3GPP TSG-T plenary meeting #22
Maui, US, 10-12 December 2003

Tdoc TP-030253

Source: T3

Title: CRs to TS 31.111: USIM Application toolkit (USAT)

Document for: Approval

This document contains the following change requests:

Spec	CR	Rev	Phase	Subject	Cat	new ver.	Doc-2nd-Level
31.111	100	-	Rel-6	Addition of ability to set up Video calls using the SET UP CALL command	B	6.0.0	T3-030984
31.111	101	-	Rel-5	Cell Broadcast Data Download	F	5.6.0	T3-031001
31.111	102	-	Rel-6	Cell Broadcast Data Download	F	6.0.0	T3-031002
31.111	103	-	R99	Clarification on user confirmation for OPEN CHANNEL	F	3.10.0	T3-030987

3GPP TSG-WG3 Meeting #29
Dallas, USA, 18-21 November 2003

Tdoc ⌘T3-030984

CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** **100** ⌘ **rev** **-** ⌘ Current version: **5.5.0** ⌘

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

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

Title:	⌘	Addition of ability to set up Video calls using the SET UP CALL command
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	06/11/2003
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:

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:	⌘	This change will add the ability to setup Video calls from USAT applications.
Summary of change:	⌘	1) Section 5.2 - addition of bit7 to Byte 18 in TERMINAL PROFILE to indicate support of Video calls in SETUP CALL command. 2) Section 6.4.13 – addition of setence 3) Appendix A – addition of class g
Consequences if not approved:	⌘	Ifa SETUP CALL is issued with the bearer capabilities indicating that the call is a Video call, the handset will be unable to process the command as a specified action is not defined.

Clauses affected:	⌘	5.2, 6.4.13, Appendix A

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

Other comments:	⌘	This CR will create a Rel-6 version of this specification

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.

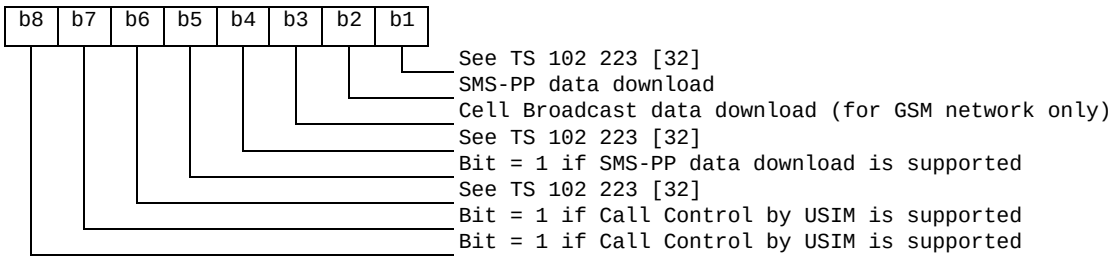
  Coding:

  - 1 bit is used to code each facility:

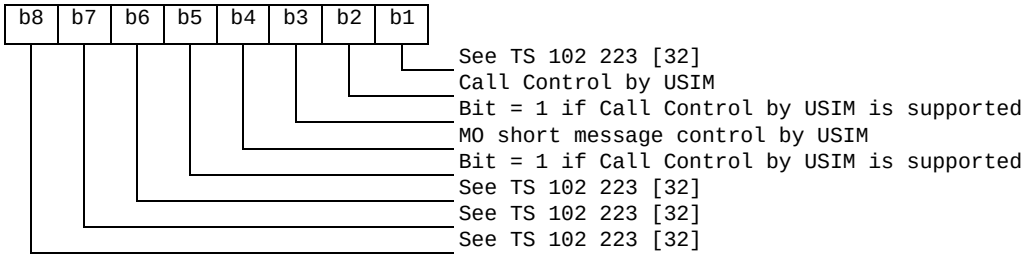
    - bit = 1: facility supported by ME.
    - bit = 0: facility not supported by ME.

NOTE: several bits may need to be set to 1 for the support of the same facility. This is because of backward compatibility with SAT: several options existed in SAT for a given facility, and they are mandatory in USAT when this facility is supported.

First byte (Download):



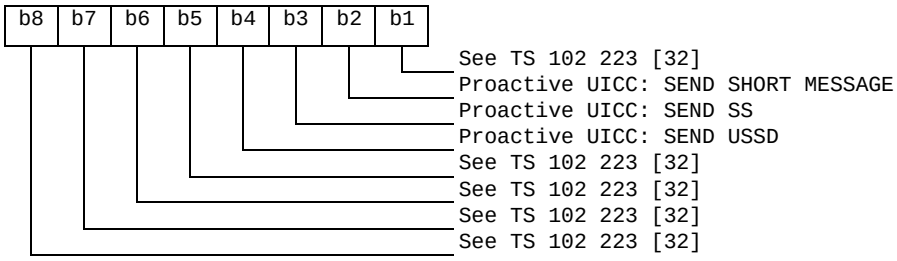
Second byte (Other):



Third byte (Proactive UICC):

- See TS 102 223 [32].

Fourth byte (Proactive UICC):



Fifth byte (Event driven information):

- See TS 102 223 [32].

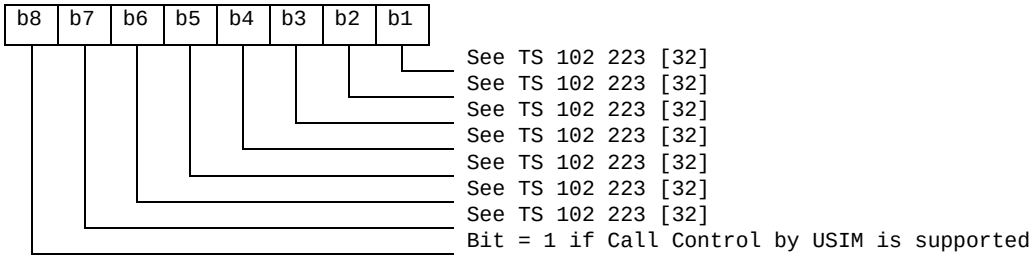
Sixth byte (Event driven information extensions):

- See TS 102 223 [32].

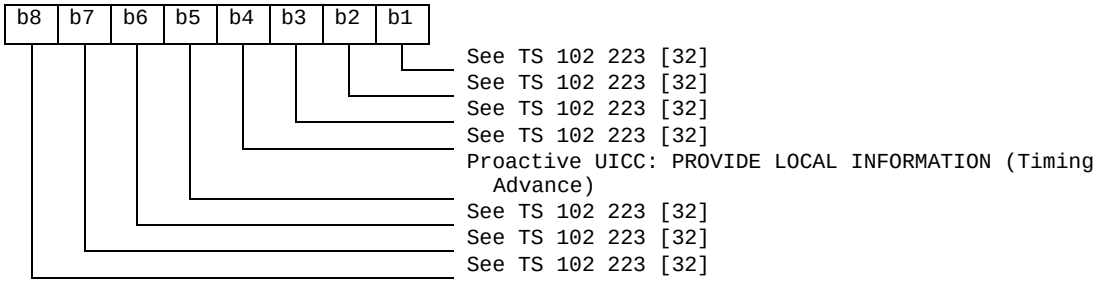
Seventh byte (Multiple card proactive commands) for class "a":

- See TS 102 223 [32].

Eighth byte (Proactive UICC):



Ninth byte:



Tenth byte (Soft keys support) for class "d":

- See TS 102 223 [32].

Eleventh byte: (Soft keys information):

- See TS 102 223 [32].

Twelfth byte:

- See TS 102 223 [32].

Thirteenth byte:

- See TS 102 223 [32].

Fourteenth byte: (Screen height):

- See TS 102 223 [32].

Fifteenth byte: (Screen width):

- See TS 102 223 [32].

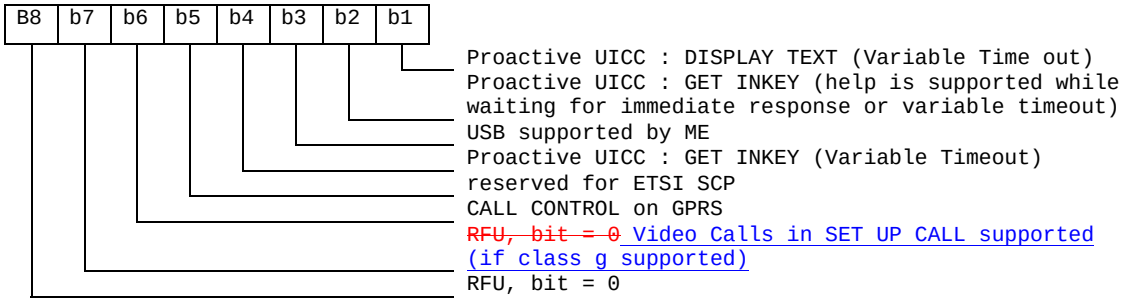
Sixteenth byte: (Screen effects):

- See TS 102 223 [32].

Seventeenth byte:

- See TS 102 223 [32].

Eighteenth byte:



Nineteenth byte: (reserved for TIA/EIA-136 facilities):

- See TS 102 223 [32].

Twentieth byte: (reserved for TIA/EIA/IS-820 facilities):

- See TS 102 223 [32].

Subsequent bytes:

- See TS 102 223 [32].

Response parameters/data:

- None.

[…]

6.4.13 SET UP CALL

This command is issued by the UICC to request a call set up. The procedure is defined in TS 102 223 [32], except when stated otherwise in the present document.

The UICC may request the use of an automatic redial mechanism according to 3GPP TS 22.001 [22]

In addition to the rules given in TS 102 223 [32] the following applies:

- If the UICC supplies a number stored in EF_{ECC}, this shall not result in an emergency call.
- If the Bearer Capabilities element indicates that a video call is to be setup then the ME shall launch and use the relevant client to make the call.

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 another call, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on call);

- 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 command is rejected because the ME cannot support Call Hold, or because the ME does not support the capability configuration parameters requested by the UICC, the ME informs the UICC using TERMINAL RESPONSE (Command beyond ME's capabilities);
- if the command is rejected because the network cannot support or is not allowing Call Hold of a multi party call, the ME informs the UICC using TERMINAL RESPONSE (SS Return Result error code);
- if the command is rejected because the network cannot support or is not allowing Call Hold of a single call, the ME informs the UICC using TERMINAL RESPONSE (Network currently unable to process command).

[…]

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	Proactive command: GET READER STATUS Proactive command: PERFORM CARD APDU Proactive command: POWER ON CARD Proactive command: POWER OFF CARD Event download: Card reader status
b	Proactive command: RUN AT COMMAND
c	Proactive command: LAUNCH BROWSER Event download: Browser termination
d	Soft key support
e	Proactive command: OPEN CHANNEL Proactive command: CLOSE CHANNEL Proactive command: RECEIVE DATA Proactive command: SEND DATA Proactive command: GET CHANNEL STATUS Event download: Data available Event download: Channel status
f	Proactive command: SERVICE SEARCH Proactive command: GET SERVICE INFORMATION Proactive command: DECLARE SERVICE Event download: Local connection
g	Video Call support

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CHANGE REQUEST

⌘ **31.111** **CR** **101** ⌘**rev** **-** ⌘ Current version: **5.5.0** ⌘

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

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

Title:	⌘	Cell Broadcast Data Download in UMTS
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 20/11/2003
Category:	⌘ **F**	***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:

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:	⌘	Currently the Cell Broadcast Data Download bearer is restricted to work only in GSM access networks. The purpose of this CR is to enable and define the download of Cell Broadcast Data Download messages to the USAT when connected to UTRAN network.
Summary of change:	⌘	Remove all restrictions of the Cell Broadcast Data Download bearer to work only when connected to a GSM access network, and add a definition of the ENVELOPE download mechanism for such messages.
Consequences if not approved:	⌘	Lack of standard definition of means to download UMTS Cell Broadcast Data Download messges to the USAT.

Clauses affected:	⌘	5.2, 7.1.2, 7.1.2.1, 8.5, 10

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

Other comments: ⌘

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.

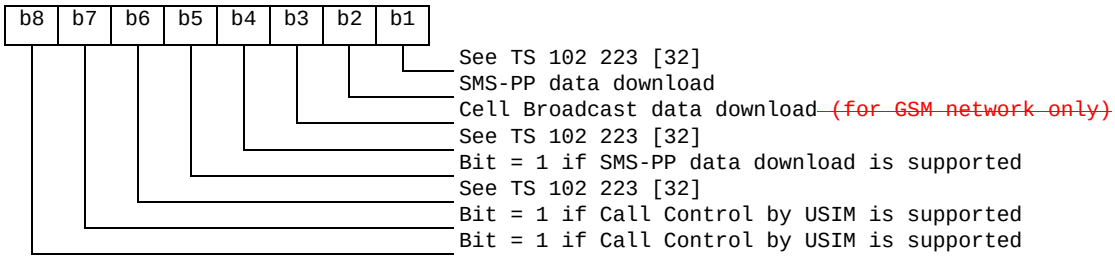
  Coding:

  - 1 bit is used to code each facility:

    - bit = 1: facility supported by ME.
    - bit = 0: facility not supported by ME.

NOTE: several bits may need to be set to 1 for the support of the same facility. This is because of backward compatibility with SAT: several options existed in SAT for a given facility, and they are mandatory in USAT when this facility is supported.

First byte (Download):



7.1.2 Cell Broadcast data download

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

7.1.2.1 Procedure

If the service "data download via SMS-CB" is available in the UICC Service Table or USIM Service Table (see 3GPP TS 31.102 [14]), then the ME shall follow the procedure below:

- when the ME receives a new Cell Broadcast message, the ME shall compare the message identifier of the Cell Broadcast message with the message identifiers contained in EF_{CBMID};

- In the case of a GSM Cell Broadcast message, if the message identifier is found in EF_{CBMID}, the cell broadcast page is passed to the UICC using the ENVELOPE (CELL BROADCAST DOWNLOAD) command, defined below. The ME shall not display the message;

- In the case of a UMTS Cell Broadcast message, if the message identifier is found in EF_{CBMID}, the ME shall deconstruct the UMTS Cell Broadcast message Parameter into its Cell Broadcast pages, and reconstruct each

page in the format of the GSM Cell Broadcast Message Parameter, as described below, and according to the definition of the Cell Broadcast message structure in TS 23.041[6]:

1. From the Number-of-Pages byte of the UMTS message, the ME shall obtain the number of Cell Broadcast pages to be constructed.

2. For each page the ME shall reconstruct GSM Cell Broadcast Page header as follows:

   - The 2-byte Serial Number of the UMTS message shall be mapped to the reconstructed GSM message Serial Number.
   - The 2-byte Message ID of the UMTS message shall be mapped to the reconstructed GSM message Message ID.
   - The 1-byte Data Coding Scheme of the UMTS message shall be mapped to the reconstructed GSM message Data Coding Scheme.
   - The 1-byte Number-Of-Pages of the UMTS message in combination with the current page's sequence number (based on the order of the pages in the UMTS message) shall be formatted into the reconstructed GSM message Page Parameter byte, as described in TS 23.041[6].
   - The respective 82 byte CBS-Message-Information-Page shall be mapped to the reconstructed GSM message content.

Cell Broadcast Message Parameter Element mapping

Network – ME (UMTS Cell Broadcast Message)	ME-USAT interface (GSM Cell Broadcast Message Format)
Message ID	Message ID
Serial Number	Serial Number
Data Coding Scheme	Data Coding Scheme
Number-Of –Pages	Page Parameter (Note)
CBS-Message-Information-Page	Content of Message

Note: The Page Parameter byte is constructed from the total number of pages as indicated in the UMTS CB message, in combination with the current page's sequence number (based on the order of the pages in the UMTS message).

- Each of the resulting pages shall then be passed to the UICC using the ENVELOPE (CELL BROADCAST DOWNLOAD) command, defined below. The ME shall not display the message;
- if the message identifier of the incoming cell broadcast message is not found in EF_{CBMID}, then the ME shall determine if the message should be displayed, by following the procedures in 3GPP TS 23.041 [6] and 3GPP TS 31.102 [14].
- if the UICC responds with '93 00', the ME shall consider that the Cell Broadcast page has not been delivered successfully. The ME may retry to deliver the same Cell Broadcast page.

The ME shall identify new cell broadcast pages by their message identifier, serial number and page values.

8.5 Cell Broadcast Page

~~These data are only available when the ME is connected to a GSM access network.~~

Byte(s)	Description	Length
1	Cell Broadcast page tag	1
2	Length = '58' (88 decimal)	1
3 - 90	Cell Broadcast page	88

The Cell Broadcast page is formatted in the same way as the GSM Cell Broadcast Message Parameter , as described in 3GPP TS 23.041 [6].

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	~~GSM n~~Network ~~only~~	UICC
MO SHORT MESSAGE CONTROL	ME	UICC
SEND SS	UICC	Network
SEND USSD	UICC	Network

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Tdoc T3-031002⌘

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CHANGE REQUEST

⌘ **31.111** **CR** **102** ⌘ **rev** **-** ⌘ Current version: ⌘

*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:	⌘	Cell Broadcast Data Download in UMTS
Source:	⌘	T3
Work item code:	⌘	***Date:*** ⌘ 20/11/2003
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:	⌘	Currently the Cell Broadcast Data Download bearer is restricted to work only in GSM access networks. The purpose of this CR is to enable and define the download of Cell Broadcast Data Download messages to the USAT when connected to UTRAN network.
Summary of change:	⌘	Remove all restrictions of the Cell Broadcast Data Download bearer to work only when connected to a GSM access network, and add a definition of the ENVELOPE download mechanism for such messages.
Consequences if not approved:	⌘	Lack of standard definition of means to download UMTS Cell Broadcast Data Download messges to the USAT.

Clauses affected:	⌘	5.2, 7.1.2, 7.1.2.1, 8.5, 10

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

Other comments: ⌘

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.

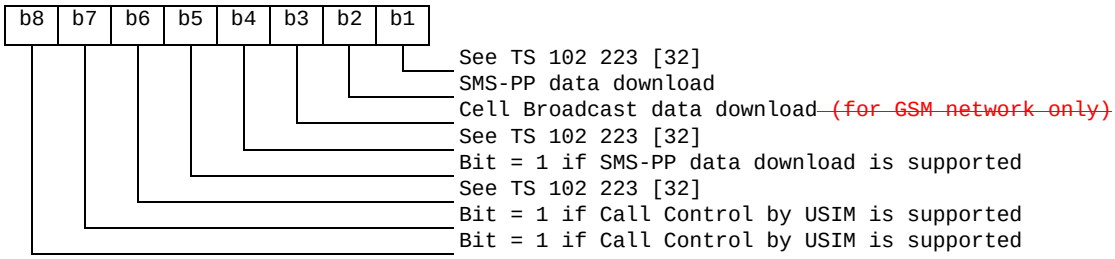
  Coding:

  - 1 bit is used to code each facility:

    - bit = 1: facility supported by ME.
    - bit = 0: facility not supported by ME.

NOTE: several bits may need to be set to 1 for the support of the same facility. This is because of backward compatibility with SAT: several options existed in SAT for a given facility, and they are mandatory in USAT when this facility is supported.

First byte (Download):



7.1.2 Cell Broadcast data download

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

7.1.2.1 Procedure

If the service "data download via SMS-CB" is available in the UICC Service Table or USIM Service Table (see 3GPP TS 31.102 [14]), then the ME shall follow the procedure below:

- when the ME receives a new Cell Broadcast message, the ME shall compare the message identifier of the Cell Broadcast message with the message identifiers contained in EF_{CBMID};

- In the case of a GSM Cell Broadcast message, if the message identifier is found in EF_{CBMID}, the cell broadcast page is passed to the UICC using the ENVELOPE (CELL BROADCAST DOWNLOAD) command, defined below. The ME shall not display the message;

- In the case of a UMTS Cell Broadcast message, if the message identifier is found in EF_{CBMID}, the ME shall deconstruct the UMTS Cell Broadcast message Parameter into its Cell Broadcast pages, and reconstruct each

page in the format of the GSM Cell Broadcast Message Parameter, as described below, and according to the definition of the Cell Broadcast message structure in TS 23.041[6]:

1. From the Number-of-Pages byte of the UMTS message, the ME shall obtain the number of Cell Broadcast pages to be constructed.

2. For each page the ME shall reconstruct GSM Cell Broadcast Page header as follows:

   - The 2-byte Serial Number of the UMTS message shall be mapped to the reconstructed GSM message Serial Number.
   - The 2-byte Message ID of the UMTS message shall be mapped to the reconstructed GSM message Message ID.
   - The 1-byte Data Coding Scheme of the UMTS message shall be mapped to the reconstructed GSM message Data Coding Scheme.
   - The 1-byte Number-Of-Pages of the UMTS message in combination with the current page's sequence number (based on the order of the pages in the UMTS message) shall be formatted into the reconstructed GSM message Page Parameter byte, as described in TS 23.041[6].
   - The respective 82 byte CBS-Message-Information-Page shall be mapped to the reconstructed GSM message content.

Cell Broadcast Message Parameter Element mapping

Network – ME (UMTS Cell Broadcast Message)	ME-USAT interface (GSM Cell Broadcast Message Format)
Message ID	Message ID
Serial Number	Serial Number
Data Coding Scheme	Data Coding Scheme
Number-Of –Pages	Page Parameter (Note)
CBS-Message-Information-Page	Content of Message

Note: The Page Parameter byte is constructed from the total number of pages as indicated in the UMTS CB message, in combination with the current page's sequence number (based on the order of the pages in the UMTS message).

- Each of the resulting pages shall then be passed to the UICC using the ENVELOPE (CELL BROADCAST DOWNLOAD) command, defined below. The ME shall not display the message;
- if the message identifier of the incoming cell broadcast message is not found in EF_{CBMID}, then the ME shall determine if the message should be displayed, by following the procedures in 3GPP TS 23.041 [6] and 3GPP TS 31.102 [14].
- if the UICC responds with '93 00', the ME shall consider that the Cell Broadcast page has not been delivered successfully. The ME may retry to deliver the same Cell Broadcast page.

The ME shall identify new cell broadcast pages by their message identifier, serial number and page values.

8.5 Cell Broadcast Page

~~These data are only available when the ME is connected to a GSM access network.~~

Byte(s)	Description	Length
1	Cell Broadcast page tag	1
2	Length = '58' (88 decimal)	1
3 - 90	Cell Broadcast page	88

The Cell Broadcast page is formatted in the same way as the GSM Cell Broadcast Message Parameter , as described in 3GPP TS 23.041 [6].

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	~~GSM n~~Network ~~only~~	UICC
MO SHORT MESSAGE CONTROL	ME	UICC
SEND SS	UICC	Network
SEND USSD	UICC	Network

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CR-Form-v7

CHANGE REQUEST

⌘ **31.111** **CR** 103 ⌘**rev** **-** ⌘ Current version: **3.9.0** ⌘

*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:	⌘	Clarification on user confirmation for OPEN CHANNEL
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	20/11/2003
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:	⌘	Misalignment with SA1 specification (TS 22.038). With the current text, one can believe that a “user confirmation phase” is always necessary with OPEN CHANNEL, as for the SETUP CALL. However the bearer independent protocol is (when using PS) much more like the SMS or the USSD, i.e. the service might be transparent to the user. Anyway, it is defined in 22.038 that the ME may implement a general mechanism in order for the user to confirm the actions initiated by the toolkit applications.
Summary of change:	⌘	Clarification of the description of the OPEN CHANNEL COMMAND for PS
Consequences if not approved:	⌘	TS 31.111 not fulfilling the requirements of the stage 1 (TS 22.038).

Clauses affected:	⌘	2, 6.4.27.2

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

⌘

Other comments:	⌘	Equivalent text in further releases is in ETSI TS 102223 (CAT)

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".

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[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 22.038: " USIM/SIM Application Toolkit (USAT/SAT); Service description"

6.4.27.2 OPEN CHANNEL related to ~~GPRS~~PS bearer

This clause applies only if class "e" is supported.

Upon receiving this command, the ME shall decide if it is able to execute the command. The UICC shall indicate whether the ME should establish the link immediately or upon receiving the first transmitted data (on demand).

The UICC provides to the ME a list of parameters necessary to activate a PDP context.

The ME shall attempt at least one PDP context activation.

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 immediate PDP context activation is requested and the ME is unable to set-up a channel using the exact parameters provided by the UICC, the ME sets up the channel using the best parameters it can support and informs the UICC of the channel identifier and the modified parameters using TERMINAL RESPONSE (Command performed with modification);
- if immediate PDP context activation is requested and the ME is unable to activate the PDP context with the network using the exact parameters provided by the UICC, the ME informs the UICC using TERMINAL RESPONSE (Network currently unable to process command). The operation is aborted;
- if on demand link establishment is requested and the ME is unable to set-up a channel using the exact parameters provided by the UICC, the ME sets up the channel using the best parameters it can support and informs the UICC of the channel identifier and the modified parameters using TERMINAL RESPONSE (Command performed with modification);
- if the command is rejected because the ME has no channel left with the requested bearer capabilities, the ME informs the UICC using TERMINAL RESPONSE (Bearer independent protocol error). The operation is aborted;
- if the user does not accept the channel set-up, the ME informs the UICC using TERMINAL RESPONSE (User did not accept the proactive command). The operation is aborted;
- if the user has indicated the need to end the proactive UICC session, the ME informs the UICC using TERMINAL RESPONSE(Proactive UICC session terminated by the user). The operation is aborted;
- if the command is rejected because the class B ME is busy on a call, the ME informs the UICC using TERMINAL RESPONSE (ME unable to process command - currently busy on call). The operation is aborted;
- if the command is rejected because the class B 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). The operation is aborted.

The ME shall inform the UICC that the command has been successfully executed using TERMINAL RESPONSE:

- if immediate PDP context activation is requested, the ME allocates buffers, activates the PDP context and informs the UICC and reports the channel identifier using TERMINAL RESPONSE (Command performed successfully);
- if on demand PDP context activation is requested, the ME allocates buffers, informs the UICC and reports the channel identifier using TERMINAL RESPONSE (Command performed successfully).

If the ME is able to set up the channel on the serving network, the ME shall~~:~~ then enter

~~- alert the user (as for an incoming call). This is~~ the confirmation phase described hereafter;

~~-~~ 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 during the user confirmation phase. This is also an indication that the ME should not give any other information to the user during the user confirmation phase. 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 or ask for user confirmation.

- if the alpha identifier is not provided by the UICC ~~or is a null data object (i.e. length = '00' and no value part)~~, the ME may give information to the user.

- if the user ~~accepts the channel~~doesn't reject the channel, the ME shall then set up a channel;

- if the user does not accept the channel or rejects the channel, then the ME informs the UICC using TERMINAL RESPONSE (user did not accept the proactive command). The operation is aborted;

- if the user has indicated the need to end the proactive UICC session, the ME shall send a TERMINAL RESPONSE with (Proactive UICC session terminated by the user) result value;

- optionally, during PDP context activation, the ME can give some audible or display indication concerning what is happening;

- if the user stops the PDP context activation attempt before a result is received from the network, the ME informs the UICC using TERMINAL RESPONSE (user cleared down call before connection or network release).