

Agenda Item: 5.3.3

Source: T3

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

Document for: Approval

This document contains the following change requests that are approved by 3GPP TSG T3 and forwarded to 3GPP TSG T#23 for approval:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level
31.111	104	-	R99	Clarification of Alpha Identifier for BIP commands	F	3.11.0	3.12.0	T3-040118
31.111	105	-	Rel-6	Terminal profile alignment with SCP 102 223 CAT specification	F	6.0.0	6.1.0	T3-040138
31.111	106	-	Rel-6	Align the OPEN CHANNEL pro-active command and the TERMINAL RESPONSE associated with the specific 3G Quality Of Service (QOS) for packet data channel.	C	6.0.0	6.2.0	T3-040158

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

6.4.27.2 OPEN CHANNEL related to 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 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, the ME may give information to the user.
- if the user does not 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).

6.4.28 CLOSE CHANNEL

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

This command requests the ME to close the channel corresponding to the Channel identifier.

Upon receiving this command, the ME shall decide if it is able to execute the command:

- if the command is rejected because the channel identifier is not valid, the ME informs the UICC using TERMINAL RESPONSE (Bearer independent protocol error);
- if the command is rejected because the requested channel is in error, the ME informs the UICC using TERMINAL RESPONSE (Bearer independent protocol error).

If the ME is able to process the command:

- the ME shall release the data transfer, discard the remaining data and inform the UICC that the command has been successfully executed, using TERMINAL RESPONSE;
- optionally, during CLOSE CHANNEL, the ME can give some audible or display indication concerning what is happening. In this intention, 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 indicate the link closing 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 indication to the user during the link closing phase;
- 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 an indication~~information~~ to the user during the link closing phase.

6.4.29 RECEIVE DATA

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

This command requests the ME to return data from a dedicated Channel identifier according to the number of bytes specified by the UICC.

Upon receiving this command, the ME shall return the data available in the Rx buffer corresponding to the Channel identifier. Examples are given below, but the list is not exhaustive.

If the ME is unable to process the command:

- if the command is rejected because the requested channel is already closed the ME informs the UICC using TERMINAL RESPONSE (Bearer independent protocol error);
- 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).

If the ME is able to process the command:

- if the requested number of bytes is available in the buffer, the ME shall inform the UICC that the command has been successfully executed, using TERMINAL RESPONSE and return the requested data and the number of bytes remaining in the channel buffer (or FF if more than the maximum bytes remains);
- if the requested number of bytes is available in the buffer but the whole requested data cannot be included in the TERMINAL RESPONSE because of APDU size limits, the ME shall return the maximum number of bytes possible according to the length of other TLVs. The ME shall inform the SIM that the command has been successfully executed, using TERMINAL RESPONSE and shall indicate the number of bytes remaining in the channel buffer (or FF if more than the maximum bytes remains);
- if the requested number of bytes is not yet available in the buffer, the ME shall NOT wait for the requested number of bytes to arrive. The ME shall inform the UICC, using TERMINAL RESPONSE (Command performed with missing information) and returns the data currently available in the channel buffer;
- in the case of packet/datagram transmission, the ME shall put in the Rx buffer a complete packet SDU and only one at one time. For example, if UDP datagrams are received by the ME, the latter shall insert only the SDU of each UDP packet received in the Rx buffer. After one SDU has been downloaded by the UICC (using one or several RECEIVE DATA commands), the ME shall insert the next SDU of UDP datagram, and so on;
- Optionally, the UICC may include in the 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, the ME shall use it to inform the user. The ME may also use it to inform the user during data transfer. 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 inform the user during data transfer;
 - if the alpha identifier is not provided by the UICC, the ME may inform the user during data transfer.

6.4.30 SEND DATA

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

This command requests the ME to send data through a previously set up data channel corresponding to a dedicated Channel identifier. The UICC informs the ME if the data is:

- to be sent immediately;
- or to be stored in a Tx buffer. Then it is up to the ME to manage the data sending in order to use the bearer in an optimised way. To send the data stored in a Tx buffer, the ME shall be notified by a "send data immediately" and it shall consider the data presently and previously concatenated in its Tx buffer as one SDU, and send it in only one PDU. The Tx buffer shall then be emptied before returning the TERMINAL RESPONSE to the UICC and allowing new UICC sending.

Upon receiving this command, the ME shall either immediatly send data or store provided data into the Tx buffer corresponding to the Channel identifier. Examples are given below, but the list is not exhaustive.

If the ME is unable to process the command:

- if the command is rejected because the requested channel is already closed the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error – channel identifier not valid);
- if the command is rejected because the ME could not establish the link (after OPEN CHANNEL (on demand)) or the link was dropped, the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error – channel closed);
- if the command is rejected because the channel is temporarily unavailable the ME informs the UICC using TERMINAL RESPONSE (ME currently unable to process command);
- if the requested number of bytes of empty space is not yet available in the buffer the ME informs the UICC using TERMINAL RESPONSE (Bearer Independent Protocol error);
- 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).

If the ME is able to process the command:

- if the requested number of bytes of empty space is available in the buffer the ME shall inform the UICC that the command has been successfully executed, using TERMINAL RESPONSE and return the number of bytes of empty space available in the Tx buffer (or FF if more then 255 bytes are available);
- in the case of packet/datagram transmission, the structure of the SDU sent by the UICC to the ME shall be fully respected while sending to the ME external interface. The size of the SDU is therefore limited by the size of the packet PDU sent over the ME external interface. In order to send one complete SDU, the USAT application may fill the Tx buffer with several SEND DATA commands, if necessary. Then the ME shall send the complete SDU in one packet PDU.
- Optionally, the SIM may include in the 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, the ME shall use it to inform the user. The ME may also use it to inform the user during data transfer. 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 inform the user during data transfer;
 - if the alpha identifier is not provided by the UICC, the ME may inform the user during data transfer.

CR-Form-v7

CHANGE REQUEST

⌘ **31.111 CR 105** ⌘ rev - ⌘ Current version: **6.0.0** ⌘

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:	⌘ Terminal profile alignment with SCP 102 223 CAT specification		
Source:	⌘ T3		
Work item code:	⌘ TEI	Date:	⌘ 13/02/2004
Category:	⌘ F	Release:	⌘ Rel-6
	<i>Use one of the following categories:</i> 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 .		<i>Use one of the following releases:</i> 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:	⌘ The Terminal Profile has evolved in the SCP 102 223 CAT specification		
Summary of change:	⌘ Terminal Profile updated in accordance with the latest available 102 223 specification		
Consequences if not approved:	⌘ Possible conflict when new bytes and bits are allocated by 3GPP		

Clauses affected:	⌘ 5.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
	X										
	X										
	X										
Other comments:	⌘										

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

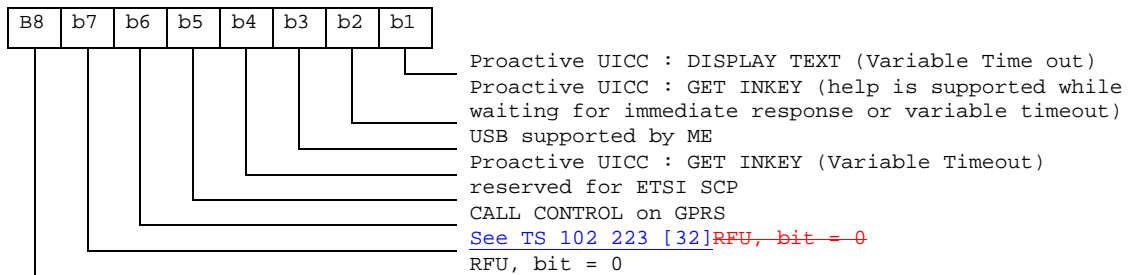
The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data:

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

[...]

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].

[Twenty-first byte \(Extended Launch Browser Capability\) for class "c":](#)

[See TS 102 223 \[32\].](#)

Subsequent bytes:

- See TS 102 223 [32].

Response parameters/data:

- None.

CHANGE REQUEST

⌘ **31.111 CR 106** ⌘ rev **-** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Align the OPEN CHANNEL pro-active command and the TERMINAL RESPONSE associated with the specific 3G Quality Of Service (QOS) for packet data channel.		
Source:	⌘ T3		
Work item code:	⌘ TEI	Date:	⌘ 13/02/2004
Category:	⌘ C	Release:	⌘ Rel-6
	Use <u>one</u> 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ To align the 3G network possibilities with the OPEN CHANNEL functionality. UTRAN has a more developed Quality of Services than the GSM technology, which should be taken into account.		
Summary of change:	⌘ Specific UTRAN Quality of Services is introduced in the OPEN CHANNEL command		
Consequences if not approved:	⌘		

Clauses affected:	⌘ 5.2 – 6.4.27.1 - 6.4.27.2 – 8.52 – 8.52.2 – 8.52.x (new)										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X	⌘ ETSI 102 223	
Y	N										
X											
	X										
	X										
Other comments:	⌘ Replacing T3-030882										

5.2 Structure and coding of TERMINAL PROFILE

Direction: ME to UICC.

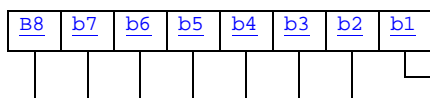
The command header is specified in 3GPP TS 31.101 [13].

Command parameters/data:

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

[...]

Twenty second byte:



Support of UTRAN PS with extended parameters
RFU, bit = 0

Subsequent bytes:

- See TS 102 223 [32].

Response parameters/data:

- None.

[...]

6.4.27 OPEN CHANNEL

6.4.27.1 OPEN CHANNEL related to CS bearer

This command is issued by the UICC to request a channel opening. 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 reconnection mechanism according to 3GPP TS 22.001 [22].

Upon receiving this command, the ME shall decide if it is able to execute the command. In addition to the examples given in TS 102 223 [32] the following example applies:

- 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). The operation is aborted.

The "Bearer description" provided in the command gives recommended values for parameters that the ME should use to establish the data link. However if the ME or network does not support these values, the ME selects the most appropriate values.

6.4.27.2 OPEN CHANNEL related to GPRS/3G packet service

The procedures defined in TS 102 223 [32] apply, understanding that:

- "packet data service" means GPRS or 3G packet service,

- "activation of packet data service" means activation of a PDP context.

The UICC provides to the terminal a list of parameters necessary to activate a packet data service. The UICC has two ways to indicate to the ME the QoS it requires:

- either use a Bearer Description called "Bearer description for GPRS/3G Packet Service", which is valid for 2G and 3G packet service
- or use a Bearer Description called "Bearer description for UTRAN Packet Service with extended parameters" which is valid only for a UTRAN packet service

Upon receiving this command, the ME shall decide if it is able to execute the command. In addition to the examples given in TS 102 223 [32] the following example applies:

- if the command is rejected because the ME is busy on a SS transaction and unable to activate a PDP context in parallel with this 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 "Bearer description" provided in the command gives recommended values for parameters that the ME should use to establish the data link. However if the ME or network does not support these values, the ME selects the most appropriate values.

[...]

8.52 Bearer description

Byte(s)	Description	Length
1	Bearer description tag	1
2	Length (X+1)	1
3	Bearer type	1
4 to (3+X)	Bearer parameters	X

- Bearer Type coding: in addition to the values defined in TS 102 223 [32], the following are defined:
 - '01' = CSD;
 - '02' = GPRS / 3G packet service.
 - '03' = UTRAN packet service with extended parameters
- Bearer parameters coding: see the following clauses ~~for 3G-specific technologies~~.

[...]

8.52.2 Bearer parameters for GPRS/3G Packet Service

Contents: parameters describing the Quality of Service (QoS) and the type of PDP. This is an element of the PDP context. These parameters can be used for 2G or 3G packet service.

In this case X=6.

Coding:

- The following values are as defined in the 3GPP TS 27.007 [12], for the "+CGQREQ" extended command. They are coded in hexadecimal.

Coding of Byte 4:

- Precedence class: same as the "precedence" subparameter, defined in 3GPP TS 27.007 [12].

Coding of Byte 5:

- Delay class: same as the "delay" subparameter, defined in 3GPP TS 27.007 [12].

Coding of Byte 6:

- Reliability class: same as the "reliability" subparameter, defined in 3GPP TS 27.007 [12].

Coding of Byte 7:

- Peak throughput class: same as the "peak" subparameter, defined in TS 27.007 [12].

Coding of Byte 8:

- Mean throughput class: same as the "mean" subparameter, defined in TS 27.007 [12].

Coding of Byte 9:

- Packet data protocol type:
 - '02' = IP (Internet Protocol, IETF STD 5);
 - all other values are reserved.

8.52.x Bearer parameters for UTRAN Packet Service with extended control

Contents: parameters describing the Quality of Service (QoS) and the type of PDP. This is an element of the PDP context.

In this case X=13.

Coding:

- The following values are as defined in the 3GPP TS 27.007 [12], for the "+CGEQREQ" extended command. They are coded in hexadecimal.
 - Traffic class: same as the "Traffic class" subparameter, defined in TS 27.007 [12].
 - Maximum bitrate UL: same as the "Maximum bitrate UL" subparameter, defined in TS 27.007 [12].
 - Maximum bitrate DL: same as the "Maximum bitrate DL" subparameter, defined in TS 27.007 [12].
 - Guaranteed bitrate UL: same as the "Guaranteed bitrate UL" subparameter, defined in TS 27.007 [12].
 - Guaranteed bitrate DL: same as the "Guaranteed bitrate DL" subparameter, defined in TS 27.007 [12].
 - Delivery order: same as the "Delivery order" subparameter, defined in TS 27.007 [12].
 - Maximum SDU size: same as the "Maximum SDU size" subparameter, defined in TS 27.007 [12].
 - SDU error ratio: same as the "SDU error ratio" subparameter, defined in TS 27.007 [12].
 - Residual bit error ratio: same as the "Residual bit error ratio" subparameter, defined in TS 27.007 [12].
 - Delivery of erroneous SDUs: same as the "Delivery of erroneous SDUs" subparameter, defined in TS 27.007 [12].
 - Transfer delay: same as the "Transfer delay" subparameter, defined in TS 27.007 [12].
 - Traffic handling priority: same as the "Traffic handling priority" subparameter, defined in TS 27.007 [12].

- [PDP_type: same as the "PDP_type" subparameter, defined in TS 27.007 \[12\].](#)