Technical Specification Group Services and System Aspects
Meeting #8, Düsseldorf, Germany, 26-28 June 2000

***TSGS#8(00)0196***

**Source:** **TSG SA1**

**Title:** **CRs to SIM Application Toolkit (22.038)**

**Document for:** **Approval**

**Agenda Item:** **6.1.3**

| Doc-1st-Level | Doc-2nd-Level | Spec | CR | Rev | Phase | Cat | Subject | Version-Current | Version-New |
|---|---|---|---|---|---|---|---|---|---|
| SP-000196 | S1-000432 | 22.038 | 003 | | R99 | F | Deletion of note to non-existent TS | 3.1.0 | 3.2.0 |

**3GPP TSG SA WG1 Meeting (S1#9)**
Taastrup, Denmark 17th to 21st July 2000

***Tdoc* S1-00-432**
*e.g. for 3GPP use the format TP-99xxx*
*or for SMG, use the format P-99-xxx*

# CHANGE REQUEST

*Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.*

| 22.038 | CR | 003 | Current Version: | 3.1.0 |
|---|---|---|---|---|

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

| For submission to: | SA#8 | for approval | X | strategic | | *(for SMG use only)* |
|---|---|---|---|---|---|---|
| *list expected approval meeting # here ?* | | for information | | non-strategic | | |

*Form: CR cover sheet, version 2 for 3GPP and SMG* *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

**Proposed change affects:** (U)SIM [ ] ME [ ] UTRAN / Radio [ ] Core Network [ ]
*(at least one should be marked with an X)*

**Source:** TSG SA1 Secretary **Date:** 23/05/00

**Subject:** Deletion of note

**Work item:**

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

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

**Reason for change:** A note is included in this specification which makes reference to a technical specification to be written by T2. Once the specification is written, the note should be replaced by a reference to the new specification.
At the last T2 meeting, it was decided that it is not going to be possible to complete this technical specification in the short timescales available for R'99. Therefore, it is proposed to delete the note for R'99 and add a reference for R'00 once the specification is completed.

**Clauses affected:** 6.2

**Other specs affected:**

| | | | |
|---|---|---|---|
| Other 3G core specifications | [ ] | ? | List of CRs: |
| Other GSM core specifications | [ ] | ? | List of CRs: |
| MS test specifications | [ ] | ? | List of CRs: |
| BSS test specifications | [ ] | ? | List of CRs: |
| O&M specifications | [ ] | ? | List of CRs: |

**Other comments:**


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

- the means for the SAT/USAT application to control the PLMN services/supplementary services via the standardized MMI. Only the originator (i.e. either user or SAT/USAT application) of the action shall directly receive the results/responses of that action (e.g. network response to an SCI). Optionally under user control the ME may display the individual actions/responses.

Some of the above requirements are subsequently elaborated.

# 6 SAT/USAT/ME interface requirements

## 6.1 SAT/USAT APIs

The SAT/USAT-API is defined in GSM 02.19 [6].
The SAT/USAT API for the GSM USIM/SIM card shall allow application programmers easy access to the functions and data described in GSM 11.11 [4] and GSM 11.14 [5], such that USIM/SIM based services can be developed and loaded onto USIM/SIMs (independent of the USIM/SIM manufacturer), quickly and, if necessary, remotely, after the card has been issued. The SAT/USAT API shall support pro-active functions as described in GSM 11.14 [5] and transport functions as described in GSM 11.11 [4].

## 6.2 SAT/USAT proactive capability

The SAT/USAT proactive capability is a mechanism whereby the USIM/SIM can request specific actions to be taken by the ME by issuing "proactive commands" thus establishing and maintaining an interactive dialogue with the user and/or communicating with the network..
The ME shall inform the USIM/SIM of the success or otherwise of each command issued to it by the USIM/SIM, and also indicate the command details and if applicable add more specific information.
The proactive command set allows the SAT/USAT to instruct the ME to:

1 display text supplied by the USAT/SAT on the ME's display, with an indication of priority (normal or high), and a defined action (user activity or timeout) to terminate the text display.

2 display a text string and obtain the response in the form of a single user keystroke or a string of keys entered by the user and pass the response to the USIM/SIM. If the response is designated as private by the USIM/SIM the ME shall not display the users response on the screen.

3 set up a voice call to an address with a specific priority as indicated by the USIM/SIM with all parameters indicated by the SIM.

4 set up a data call to an address with specific bearer capability and priority, all parameters are indicated by the USIM/SIM.

5 set up and manage a data channel (using a CSD, GPRS, SMS or USSD bearer) between the SIM and an address using information provided by the SIM.

6 send data through a previously set up data channel. The SIM informs the ME if the data is to be sent immediately.

7 retrieve data from the ME that has previously been received via a data channel set up using (5) above. The SIM informs the ME as to how much data it expects to retrieve.8 send a short message to the network. The short message text is supplied by the USIM/SIM to the ME in either packed or unpacked SMS 7-bit alphabet, or UCS2 alphabet.

9 send a SS control, SS MMI string or USSD string, indicating which alphabet is used where applicable.

10 play a tone in the appropriate audio device.

11 negotiate, within reasonable tolerances, a periodic "polling" of the USIM/SIM Toolkit.

12 refresh the image (if applicable) of the USIM/SIM data contained in the ME memory, either entirely, or partially, or instruct the ME to re-initialize completely.

13 set up an event list in the ME such that the USIM/SIM is informed by the ME when a USIM/SIM indicated event has occurred.

14 set up an additional menu in the ME, by issuing the ME with a menu list, and allow indication back to the USIM/SIM of the user selected menu item.

15 provide requested information from the ME to the USIM/SIM, for example the MCC, MNC and IMEI.

16 communicate bi-directionally with an auxiliary device, e.g. a second card reader.

17 set up, refresh and interrogate several timers, and inform the USIM/SIM when these expire, within reasonable tolerances.

18 display additional MMI information such as display information or tones with commands that employ network resources, with an indication to the ME as to the required level of ME generated MMI as a result of the interaction with the network.

19 allow the ME to display help information with the commands, by providing the associated text, related to the user action (e.g. menu selection).

Unless otherwise stated the following shall apply:

- The format of text to be displayed is designated by the USIM/SIM and is either SMS default alphabet (packed or unpacked) or UCS2 alphabet.

- The format of the response from the ME is designated by the USIM/SIM and is either keypad digit (0-9, *, #, +), SMS default alphabet characters or UCS2 alphabet characters.

~~Editor's Note: Release 99 shall also include a technical specification produced in a technical working group (the exact group is to be decided) to describe the technical detail of how these requirements are to be fulfilled by the ME. This technical specification is to be introduced in TSGs#8 in June 1999 at which point this note can be removed. A reference to this specification shall be provided in the references section above. Additional requirements from the Applications and Automatic Execution Environment Workshop should be considered for inclusion in Release 99 of this specification.~~

## 6.3 ME Capability for support of bearer independent protocol

The ME supporting bearer independent protocol shall provide to the SIM a common interface for any type of data bearer. This interface is in addition to dedicated commands (eg SMS, SS and USSD) for SAT application to exchange data with the network. The communication is initiated by the SIM. The ME negotiates with the SIM and the network to establish the optimum channel considering the SIM request, the network and ME capabilities.
The ME is responsible for maintaining and restoring the link should there be a link error.

# 7 SAT/USAT User Interface requirements

## 7.1 Data presentation requirements (e.g. Display)

In order to be able to create and operate applications with a homogeneous display(s) SAT/USAT shall fully control the display of all actions and all network-responses concerned with the operation of the application. SAT/USAT shall, upon completion/closure of the application, return full control to the ME.
The display of information shall be either in the form of text (i.e. alphanumeric characters) or in graphical form or both.