USIM or MO short message control by USIM, permanent problem" shall be given in the first Result TLV if the general result of the second Result TLV is '3X';

- if the call set-up request is changed by call control into a supplementary service or USSD operation, and if the supplementary service or USSD operation is beyond the ME's capabilities, then the ME shall send back a TERMINAL RESPONSE to the SET UP CALL command, without performing the supplementary service or USSD operation at all. In that case, the TERMINAL RESPONSE shall contain the response data given in the response to ENVELOPE (CALL CONTROL) and a second Result TLV identical to the one given in response to the proactive command equivalent to the action requested by call control (i.e. SEND SS or SEND USSD). The mapping between the general result in the first Result TLV and the general result in the second Result TLV is given below:

  - the general result "interaction with call control by USIM or MO short message control by USIM, permanent problem" shall be given in the first Result TLV, and the general result "command beyond ME's capabilities" shall be given in the second Result TLV.

The ME shall then follow the call set-up procedure defined in 3GPP TS 24.008 [9] or the supplementary service or USSD operation procedure defined in 3GPP TS 24.080 [11].

3GPP TSG-T3 Meeting #32
New York, USA, 10 - 13 August 2004

Tdoc ⌘ T3-040596

CR-Form-v7.1

CHANGE REQUEST

⌘ **31.111** **CR** 113 ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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⌘ [X] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Alignement with SCP TS 102 223
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	11/08/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	A new letter class has been added in SCP TS 102 223 when introducing the "video call" feature (see T3-040444). This new letter class should be reserved in the 3GPP specification, to avoid any mismatch if we later introduce new letter classes ourself.
Summary of change:	⌘	Addition of a new letter class h for mobiles, according to recent additions in SCP TS 102 223
Consequences if not approved:	⌘	Misalignement between 3GPP and SCP specifications.
Clauses affected:	⌘	Annex A

Other specs affected: ⌘	Y	N		⌘
			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/specs/CR.htm.
Below is a brief summary:

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

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

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

Annex A (normative): Support of USAT by Mobile Equipment

Support of USAT is optional for Mobile Equipment. However, if an ME states conformance with a specific 3G release, it is mandatory for the ME to support all functions of that release.

The support of USAT implies the support of CAT (TS 102 223 [32]).

The support of letter classes, which specify mainly ME hardware dependent features, is optional for the ME and may supplement the USAT functionality described in the present document. If an ME states conformance to a letter class, it is mandatory to support all functions within the respective letter class.

The table below indicates the commands and functions of the optional letter classes.

~~Letter classes~~	~~Command/function description~~
~~a~~	~~See TS 102 223 [32]~~
~~b~~	~~See TS 102 223 [32]~~
~~c~~	~~See TS 102 223 [32]~~
~~d~~	~~See TS 102 223 [32]~~
~~e~~	~~See TS 102 223 [32]~~
~~f~~	~~See TS 102 223 [32]~~
~~g~~	~~See TS 102 223 [32]~~

Letter classes	Command/function description
a	See TS 102 223 [32]
b	See TS 102 223 [32]
c	See TS 102 223 [32]
d	See TS 102 223 [32]
e	See TS 102 223 [32]
f	See TS 102 223 [32]
g	See TS 102 223 [32]
h	See TS 102 223 [32]

3GPP TSG T WG3 Meeting #32
New-York, NY, USA, 10th – 13th August 2004

Tdoc T3-040602
(revised from T3-040302)

CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** 114 ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

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

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

Title:	⌘	Disallow SMS/SS/USSD transmission in the case where UICC responds with an error status code in Envelope Confirmation.
Source:	⌘	T2
Work item code:	⌘	TEI
Date:	⌘	11/08/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	TS 31.111 (and TS 11.14 as it happens) does not specify what ME needs to do in case it gets an error status response (for instance 6F XX) from the UICC in response to Envelope request for the Call Control and MO SMS Control by UICC.
Summary of change:	⌘	In such a scenario, the error status must be treated as a rejection from the SIM/UICC card and ME must disallow the SMS/SS/USSD from being sent. This must be handled in the ME.
Consequences if not approved:	⌘	Unpredictible behaviour of the ME.

Clauses affected:	⌘	7.3.1.2, 7.3.2.1

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

Other comments:	⌘	Regarding Call Control for calls, a similar CR should be done in ETSI TS 102223

7.3.1.2 Procedure for Supplementary Services and USSD

If the service "call control" is available in the USIM Service Table (see 3GPP TS 31.102 [14]), then for all supplementary service and USSD operations (including those resulting from a SEND SS or SEND USSD proactive UICC command), the ME shall first pass the supplementary service or USSD control string (corresponding to the supplementary service or USSD operation and coded as defined in 3GPP TS 22.030 [2], even if this SS or USSD operation has been performed via a specific menu of the ME) to the UICC, using the ENVELOPE (CALL CONTROL) command defined below. The ME shall also pass to the UICC in the ENVELOPE (CALL CONTROL) command the current serving cell.

The UICC shall respond in the same way as for mobile originated calls. The ME shall interpret the response as follows:

- if the UICC responds with '90 00', the ME shall send the supplementary service or USSD operation with the information as sent to the UICC;

- if the UICC responds with any status code indicating an error, the ME shall not send the supplementary service or USSD;

- if the UICC responds with '93 00', the ME shall not send the supplementary service or USSD operation and may retry the command;

- if the UICC provides response data, then the response data from the UICC shall indicate to the ME whether to send the supplementary service or USSD operation as proposed, not send the SS or USSD operation, send the SS or USSD operation using the data supplied by the UICC, or instead set up a call using the data supplied by the UICC. It is mandatory for the ME to perform the supplementary service or USSD operation or the call set-up request in accordance with the data from the UICC, if it is within the ME's capabilities to do so. If the UICC requires a call set-up or supplementary service or USSD operation that is beyond the ME's capabilities (e.g. the UICC maps a USSD operation to a data call, and the ME does not support data calls), then the ME shall not the perform the call set-up request or supplementary service or USSD operation at all.

In the case where the initial SS or USSD request results from a proactive command SEND SS or SEND USSD:

- if the call control result is "not allowed", the ME shall inform the UICC using TERMINAL RESPONSE ("interaction with call control by UICC or MO short message control by UICC, action not allowed");

- if the SS or USSD request is changed by call control in a call set-up request, then the ME shall set up the call using the data given by the UICC, if it is within the ME's capabilities to do so. If the UICC requires a call set-up that is beyond the ME's capabilities (e.g. the UICC maps a USSD operation to a data call, and the ME does not support data calls), then the ME shall not set up the call at all. The ME shall send back a TERMINAL RESPONSE to the initial proactive command at the same time it would have done for the proactive command equivalent to the action requested by call control (i.e. SET UP CALL). However, in that case, the TERMINAL RESPONSE shall contain the response data given in the response to ENVELOPE (CALL CONTROL) and a second Result TLV identical to the one given in response to the proactive command equivalent to the action requested by call control (i.e. SET UP CALL). The mapping between the general result in the first Result TLV and the general result in the second Result TLV is the same as the one described in clause 7.3.1.1.

If the ME supports the Last Number Dialled service, the ME shall update EF_{LND} with the supplementary service or USSD control string corresponding to the initial user request.

The ME shall then follow the supplementary service or USSD operation procedure defined in TS 24.080 [11] or the call set-up procedure defined in 3GPP TS 24.008 [9].

7.3.2 MO Short Message Control by USIM

7.3.2.1 Description

If the service "MO Short Message Control" is available in the USIM Service Table (see TS 31.102 [14]), then the ME shall follow the procedure below:

- for all MO short message attempts (even those resulting from a SEND SM proactive UICC command), the ME shall first pass the RP_destination_address of the service centre and the TP_Destination_Address to the UICC, using the ENVELOPE (MO SHORT MESSAGE CONTROL) command defined below. The ME shall also pass to the UICC in the ENVELOPE (MO SHORT MESSAGE CONTROL) command the current serving cell;

- if the UICC responds with '90 00', the ME shall send the short message with the addresses unchanged;

- if the UICC responds with any other status code indicating an error, the ME shall not send the short message;

- if the UICC responds with '93 00', the ME shall not send the short message and may retry the command;

- if the UICC provides response data, then the response data from the UICC shall indicate to the ME whether to send the short message as proposed, not send the short message or send a short message using the data supplied by the UICC. It is mandatory for the ME to perform the MO short message request in accordance with the data from the UICC.

The ME shall then follow the MO Short Message procedure defined in 3GPP TS 24.011 [10].

In the case where the initial MO short message request results from a proactive command SEND SHORT MESSAGE, if the MO short message control result is "not allowed", the ME shall inform the UICC using TERMINAL RESPONSE, "interaction with call control by UICC or MO short message control by UICC, action not allowed".