

Agenda Item: 6.5.1
Source: CT6
Title: All LSs sent from CT6 since TSG CT#27 Meeting
Document for: Information

This document contains the following liaisons that are agreed by 3GPP TSG CT WG6 and have been sent to the respective bodies.

Table of Liaisons

Doc	Title	Source	Agenda	Status
C6-050351	LS on MMS related features of the USIM and USAT (Reply to C6-050345)	CT6	8.5	Agreed
C6-050350	LS on naming convention (Reply to SCaG Doc 34_016)	CT6	8.5	Agreed
C6-050456	LS to SCP TEC on reservation of values for response status code and events	CT6	13.1	Agreed
C6-050349	LS to 3GPP2 on Clarifications on 3GPP CT6 specifications	CT6	8.5	Agreed
C6-050348	LS to 3GPP2 on ICCID uniqueness	CT6	8.5	Agreed
C6-050353	LS to GERAN on 51.010-2 misalignment with Toolkit	CT6	14.6	Agreed

Title: LS on ICCID uniqueness
Response to: Response to C6-050211
Release:

Source: 3GPP-CT6
To: 3GPP2 TSG-C
Cc: 3GPP CT

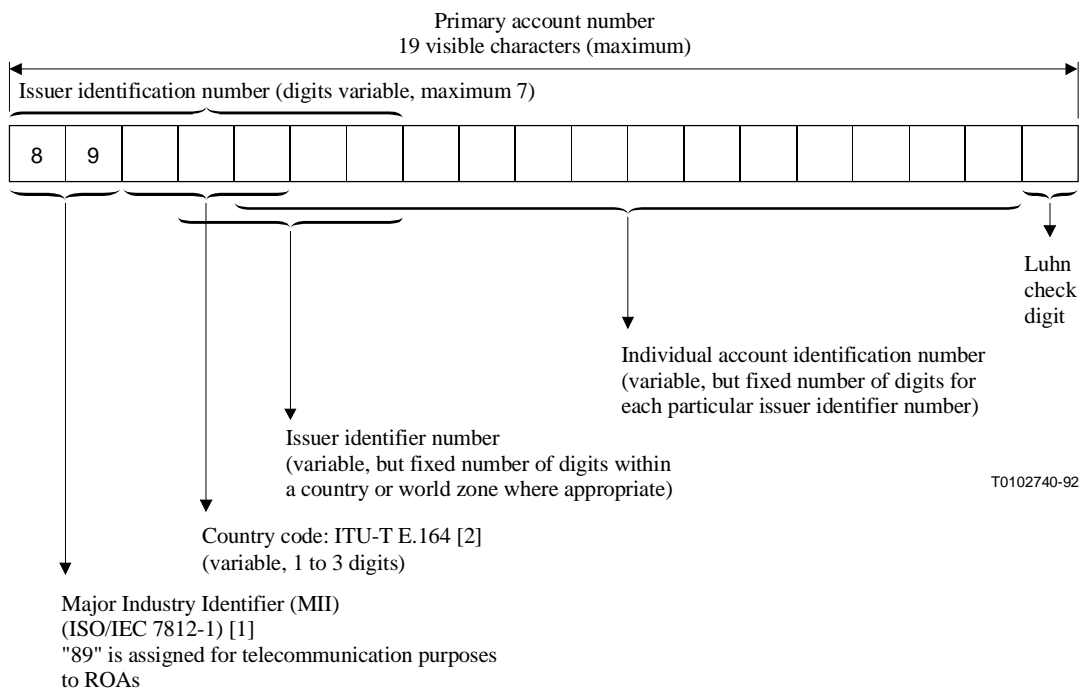
Contact Person:
Name: Enrico PERIN
Tel. Number:
E-mail Address: eperin@axalto.com

Attachments:

1. Overall Description:

3GPP-CT6 would like to thank 3GPP2 TSG-C for its LS. After analysis of the different questions, 3GPP-CT6 gives the following answers:

- 1) The specification TS 31 101 references the TS 102 221 which defines the coding of the content of the file EF_{ICCID} according to ITU-T Recommendation E.118: "The international telecommunication charge card".
- 2) Operators shall conform to E.118 for structuring the ICCID. However, it is known that some operators have not followed these rules, which could lead to problems in theory, but the ICCID is not used for user/mobile identification in 3GPP networks.
- 3) 3GPP operators shall use the country code (E.164) following the major industry identifier (89 for telecom).
- 4) The assignment of specific issuer identifier numbers should be the responsibility of a country or group of countries as appropriate. These numbers should only be assigned to ROAs (Recognised Operating Agency) with the agreement of their Administrations.
These issuer identifier numbers are normally used to distinguish among multiple ROAs who issue cards within a country. However, these numbers may also be used to distinguish individual countries sharing the same country code (as defined in ITU-T E.164 [2]) or, if appropriate, to distinguish both countries and issuers.



- 5) It is impossible to have the situation where identical mobile network codes from different operators exist in the same country code, because the regulatory telecom administration that assigns the mobile network code has the responsibility to guarantee that there is no duplicate.

3GPP-CT6 would like to thank 3GPP2 TSG-C for its careful attention and looks forward to continuing cooperation in the future.

3. Date of Next TSG-CT6 Meetings:

TSG-CT6 Meeting #36 9 – 12 August 2005

Dublin, Ireland.

TSG-CT6 Meeting #37 7 – 10 November 2005

Sophia Antipolis, France.

Title: LS on Clarifications on 3GPP CT6 specifications
Response to: 3GPP2 L.S. on Clarifications on 3GPP CT6 specifications (C6-050212)
Release: Release 99, 4, 5, 6.

Source: 3GPP-CT6
To: 3GPP2 TSG-C
Cc:

Contact Person:
Name: Enrico PERIN
Tel. Number:
E-mail Address: eperin@axalto.com

Attachments: C6-050367, C6-050368

1. Overall Description:

3GPP-CT6 would like to thank 3GPP2 TSG-C for its LS. After analysis of the different questions, 3GPP-CT6 informs the 3GPP2 TSG-C that the following actions had been taken into account:

- 1) A CR to GSM 11.11 rel-99 (see attachment C6-050367) and a CR to TS 51.011 rel-4 (see attachment C6-050368) has been submitted at the last CT6#35 meeting in order to align the references with the ISO/IEC specifications revision and at the same time this issue was corrected.
- 2) CT6 confirm that the coding of digits in the emergency call code file is BCD.
- 3) This is intentional because the normative text is in the main body of the specification.
- 4) PIN1/PIN2 is used to indicate that it is the choice of the operator issuing the card as to whether one or the other PIN value applies.
- 5) The coding of field lengths in file descriptions can't be corrected to "x to y" in TS 11.11 and TS 51.011 because this would be an editorial correction in frozen releases. At the next CT6 meeting a CR for TS 31.102 will be submitted.

3GPP-CT6 would like to thank 3GPP2 TSG-C for its careful attention and looks forward to continuing cooperation in the future.

3. Date of Next TSG-CT6 Meetings:

TSG-CT6 Meeting #36	9 – 12 August 2005	Dublin, Ireland.
TSG-CT6 Meeting #37	7 – 10 November 2005	Sophia Antipolis, France.

Title: LS on Naming convention (CT6 document C6-050284)
Response to: -
Release: -

Source: 3GPP-CT6
To: GSMA SCAg
Cc: ETSI SCP Plenary, ETSI SCP REQ

Contact Person:
Name: Paul JOLIVET
Tel. Number:
E-mail Address: pjolvivet@lge.com

Attachments:

1. Overall Description:

3GPP TSG-CT6 thanks GSMA SCAg for their LS about the naming conventions, noting that the document mentioned as attached to this LS unfortunately was not available.

From the CT6 point of view, it is essential to have naming convention that allow to identify each combination of platform and applications. It happened in the past that some requests were difficult to understand because the correct terminology was not used and for instance "SIM" or "SIM Card" used to mean UICC with USIM. This can lead to misinterpretation and interpretation of some requirement.

CT6 is afraid that simplifying the naming using for instance "USIM card" does not allow to differentiate combinations like:

- UICC with only a USIM
- UICC with SIM and USIM
- UICC with USIM and ISIM

Therefore CT6 would like SCAg and any other committee making some inputs to 3GPP on smart card to use the exact terminology as defined in 3GPP and ETSI SCP. For reference, the 3GPP terminology is defined in TS 21.905 for all generic terms and in each specification when needed.

It is also CT6 understanding that Operators can internally or for marketing operation, use their own naming conventions and brands, although it would be preferable that this naming remains somewhat consistent with the terminology in the ETSI and 3GPP specifications.

2. Action:

None

3. Date of Next TSG-CT6 Meetings:

TSG-CT6 Meeting #36	9 – 12 August 2005	Dublin, Ireland.
TSG-CT6 Meeting #37	7 – 10 November 2005	Sophia Antipolis, France.

Title: LS on MMS related features of the USIM and USAT
Response to: LS C6-050345
Release:

Source: 3GPP-CT6
To: EP SCP, SCP REQ, 3GPP2 TSG-C
Cc:

Contact Person:
Name: Christophe DUBOIS
Tel. Number:
E-mail Address: cdubois@axalto.com

Attachments:

1. Overall Description:

3GPP-CT6 would like to thank 3GPP2 TSG-C for their LS and interest on MMS related features of the USIM and USAT.

3GPP-CT6 has no objection to transfer the generic part of the USAT MMS command set from 3GPP to SCP CAT specification, and therefore ensure harmonization between 3GPP and 3GPP2.

However, CT6 cannot foresee the opinion of SCP and will therefore wait to know if SCP agrees to integrate the generic part of the USAT MMS command set in the SCP CAT specification before removing it from the 3GPP USAT specification.

If this can be done, then only any technology specific parts of the MMS command set will remain into the 3GPP USAT specification.

In that view, CT6 would like to ask SCP if they agree to proceed with this transfer, and if yes, to inform CT6 once SCP will have integrated the MMS command set into the CAT specification so CT6 can modify its own USAT specification accordingly.

2. Actions:

To EP SCP group.

ACTION: 3GPP-CT6 asks EP SCP group to inform CT6 whether SCP agrees to integrate the generic part of the toolkit MMS command set in their specification or not.

3GPP-CT6 asks EP SCP group to inform CT6 once they will have integrated the generic part of the USAT MMS command set into the CAT specification, if SCP have chosen to do so.

3. Date of Next TSG-CT- Meetings:

TSG-CT6 Meeting #36 9 – 12 August 2005 Dublin, Ireland.

TSG-CT6 Meeting #37 7 – 10 November 2005 Sophia Antipolis, France.

Title: Reference to SIM Application Toolkit in TS 51.010-2 inconsistent with TS 11.14 and TS 11.10-4
Release: Rel-6
Source: CT6
To: GERAN3

Contact Person:

Name: Eric Laffont
Tel. Number: +33 442 36 6202
E-mail Address: eric.laffont@gemplus.com

Attachments:

At 3GPP TSG-CT6 (former T3) it became apparent that TS 51.010-2 does not reflect the contents of the SIM Toolkit Test Specification TS 11.10-4 R99:

Some commands are stated as mandatory whereas they are optional in the core specification, like Run AT Command.

Other are purely absent from these tables, like the mandatory support of information in Provide Local information, like the optional support of icons, help information.

The intention to create table B.1: Applicability of tests in TS 11.10-4 R99 was precisely to present all the information on supported commands and optional features, that are presented under these incomplete series of tables A26.xx of the TS 51.010-2 Rel-6.

Therefore CT6 kindly asks GERAN3 to revise TS 51.010-2 Rel-6 to remove these tables and to directly point to TS 11.10-4, R99.

Below are a few examples of inconsistencies between 3GPP TS 11.14/ TS 11.10-4 and 51.010-2:

The table A.26.3: Proactive commands contains errors: Run AT is stated as mandatory (M) whereas it is an optional command.

Table A.26.4: Display Text does not contain the icon optional support. Besides icon support is stated nowhere in this document.

Table A.26.5: Get Inkey does not contain help information option. Help information support is stated nowhere in this specification, except in table A.26.10: Set Up Menu

Table A.26.18: Event Download does not list all mandatory events : MT Call, Call connected, call disconnected, location status, user activity, idle screen available are not listed as mandatory (M) events.

Table A.26.17: Provide Local Information is incomplete : it does not contain local information and IMEI mandatory fields, but contains NMR as a mandatory field.

Besides, in TS 51.010-2, the table of PICS/PIXIT in section 27.22 precisely refers to the TS 11.10-4 applicability table B.1.

CHANGE REQUEST

11.11 CR A140 # rev - # Current version: 8.9.0

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# ME Radio Access Network Core Network

Title:	# ISO/IEC 7816-series revision		
Source:	# CT6		
Work item code:	# T.E.I	Date:	# 27/04/2005
Category:	# F	Release:	# R99
	<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> 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:	# ISO/IEC 7816-series has been revised. The contents of the 7816-series have been updated and text has moved between parts causing incorrect references. Corrections too in the administrative data field and the trusted keys/certificates data file.
Summary of change:	# The document titles and references have been updated
Consequences if not approved:	# The references in the 3GPP specifications points to the incorrect 7816-series documents causing incorrect functionality to be referenced.

Clauses affected:	# 2, 3.1, 4, 4.1.1, 4.1.2, 10.3.18, 10.4.2.5						
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> </table> Other core specifications	Y	N	#	X	#	
Y	N						
#	X						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Test specifications	#	X	#			
#	X						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> O&M Specifications	#	X	#			
#	X						
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.

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.

- [1] not used
- [2] 3GPP TS 01.04: "Abbreviations and acronyms".
- [3] 3GPP TS 02.07: "Mobile Stations (MS) features".
- [4] 3GPP TS 02.09: " Security aspects".
- [5] 3GPP TS 22.011: " Service accessibility".
- [6] 3GPP TS 02.17: "Subscriber Identity Modules (SIM) Functional characteristics".
- [7] 3GPP TS 22.024: " Description of Charge Advice Information (CAI)".
- [8] 3GPP TS 02.30: "Man-Machine Interface (MMI) of the Mobile Station (MS)".
- [9] 3GPP TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1".
- [10] 3GPP TS 23.003: "Numbering, addressing and identification".
- [11] 3GPP TS 03.20: "Security related network functions".
- [12] 3GPP TS 23.038: "Alphabets and language-specific information".
- [13] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS) Point-to-Point (PP)".
- [14] 3GPP TS 23.041: "Technical realization of Short Message Service Cell Broadcast (SMSCB)".
- [15] 3GPP TS 04.08: "Mobile radio interface layer 3 specification".
- [16] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
- [17] GSM 09.91: "Digital cellular telecommunications system (Phase 2); Interworking aspects of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface between Phase 1 and Phase 2".
- [18] CCITT Recommendation E.118: "The international telecommunication charge card".
- [19] CCITT Recommendation E.164: "Numbering plan for the ISDN era".
- [20] CCITT Recommendation T.50: "International Alphabet No. 5". (ISO 646: 1983, "Information processing - ISO 7-bits coded characters set for information interchange".)
- [21] ISO/IEC 7810 (1995): "Identification cards - Physical characteristics".
- [22] ISO/IEC 7811-1 (1995): "Identification cards - Recording technique - Part 1: Embossing".
- [23] ISO/IEC 7811-3 (1995): "Identification cards - Recording technique - Part 3: Location of embossed characters on ID-1 cards".
- [24] ISO/IEC 7816-1 (~~1998~~): "Identification cards - Integrated circuit(s) cards ~~with contacts~~, Part 1: [Card with contacts](#): Physical characteristics".

- [25] ISO/IEC 7816-2 (~~1988~~): "Identification cards - Integrated circuit(s) cards ~~with contacts~~, Part 2: [Card with contacts](#): Dimensions and locations of the contacts".
- [26] ISO/IEC 7816-3 (1997): "Identification cards - Integrated circuit(s) cards with contacts, Part 3: Electronic signals and transmission protocols".
- [27] 3GPP TS 11.14: "Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [28] 3GPP TS 11.12: "Digital cellular telecommunications system (Phase 2); Specification of the 3 Volt Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [29] 3GPP TS 22.022: "Personalization of Mobile Equipment (ME) Mobile functionality specification".
- [30] ISO 639 (1988): "Code for the representation of names of languages".
- [31] ISO/IEC 10646-1 (1993): "Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane".
- [32] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [33] 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Service description; Stage 2".
- [34] 3GPP TS 11.19: "Specification of the Cordless Telephony System Subscriber Identity Module for both Fixed Part and Mobile Station".
- [35] ISO/IEC 7816-4 (~~1995~~): "Identification cards - Integrated circuit(s) cards ~~with contacts~~, Part 4: ~~Interindustry~~ [Organization, security and](#) commands for interchange".
- [36] TIA/EIA-136-005: "Introduction, Identification, and Semi-Permanent Memory, November 1998".
- [37] TIA/EIA-136-123-A: "Digital Control Channel Layer 3, November 1998".
- [38] TIA/EIA-136-140-A: "Analogue Control Channel, November 1998".
- [39] TIA/EIA-136-510-A: "Authentication, Encryption of Signaling Information/User Data and Privacy, November 1998".
- [40] ANSI TIA/EIA-41: "Cellular Radio Telecommunications Intersystem Operations".
- [41] EIA/TIA-553: "Mobile Station-Land Station Compatibility Specification".
- [42] 3GPP TS 22.067: "Enhanced Multi Level Pre-emption and Priority (eMLPP) Services - Stage 1".
- [43] TR45 AHAG "Common Cryptographic Algorithms, Revision C," October 27, 1998.
- [44] ETS 300.812: "Terrestrial Trunk Radio; Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [45] 3GPP TS 03.22: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
- [46] 3GPP TS 05.05: "Radio transmission and reception".
- [47] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification, Core Network Protocols".
- [48] 3GPP TS 04.18: "Mobile radio interface layer 3 specification, Radio Resource Control Protocol".
- [49] 3GPP TS 04.60: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol".
- [50] 3GPP TS 23.057: "Mobile Station Application Execution Environment (MExE); Functional description; Stage 2".
- [51] 3GPP TS 23.122: "Technical Specification Group Core Network; NAS Functions related to Mobile Station (MS) in idle mode".

[52] 3GPP TS 31.102: "Characteristics of the USIM application".

3 Definitions, abbreviations and symbols

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

access conditions: set of security attributes associated with a file.

application: application consists of a set of security mechanisms, files, data and protocols (excluding transmission protocols).

application protocol: set of procedures required by the application.

card session: link between the card and the external world starting with the ATR and ending with a subsequent reset or a deactivation of the card.

current directory: latest MF or DF selected.

current EF: latest EF selected.

data field: obsolete term for Elementary File.

Dedicated File (DF): file containing access conditions and, optionally, Elementary Files (EFs) or other Dedicated Files (DFs).

directory: general term for MF and DF.

Elementary File (EF): file containing access conditions and data and no other files.

file: directory or an organized set of bytes or records in the SIM.

file identifier: 2 bytes which address a file in the SIM.

GSM, DCS 1800 or PCS 1900 application: set of security mechanisms, files, data and protocols required by GSM, DCS 1800 or PCS 1900.

GSM session: that part of the card session dedicated to the GSM operation.

IC card SIM: obsolete term for ID-1 SIM.

ID-1 SIM: SIM having the format of an ID-1 card (see ISO/[IEC](#) 7816-1 [24]).

Master File (MF): unique mandatory file containing access conditions and optionally DFs and/or EFs.

normal GSM operation: relating to general, CHV related, GSM security related and subscription related procedures.

padding: one or more bits appended to a message in order to cause the message to contain the required number of bits or bytes.

plug-in SIM: Second format of SIM (specified in clause 4).

proactive SIM: SIM which is capable of issuing commands to the ME. Part of SIM Application Toolkit (see clause 11).

record: string of bytes within an EF handled as a single entity (see clause 6).

record number: number which identifies a record within an EF.

record pointer: pointer which addresses one record in an EF.

root directory: obsolete term for Master File.

SIM application toolkit procedures: defined in TS 11.14 [27].

4 Physical characteristics

Two physical types of SIM are specified. These are the "ID-1 SIM" and the "Plug-in SIM".

The physical characteristics of both types of SIM shall be in accordance with ISO/IEC 7816-1,2 [24, 25] unless otherwise specified. The following additional requirements shall be applied to ensure proper operation in the GSM environment.

4.1.1 ID-1 SIM

Format and layout of the ID-1 SIM shall be in accordance with ISO/IEC 7816-1,2 [24, 25].

The card shall have a polarization mark (see TS 02.07 [3]) which indicates how the user should insert the card into the ME.

The ME shall accept embossed ID-1 cards. The embossing shall be in accordance with ISO/IEC 7811 [22, 23]. The contacts of the ID-1 SIM shall be located on the front (embossed face, see ISO/IEC 7810 [21]) of the card.

NOTE: Card warpage and tolerances are now specified for embossed cards in ISO/IEC 7810 [21].

4.1.2 Plug-in SIM

The Plug-in SIM has a width of 25 mm, a height of 15 mm, a thickness the same as an ID-1 SIM and a feature for orientation. See figure A.1 in normative annex A for details of the dimensions of the card and the dimensions and location of the contacts.

Annexes A.1 and A.2 of ISO/IEC 7816-1 [24] do not apply to the Plug-in SIM.

Annex A of ISO 7816-2 [25] applies with the location of the reference points adapted to the smaller size. The three reference points P1, P2 and P3 measure 7,5 mm, 3,3 mm and 20,8 mm, respectively, from 0. The values in table A.1 of ISO 7816-2 [25] are replaced by the corresponding values of figure A.1.

10.3.18 EF_{AD} (Administrative data)

This EF contains information concerning the mode of operation according to the type of SIM, such as normal (to be used by PLMN subscribers for GSM operations), type approval (to allow specific use of the ME during type approval procedures of e.g. the radio equipment), cell testing (to allow testing of a cell before commercial use of this cell), manufacturer specific (to allow the ME manufacturer to perform specific proprietary auto-test in its ME during e.g. maintenance phases).

It also provides an indication of whether some ME features should be activated during normal operation as well as information about the length of the MNC, which is part of the International Mobile Subscriber Identity (IMSI).

Identifier: '6FAD'		Structure: transparent		Mandatory
File size: 3+X bytes		Update activity: low		
Access Conditions:				
READ		ALW		
UPDATE		ADM		
INVALIDATE		ADM		
REHABILITATE		ADM		
Bytes	Description	M/O	Length	
1	MS operation mode	M	1 byte	
2 to 3	Additional information	M	2 bytes	
4	length of MNC in the IMSI	O	1 byte	
5 to 3+X	RFU	O	(X-1) bytes	
<p><u>NOTE:</u> If X=0 no optional field is present;</p> <p> If X=1 byte 4 is present but no RFU field is present;</p> <p> When the RFU field is present (X ≥ 2) then byte 4 shall be present.</p>				

- MS operation mode

Contents: mode of operation for the MS

Coding:

Initial value

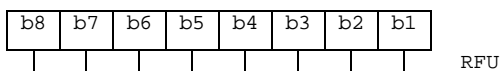
- normal operation '00'
- type approval operations '80'
- normal operation + specific facilities '01'
- type approval operations + specific facilities '81'
- maintenance (off line) '02'
- cell test operation '04'

- Additional information

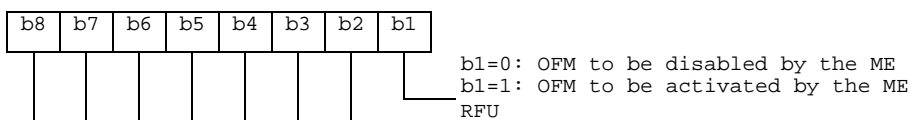
Coding:

- specific facilities (if b1=1 in byte 1);

Byte 2 (first byte of additional information):



Byte 3:



The OFM bit is used to control the Ciphering Indicator as specified in TS 02.07 [3]

- ME manufacturer specific information (if b2=1 in byte 1).

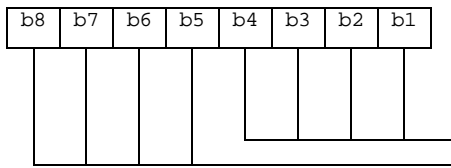
- Length of MNC in the IMSI :

Contents:

The length indicator refers to the number of digits, used for extracting the MNC from the IMSI

Coding:

Byte 4:



This value codes the number of digits of the MNC in the IMSI. Only the values '0010' and '0011' are currently specified, all other values are reserved for future use.
RFU (see subclause 9.3).

10.4.2.5 Trusted Key/Certificates Data Files

Residing under DF_{MEXE}, there may be several key/certificates data files. These EFs containing key/certificates data shall have the following attributes:

Identifier: '4FXX'	Structure: transparent	Optional	
Record length File size: Y bytes	Update activity: low		
Access Conditions: READ CHV1 UPDATE ADM INVALIDATE ADM REHABILITATE ADM			
Bytes	Description	M/O	Length
1 to Y	Key/Certicates Data	M	Y bytes

Contents and coding:

Key/certificate data are accessed using the key/certificates descriptors provided by EF_{TPRPK} (see sub-clause 10.4.2.4).

The identifier '4FXX' shall be different from one key/certificate data file to the other. For the range of 'XX', see sub-clause 6.6. The length Y may be different from one key/certificate data file to the other.

CHANGE REQUEST

⌘ **51.011 CR 036** ⌘ rev **-** ⌘ Current version: **4.13.0** ⌘

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:	⌘ ISO/IEC 7816-series revision		
Source:	⌘ CT6		
Work item code:	⌘ T.E.I	Date:	⌘ 27/04/2005
Category:	⌘ F	Release:	⌘ Rel-4
	<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> 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:	⌘ ISO/IEC 7816-series has been revised. The contents of the 7816-series have been updated and text has moved between parts causing incorrect references. Several unused references are removed. Corrections too in the trusted keys/certificates data file. EF-CMI is corrected.
Summary of change:	⌘ The document titles and references have been updated
Consequences if not approved:	⌘ The references in the 3GPP specifications points to the incorrect 7816-series documents causing incorrect functionality to be referenced

Clauses affected:	⌘ 2, 3.1, 10.4.2.5, 10.7						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
	Y	N					
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	<input checked="" type="checkbox"/>	Test specifications	⌘				
<input checked="" type="checkbox"/>	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.

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] Void.
- [2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [3] Void.
- [4] 3GPP TS 02.09: "Security aspects".
- [5] 3GPP TS 22.011: "Service accessibility".
- [6] 3GPP TS 42.017: "Subscriber Identity Modules (SIM); Functional characteristics".
- [7] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
- [8] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".
- [9] 3GPP TS 22.086: "Advice of Charge (AoC) Supplementary Services - Stage 1".
- [10] 3GPP TS 23.003: "Numbering, addressing and identification".
- [11] 3GPP TS 43.020: "Security related network functions".
- [12] 3GPP TS 23.038: "Alphabets and language-specific information".
- [13] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
- [14] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".
- [15] Void.
- [16] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
- [17] GSM 09.91: "Digital cellular telecommunications system (Phase 2); Interworking aspects of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface between Phase 1 and Phase 2".
- [18] ITU-T Recommendation E.118: "The international telecommunication charge card".
- [19] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
- [20] ITU-T Recommendation T.50: "International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) - Information technology - 7-bit coded character set for information interchange".
- [21] ~~ISO/IEC 7810 (1995): "Identification cards—Physical characteristics"~~. [Void](#)
- [22] ~~ISO/IEC 7811-1 (1995): "Identification cards—Recording technique—Part 1: Embossing"~~. [Void](#)
- [23] ~~ISO/IEC 7811-3 (1995): "Identification cards—Recording technique—Part 3: Location of embossed characters on ID-1 cards"~~. [Void](#)

- [24] ISO/IEC 7816-1 (~~1998~~): "Identification cards - Integrated circuit(s) cards ~~with contacts~~ - Part 1: [Cards with contacts](#): Physical characteristics".
- [25] ~~ISO/IEC 7816-2 (1998): "Identification cards - Integrated circuit(s) cards with contacts - Part 2: Dimensions and locations of the contacts"~~-[Void](#)
- [26] ~~ISO/IEC 7816-3 (1997): "Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols"~~-[Void](#)
- [27] 3GPP TS 51.014: "Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [28] GSM 11.12: "Digital cellular telecommunications system (Phase 2); Specification of the 3 Volt Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [29] 3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".
- [30] ISO 639 (1988): "Code for the representation of names of languages".
- [31] ISO/IEC 10646-1 (1993): "Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane".
- [32] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [33] 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".
- [34] GSM 11.19 Release 98: "Specification of the Cordless Telephony System Subscriber Identity Module for both Fixed Part and Mobile Station".
- [35] ~~ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange"~~-[Void](#)
- [36] TIA/EIA-136-005: "Introduction, Identification, and Semi-Permanent Memory, November 1998".
- [37] TIA/EIA-136-123-A: "Digital Control Channel Layer 3, November 1998".
- [38] TIA/EIA-136-140-A: "Analogue Control Channel, November 1998".
- [39] TIA/EIA-136-510-A: "Authentication, Encryption of Signaling Information/User Data and Privacy, November 1998".
- [40] ANSI TIA/EIA-41: "Cellular Radio Telecommunications Intersystem Operations".
- [41] EIA/TIA-553: "Mobile Station - Land Station Compatibility Specification".
- [42] 3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1".
- [43] TR45 AHAG "Common Cryptographic Algorithms, Revision C," October 27, 1998.
- [44] ETS 300 812: "Terrestrial Trunked Radio (TETRA); Security aspects; Subscriber Identity Module to Mobile Equipment (SIM - ME) interface".
- [45] 3GPP TS 43.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
- [46] 3GPP TS 45.005: "Radio transmission and reception".
- [47] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".
- [48] 3GPP TS 04.18 Release 99: "Mobile radio interface layer 3 specification; Radio Resource Control Protocol".
- [49] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol".

- [50] 3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".
- [51] 3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode".
- [52] 3GPP TS 31.102: "Characteristics of the USIM Application".
- [53] 3GPP TS 22.101: "Service aspects; Service principles".
- [54] 3GPP TS 23.097: "Multiple Subscriber Profile (MSP) (Phase 2) - Stage 2".
- [55] 3GPP TS 31.101: "UICC-Terminal interface; Physical and logical characteristics"
- [56] ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
- [57] ETSI TS 102 221 Release 4: "UICC-Terminal interface; Physical and logical characteristics"
- [58] 3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; stage 2".
- [59] 3GPP TS 44.018: "Mobile Radio Interface Layer 3 Specification; Radio Resource Control Protocol".

3 Definitions, abbreviations and symbols

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

access conditions: set of security attributes associated with a file

application: application consists of a set of security mechanisms, files, data and protocols (excluding transmission protocols)

application protocol: set of procedures required by the application

card session: link between the card and the external world starting with the ATR and ending with a subsequent reset or a deactivation of the card

current directory: latest MF or DF selected

current EF: latest EF selected

data field: obsolete term for Elementary File

Dedicated File (DF): file containing access conditions and, optionally, Elementary Files (EFs) or other Dedicated Files (DFs)

directory: general term for MF and DF

Elementary File (EF): file containing access conditions and data and no other files

file: directory or an organized set of bytes or records in the SIM

file identifier: 2 bytes which address a file in the SIM

GSM, DCS 1800 or PCS 1900 application: set of security mechanisms, files, data and protocols required by GSM, DCS 1800 or PCS 1900

GSM session: that part of the card session dedicated to the GSM operation

IC card SIM: obsolete term for ID-1 SIM

ID-1 SIM: SIM having the format of an ID-1 card (see ISO/IEC 7816-1 [24])

Master File (MF): unique mandatory file containing access conditions and optionally DFs and/or EFs

normal GSM operation: relating to general, CHV related, GSM security related and subscription related procedures

padding: one or more bits appended to a message in order to cause the message to contain the required number of bits or bytes

plug-in SIM: Second format of SIM (specified in clause 4)

proactive SIM: SIM which is capable of issuing commands to the ME. Part of SIM Application Toolkit (see clause 11)

record: string of bytes within an EF handled as a single entity (see clause 6)

record number: number which identifies a record within an EF

record pointer: pointer which addresses one record in an EF

root directory: obsolete term for Master File

SIM application toolkit procedures: defined in TS 51.014 [27]

10.4.2.5 Trusted Key/Certificates Data Files

Residing under DF_{MEXE}, there may be several key/certificates data files. These EFs containing key/certificates data shall have the following attributes:

Identifier: '4FXX'		Structure: transparent		Optional	
Record length File size: Y bytes		Update activity: low			
Access Conditions:					
READ		CHV1			
UPDATE		ADM			
INVALIDATE		ADM			
REHABILITATE		ADM			
Bytes	Description			M/O	Length
1 to Y	Key/Certificates Data			M	Y bytes

Contents and coding:

Key/certificate data are accessed using the key/certificates descriptors provided by EF_{TPRPK} (see clause 10.4.2.4).

The identifier '4FXX' shall be different from one key/certificate data file to the other. For the range of 'XX', see clause 6.6. The length Y may be different from one key/certificate data file to the other.

10.7 Files of GSM

This clause contains a figure depicting the file structure of the SIM. DF_{GSM} shall be selected using the identifier '7F20'. If selection by this means fails, then DCS 1800 MEs shall, and optionally GSM MEs may then select DF_{GSM} with '7F21'.

NOTE 1: The selection of the GSM application using the identifier '7F21', if selection by means of the identifier '7F20' fails, is to ensure backwards compatibility with those Phase 1 SIMs which only support the DCS 1800 application using the Phase 1 directory DF_{DCS1800} coded '7F21'.

NOTE 2: To ensure backwards compatibility with those Phase 1 DCS 1800 MEs which have no means to select DF_{GSM} two options have been specified. These options are given in GSM 09.91 [17].

NOTE 3: The value '6F65' under DF_{GSM} was used in earlier versions of this specification, and should not be re-assigned in future versions.

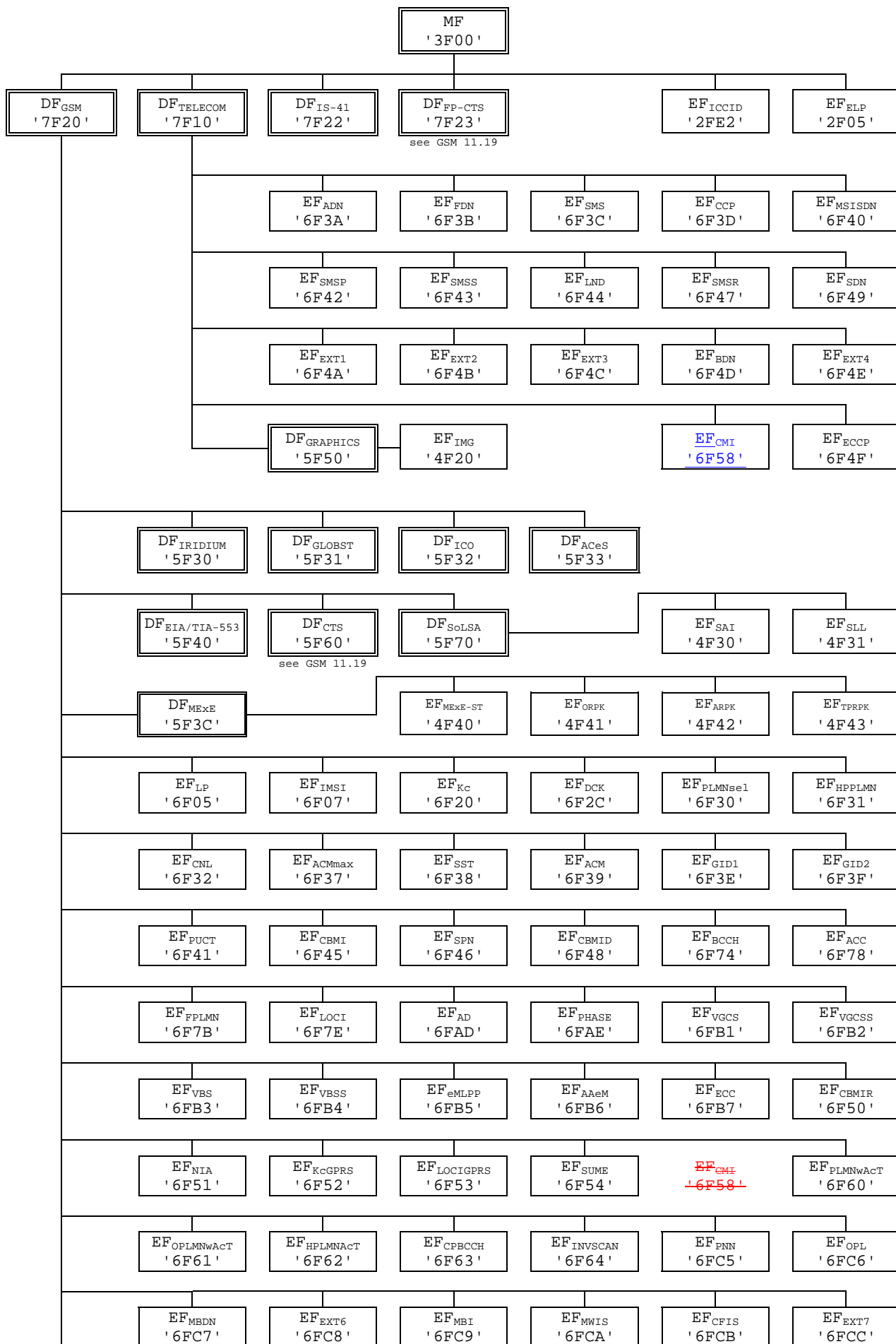




Figure 8: File identifiers and directory structures of GSM

CHANGE REQUEST

⌘ **31.115 CR 005** ⌘ rev **-** ⌘ Current version: **6.4.0** ⌘

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:	⌘ Introduction of secured data download for USSD		
Source:	⌘ CT6		
Work item code:	⌘ USSD	Date:	⌘ 28/04/2005
Category:	⌘ B	Release:	⌘ Rel-7
	<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) Rel-7 (Release 7)

Reason for change:	⌘ Following the release 6 WIs from SA1 and T3 about USSD message transfer to USIM, it was intended and agreed to add secured data download to USSD.
Summary of change:	⌘ The concept of secured download is introduced for USSD. The transport related operations are described separately in a new annex.
Consequences if not approved:	⌘

Clauses affected:	⌘ 1, 2, 3.2, 4.4, 6 (new), 7 (new), Annex 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;">⌘</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:	⌘ New Response Status code '0C' should be reserved by ETSI SCP in ETSI TS 102 225. See LS in C6-050456.										

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.

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- 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.

1 Scope

The present document specifies the structure of the Secured Packets in implementations using Short Message Service Point to Point (SMS-PP), ~~and~~ Short Message Service Cell Broadcast (SMS-CB), [and Unstructured Supplementary Service Data \(USSD\)](#) based on TS 102 225 [9].

The structure of the Secured Packets shall comply with the one defined in TS 102 225 [9]. The present document only contains additional requirements or explicit limitations for SIM/USIM applications.

It is applicable to the exchange of secured packets between an entity in a 3G or GSM PLMN and an entity in the (U)SIM.

Secured Packets contain application messages to which certain mechanisms according to TS 102 224 [2] have been applied. Application messages are commands or data exchanged between an application resident in or behind the 3G or GSM PLMN and on the (U)SIM. The Sending/Receiving Entity in the 3G or GSM PLMN and the UICC are responsible for applying the security mechanisms to the application messages and thus turning them into Secured Packets.

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 and/or edition number or version number) 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 TR 21.905: "Vocabulary for 3GPP Specifications".
 - [2] ETSI TS 102 224 Release 6: "Smart Cards; Security mechanisms for UICC based Applications - Functional requirements".
 - [3] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
 - [4] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
 - [5] ISO/IEC 7816-6 (1996): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".
 - [6] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".
 - [7] 3GPP TS 24.012: "Short Message Service Cell Broadcast (SMSCB) support on the mobile radio interface".
 - [8] 3GPP TS 23.038: "Alphabets and language-specific information".
 - [9] ETSI TS 102 225 Release 6: "Smart Cards; Secured packet structure for UICC based applications".
- [xx] [3GPP TS 24.090: "Unstructured Supplementary Service Data \(USSD\) - Stage 3"](#).

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 102 225 [9] and the following apply:

Message Identifier: two-octet field used to identify the source and type of the message

Page Parameter: single octet field used to represent the CBS page number in the sequence and the total number of pages in the SMS-CB message

Serial Number: two octet field which identifies a particular message
It is linked to the Message Identifier and is altered every time the message is changed

Short Message: information that may be conveyed by means of the SMS Service as defined in 3GPP TS 23.040 [3].

USSD message: [information that may be conveyed in the USSD-String field of a Facility message as defined in 3GPP TS 24.090 \[xx\].](#)

3.2 Abbreviations

For the purpose of the present document, the abbreviations given in TS 102 225 [9] and the following apply:

CBC	Cipher Block Chaining
CBS	Cell Broadcast Service
CCF	Concatenation Control Field
DCS	Data Coding Scheme
IEI	Information Element Identifier
IEIDL	Information Element Identifier Data Length
IED	Information Element Data
MID	Message IDentifier
MO-SMS	Mobile Originated Short Message Service
MT-SMS	Mobile Terminated Short Message Service
PFI	Packet Format Information
PLMN	Public Land Mobile Network
PP	Page Parameter
SIM	Subscriber Identity Module
SM	Short Message
SMS	Short Message Service
SMS-PP	Short Message Service - Point to Point
SMS-CB	Short Message Service - Cell Broadcast
SMS-SC	Short Message Service - Service Centre
SN	Serial Number
UM	USSD message
USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Service Data

4 Implementation for SMS-PP

[\[...\]](#)

4.4 Structure of the Response Packet

The Response Packet is as follows. This message is generated by the Receiving Entity and possibly includes some data supplied by the Receiving Application, and returned to the Sending Entity/Sending Application. In the case where the Receiving Entity is the UICC, depending on bit 6 of the second octet of the SPI, this Response Packet is generated on the UICC, either:

- retrieved by the ME from the UICC, and included in the User-Data part of the SMS-DELIVER-REPORT returned to the network; or
- fetched by the ME from the UICC after the Send Short Message proactive command.

The structure of an SMS-DELIVER/SUBMIT User Data object is defined in TS 23.040 [3].

RPI identifies the Response Packet and indicates that the first portion of the SM (8 bit data) contains the Response Packet Length (RPL), the Response Header Length (RHL) followed by the remainder of the Response Header: the Secured Data follows on immediately as the remainder of the SM element.

The relationship between the Response Packet and its inclusion in the UDH structure of a single Short Message defined in TS 23.040 [3] is as following:

- RPI is mapped to IEIa defined in TS 23.040 [3] and shall be set to '71'.
- IEDa defined in TS 23.040 [3] shall be a null field and its length IEIDL a shall be set to '00'.

The following Table 3 indicates the Response Packet contained in a single SMS-PP. It is a particular implementation for single SMS-PP of the generic Response Packet structure described in TS 102 225 [9].

Table 3: Structure of the Response Packet contained in the SM (8 bit data)

Generalised Response Packet Elements (Refer to table 3)	Length	Description
Response Packet Length	2 octets	Length of the Response Packet (RPL), coded over 2 octets, and shall not be coded according to ISO/IEC 7816-6 [5]. (see note)
Response Header Identifier		(RHI) Null field.
Response Header Length	1 octet	Length of the Response Header (RHL), coded over one octet, and shall not be coded according to ISO/IEC 7816-6 [5].
TAR to RC/CC/DS elements in the Response Header	Variable	The remainder of the Response Header as described in TS 102 225 [9]. Response Status Codes are defined in clause 7.
Secured Data	Variable	Additional Response Data (optional), including padding octets as described in TS 102 225 [9].

NOTE: This field is not absolutely necessary but is placed here to maintain compatibility with the structure of the Command Packet when included in a SMS-SUBMIT or SMS-DELIVER.

In order to achieve a modulo 8 length of the data before the RC/CC/DS field in the Response Header, the Length of the Response Packet, the Length of the Response Header and the three preceding octets (UDHL, IEIa and IEIDL a defined in TS 23.040 [3]) shall be included in the calculation of RC/CC/DS if used. These fields shall not be ciphered.

Table 4: Response Status Codes

Status Code (hexadecimal)	Meaning
'00' to '0A'	See TS 102 225 [9]
'0B'	Actual response data to be sent using SMS-SUBMIT.
'0C' to 'FF'	See TS 102 225 [9]

6 Implementation for USSD

The USSD application mode enables the transparent transport of data between an application residing in the network and a UICC based application. In such a case, to secure the payload of USSD operations, security mechanisms defined in TS 102 225 [9] shall be applied to the USSD messages. Generic secured Command Packet and secured Response Packet as defined in TS 102 225 [9] are contained, as defined hereafter, in the UM part of the USSD String. The USSD String shall be formatted according to annex X, where the PFI byte indicates that Application Data are formatted according to the present document.

The Data Coding Scheme of the USSD String (as defined in TS 23.038 [8]) shall be set to 0x96 (DCS = '10010110') to indicate that data is binary (8 bit data), and formatted according to annex X. In USSD Application mode, which uses an 8-bit character set, the maximum length of the USSD String field is 160 bytes.

Command and Response packets exceeding 159 bytes shall be segmented as described in sections 6.2 and 6.4.

6.1 Structure of the Command Packet contained in a Single USSD Message

The UM field of an USSD String contains the Command Packet.

The Command Packet shall be coded as the generic Command Packet described in TS 102 225 [9].

In the Command Packet, the Command Packet Identifier (CPI) value is '03' and the Command Header Identifier (CHI) is a Null field.

CPI, CPL and CHL shall be included in the calculation of the RC/CC/DS.

The SPI shall be coded as specified in TS 102 225 [9].

6.2 Structure of the Command Packet contained in concatenated USSD Messages

If the Command Packet, which is structured as described in section 6.1, is longer than 159 bytes (including the Command Header) then it shall be handled as follows.

- The entire Command Packet including the Command Header shall be separated into its component concatenated parts.
- The Command Packet is handled as a Concatenated USSD Message as described in annex X of the present document.
- The Command Packet Header will only be present in the first segment of a concatenated message.

If the data is ciphered, then it is ciphered as described above, before being broken down into individual concatenated elements.

CPI, CPL and CHL shall be included in the calculation of the RC/CC/DS.

The SPI shall be coded as specified in TS 102 225 [9].

An example illustrating a Command Packet split over a sequence of three messages is shown below.

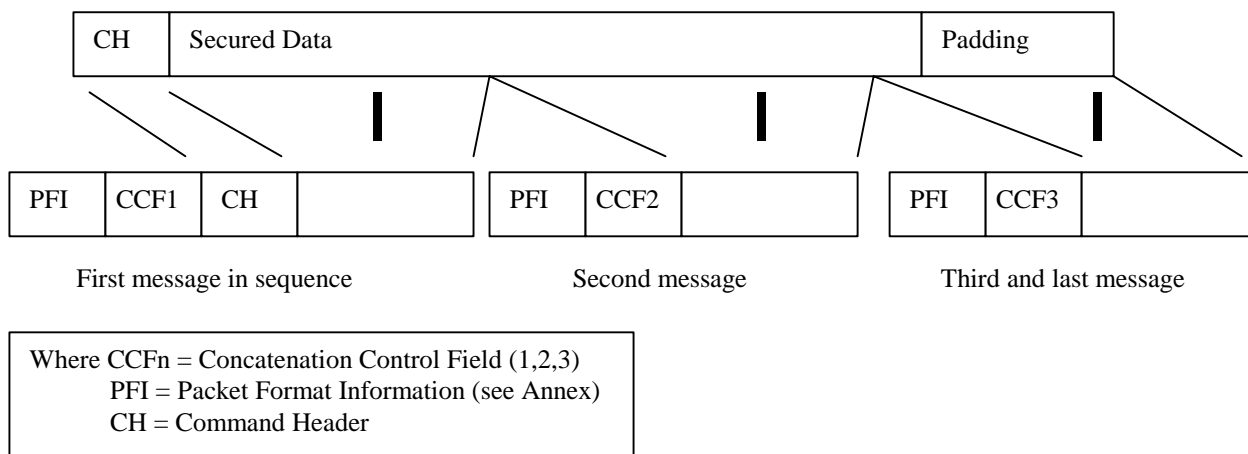


Figure 4: Example of command split using concatenated USSD messages

6.3 Structure of the Response Packet

The Response Packet is generated by the Receiving Entity and possibly includes some data supplied by the Receiving Application, and returned to the Sending Entity/Sending Application. In the case where the Receiving Entity is the UICC, this Response Packet is generated on the UICC, retrieved by the ME from the UICC, and included in the Return Result Component of a Facility message (see TS 24.090 [xx]) returned to the network.

The USSD operations are defined in TS 24.090 [xx].

The UM field of an USSD String contains the Response Packet.

The Response Packet shall be coded as the generic Response Packet described in TS 102 225 [9].

In the Response Packet, the Response Packet Identifier (RPI) value is '04' and the Response Header Identifier (RHI) is a Null field.

RPI, RPL and RHL shall be included in the calculation of the RC/CC/DS.

Coding of Response Status Codes is defined in clause 7.

6.4 Structure of the Response Packet contained in concatenated USSD Messages

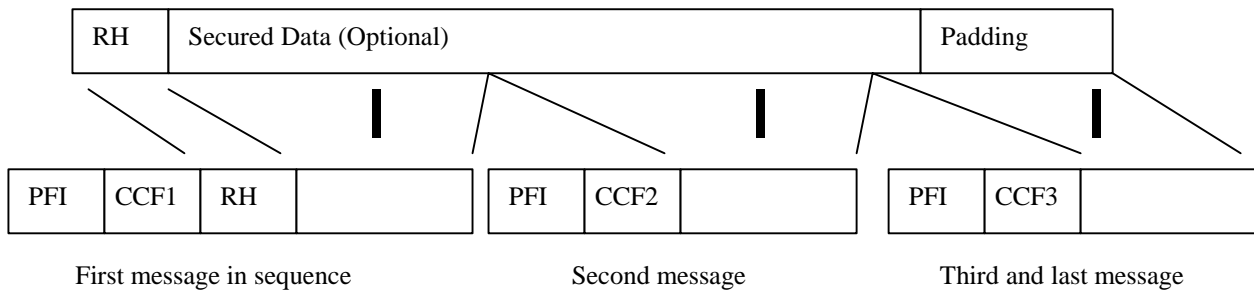
If the Response Packet, which is structured as described in section 6.3, is longer than 159 bytes (including the Response Header) then it shall be handled as follows.

- The entire Response Packet including the Response Header shall be separated into its component concatenated parts.
- The Response Packet is handled as a Concatenated USSD Message as described in annex X of the present document.
- The Response Packet Header will only be present in the first segment of a concatenated message.

If the data is ciphered, then it is ciphered as described above, before being broken down into individual concatenated elements.

RPI, RPL and RHL shall be included in the calculation of the RC/CC/DS.

An example illustrating a Response Packet split over a sequence of three messages is shown below.



Where CCFn = Concatenation Control Field (1,2,3)
 PFI = Packet Format Information (see Annex)
 RH = Response Header

Figure 5: Example of Response split using concatenated USSD messages

If it is indicated in the SPI2 of a Command Packet to send back a PoR and if the Response Packet is too large to be contained in a single USSD String, then:

- One single Response Packet shall be sent back to the SE using the Return Result Component contained in the subsequent Facility message. This Response Packet:
 - Shall not contain any additional response data
 - Shall contain the Response Status Code set to '0C' ('Actual response data to be sent using a ProcessUnstructuredSS-Request invoke component (i.e. using SEND USSD proactive command) ').
 - The security applied to this Response Packet shall be the one indicated in the SPI2 of the Command Packet.
- This shall be followed by a complete Response Packet, contained in a concatenated USSD Message as defined above.

7. Specific Response Status Codes

Status Code (hexadecimal)	Meaning
'00' to '0A'	See TS 102 225 [9]
'0B'	Actual response data to be sent using SMS-SUBMIT. See section 4.4.
'0C'	Actual response data to be sent using a ProcessUnstructuredSS-Request invoke component (i.e. using Send USSD proactive command). See section 6.3
'0D' - 'FF'	See TS 102 225 [9]

Specific Response Status Codes

Annex X (normative): USSD String format

For the purpose of UICC-based application, the USSD String shall be coded as follows:

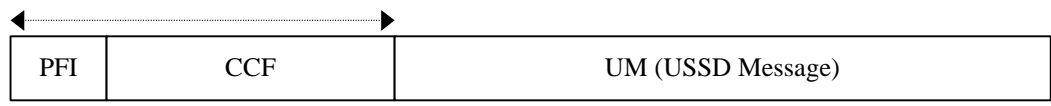


Figure 6: USSD String format

The header of an USSD Message may contain two fields:

- A mandatory PFI field, which is coded on 1 byte. The PFI contains information on the format of the USSD String.
- An optional CCF field, which is coded on 3 bytes. The CCF field presence is indicated by the PFI.

The PFI is coded as follows.

b8	b7	b6	b5	b4	b3	b2	b1	
					X	0	0	Proprietary Application Data format
					X	0	1	Application Data formatted according to the present document. If b2 b1 = '01' (Application Data formatted according to the present document), then b3 shall be coded as follows:
					0	0	1	No CCF field
					1	0	1	CCF field present
								Reserved for future use

The usage of CCF field allows USSD Messages to be concatenated to form a longer message. The CCF field contains information set by the application so that the receiving entity is able to re-assemble the received UMs in the correct order. Additionally, the CCF contains a reference number, which allows the receiving entity to discriminate between messages. The CCF octets shall be coded as follows.

Octet 1: Concatenated USSD Message reference number.

This octet shall contain a modulo-256 counter indicating the reference number for a particular USSD Message, Concatenated or not. This reference number shall remain constant for every USSD Message that makes up a particular Concatenated USSD Message.

Octet 2: Total number of USSD Messages in the Concatenated USSD Message.

This octet shall contain a value in the range 1 to 255 indicating the total number of USSD Messages constituting the Concatenated USSD Message. The value shall start at 1 and remain constant for every USSD Message that makes up the Concatenated USSD message. If the value is zero then the receiving entity shall ignore the whole USSD Message.

Octet 3: Sequence number of the current USSD Message.

This octet shall contain a value in the range 1 to 255 indicating the sequence number of a particular USSD Message within the Concatenated USSD Message. The value shall start at 1 and increment by one for every USSD Message sent within the Concatenated USSD Message. If the value is zero or the value is greater than the value in octet 2 then the receiving entity shall ignore the whole USSD Message.

The UM field contains the actual application data (e.g. secure Command/Response Packets coded according to the present document).

In each USSD String in a concatenated series, the PFI and CCF fields shall be present.

CHANGE REQUEST

⌘ **31.130 CR 014** ⌘ rev **-** ⌘ Current version: **7.0.0** ⌘

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:	⌘ Addition of new events EVENT_FORMATTED_USSD and EVENT_UNFORMATTED_USSD		
Source:	⌘ CT6		
Work item code:	⌘ USSD Date: ⌘ 28/04/2005		
Category:	⌘ B Release: ⌘ Rel-7		
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Use one of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Use one of the following releases:</i></p> <p>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) Rel-7 (Release 7)</p> </td> </tr> </table>	<p><i>Use one of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use one of the following releases:</i></p> <p>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) Rel-7 (Release 7)</p>
<p><i>Use one of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use one of the following releases:</i></p> <p>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) Rel-7 (Release 7)</p>		

Reason for change:	⌘ Following the release 6 WIs from SA1 and T3 about USSD message transfer to USIM, it was intended and agreed to add secured data download to USSD.
Summary of change:	⌘ Addition of new events EVENT_FORMATTED_USSD and EVENT_UNFORMATTED_USSD. Support of USSD Data Download in getSecuredDataLength() and getSecuredDataOffset() methods.
Consequences if not approved:	⌘

Clauses affected:	⌘ 6.2, 6.3, 6.5, Annex A					
Other specs affected:	<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications ⌘
	Y	N				
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
	<input checked="" type="checkbox"/>	Test specifications ⌘				
<input checked="" type="checkbox"/>	O&M Specifications ⌘					
Other comments:	⌘ Linked to CR to TS 31.115 C6-050418 New Events values should be reserved by ETSI SCP in ETSI TS 102 241 See LS in C6-050456.					

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.

6.2 Definition of Events

The following events can trigger a Toolkit Applet in addition to the events defined in TS 102 241[2], all short values are reserved in TS 102 241[2]:

Table 1: (U)SAT event list

Event Name	Reserved short value
EVENT_FORMATTED_SMS_PP_ENV	2
EVENT_FORMATTED_SMS_PP_UPD	3
EVENT_UNFORMATTED_SMS_PP_ENV	4
EVENT_UNFORMATTED_SMS_PP_UPD	5
EVENT_UNFORMATTED_SMS_CB	6
EVENT_MO_SHORT_MESSAGE_CONTROL_BY_NAA	10
EVENT_FORMATTED_SMS_CB	24
EVENT_FORMATTED USSD	121
EVENT_UNFORMATTED USSD	122

EVENT_FORMATTED_SMS_PP_ENV, EVENT_UNFORMATTED_SMS_PP_ENV, EVENT_FORMATTED_SMS_PP_UPD, EVENT_UNFORMATTED_SMS_PP_UPD

There are two ways for a card to receive a Short Message Point to Point: via an ENVELOPE(SMS-PP DOWNLOAD) APDU as defined in TS 31.111[7] and TS 51.014[8] or an UPDATE RECORD EF_{SMS} APDU as defined in TS 31.102[3] and TS 51.011[4]. The EF_{SMS} can be either located under the DF_{Telecom} or under any ADF as defined in TS 31.102[3] and TS 51.011[4].

The received Short Message may be:

- formatted according to TS 31.115[9] or an other protocol to identify explicitly the toolkit applet for which the message is sent;
- unformatted (e.g. a toolkit applet specific protocol) then the (U)SAT Framework will pass this data to all registered toolkit applets.

When the Short Message is received as Concatenated Short Messages as defined in TS 23.040[10], it is the responsibility of the (U)SAT Framework to link single Short Messages together to re - assemble the original message before any further processing. The original Short Message shall be placed in one SMS TPDU TLV (with TP-UDL field coded on one octet) included in the *USATEnvelopeHandler*. The concatenation control headers used to re-assemble the short messages in the correct order shall not be present in the SMS TPDU. The TP-elements of the SMS TPDU and the Address (TS - Service-Centre-Address) shall correspond to the ones in the last received Short Message (independently of the Sequence number of Information-Element-Data).

The minimum requirement for the (U)SAT Framework is to process a concatenated short message with the following properties:

- the Information Element Identifier is equal to the 8-bit reference number.
- it contains uncompressed 8 bit data or uncompressed UCS2 data.

EVENT_FORMATTED_SMS_PP_ENV

Upon reception of a TS 31.115[9] formatted Short Message Point to Point (Single or Concatenated) via an ENVELOPE, the (U)SAT Framework shall:

- verify the security of the Short Message as per TS 31.115[9];
- trigger the toolkit applet registered with the corresponding TAR;
- take the optional Application Data posted by the triggered toolkit applet if present;

- secure and send the response packet using SMS-DELIVER-REPORT or SMS-SUBMIT.

When the toolkit applet is triggered, data shall be provided deciphered.

EVENT_UNFORMATTED_SMS_PP_ENV

Upon reception of an unformatted Short Message Point to Point (Single or Concatenated) via an ENVELOPE, the (U)SAT Framework shall trigger all the Toolkit Applets registered to this event.

Note: As a consequence of the *EnvelopeResponseHandler* availability rules specified in clause 6.6, only the first triggered toolkit applet is guaranteed to be able to send back a response.

EVENT_FORMATTED_SMS_PP_UPD

Upon reception of a TS 31.115[9] formatted Short Message Point to Point (Single or Concatenated) via an UPDATE RECORD EF_{SMS}, the (U)SAT Framework shall:

- update the EF_{SMS} file with the data received, it is then up to the receiving toolkit applet to change the SMS stored in the file (i.e. the toolkit applet need to have access to the EF_{SMS} file)
- verify the security of the Short Message as per TS 31.115[9];
- convert the UPDATE RECORD EF_{SMS} APDU into a COMPREHENSION TLV List;
- trigger the toolkit applet registered with the corresponding TAR;

When the toolkit applet is triggered, data shall be provided deciphered.

The *USATEnvelopeHandler* provided to the applet shall:

- return *BTAG_SMS_PP_DOWNLOAD* to the *getTag()* method call;
- return the Comprehension TLV list length to the *getLength()* method call;

The *USATEnvelopeHandler* provided to the applet shall contain the following COMPREHENSION TLVs :

- Device Identities TLV

The Device Identities Comprehension TLV is used to store the information about the absolute record number in the EF_{SMS} file and the value of the EF_{SMS} record status byte, and is formatted as defined below:

Device identities Comprehension TLV
Device Identities tag
length = 02
Absolute Record Number
Record Status

With the absolute record number the toolkit applet can update EF_{SMS} in absolute mode to change the received SMS (e.g. in a readable text).

For Concatenated Short Message the Absolute Record Number and the Record Status will correspond to the last UPDATE RECORD EF_{SMS} APDU received.

- Address TLV

The value is the TS-Service-Centre-Address (RP-OA) of the last UPDATE RECORD EF_{SMS} APDU.

- SMS TPDU TLV

The value is the SMS TPDU provided deciphered and reassembled, if needed

- AID TLV

The AID comprehension TLV is present only if the EF_{SMS} file updated is under an ADF. The value is the AID of the ADF as defined TS 102 223[6].

The order of the TLVs given in the *USATEnvelopeHandler* is not specified,

Note: To get each COMPREHENSION TLV, it is recommended that the applet uses the *ViewHandler.findTLV()* methods

EVENT_UNFORMATTED_SMS_PP_UPD

Upon reception of an unformatted Short Message Point to Point (Single or Concatenated) via UPDATE RECORD EF_{SMS} APDU, the (U)SAT Framework shall :

- update the EF_{SMS} file with the data received;
- convert the UPDATE RECORD EF_{SMS} APDU data into a COMPREHENSION TLV List (as described for *EVENT_FORMATTED_SMS_PP_UPD*);
- trigger all the Toolkit Applets registered to this event.

The content of EF_{SMS} may have been modified by a previously triggered Toolkit Applet..

EVENT_FORMATTED_SMS_CB, EVENT_UNFORMATTED_SMS_CB

The received Cell Broadcast Message, via an ENVELOPE (CELL BROADCAST DOWNLOAD) APDU as defined in TS 31.111[7] and TS 51.014[8] and, can be either:

- formatted according to TS 31.115 [9] or an other protocol to identify explicitly the toolkit applet for which the message is sent;
- unformatted (e.g. using a toolkit applet specific protocol), then the (U)SAT Framework will pass this data to all registered toolkit applets.

When the Cell Broadcast Message is received as multiple pages as defined in TS 23.041[5], it is the responsibility of the (U)SAT Framework to link single pages together to re-assemble the original message before any further processing. The original Cell Broadcast message shall be placed in one Cell Broadcast page TLV included in the *USATEnvelopeHandler*. The message parameters shall correspond to the ones in the last received Cell Broadcast page (independently of the Page Parameter).

EVENT_FORMATTED_SMS_CB

Upon reception of a TS 31.115[9] formatted Cell Broadcast message, the (U)SAT Framework shall:

- verify the security of the Cell Broadcast message as per TS 31.115[9];
- trigger the toolkit applet registered with the corresponding TAR;

When the toolkit applet is triggered, data shall be provided deciphered.

EVENT_UNFORMATTED_SMS_CB

Upon reception of an unformatted Cell Broadcast message, the (U)SAT Framework shall trigger all the Toolkit Applets registered to this event.

EVENT_MO_SHORT_MESSAGE_CONTROL_BY_NAA

Upon reception of an ENVELOPE (MO SHORT MESSAGE CONTROL defined in TS 51.014[8] and TS 31.111[7]) APDU as defined in TS 102 221[6] and TS 51.011[4] the (U)SAT Framework shall trigger the Toolkit Applet registered to this event. The (U)SAT Framework shall not allow more than one Toolkit Applet to be registered to this event at a time(e.g. if a Toolkit Applet is registered to this event but not in selectable state the (U)SAT Framework shall not allow another Toolkit Applet to register to this event).

EVENT_FORMATTED_USSD, EVENT_UNFORMATTED_USSD

The received USSD String, via an ENVELOPE (USSD Data Download) APDU as defined in TS 31.111 [7], may be:

- formatted according to TS 31.115 [9] or an other protocol to identify explicitly the toolkit applet for which the message is sent;
- unformatted (e.g. a toolkit applet specific protocol) then the (U)SAT Framework will pass this data to all registered toolkit applets.

When the USSD Message is received as concatenated as defined in TS 31.115 [9], it is the responsibility of the (U)SAT Framework to link single USSD Messages together to re-assemble the original message before any further processing. The original USSD message shall be placed in one USSD String TLV included in the USATEnvelopeHandler. The USSD String parameters (DCS, PFI, CCF) shall correspond to the ones in the last received USSD String (independently of the CCF Sequence number).

EVENT FORMATTED USSD

Upon reception of a TS 31.115 [9] formatted USSD Message via an ENVELOPE, the (U)SAT Framework shall:

- verify the security of the USSD Message as per TS 31.115 [9];
- trigger the toolkit applet registered with the corresponding TAR;
- take the optional Application Data posted by the triggered toolkit applet if present;
- secure and send the response packet.

When the toolkit applet is triggered, data shall be provided deciphered.

EVENT UNFORMATTED USSD

Upon reception of an unformatted USSD String via an ENVELOPE, the (U)SAT Framework shall trigger all the Toolkit Applets registered to this event.

Note: As a consequence of the *EnvelopeResponseHandler* availability rules specified in clause 6.6, only the first triggered toolkit applet is guaranteed to be able to send back a response.

The following events defined in TS 102 221[6] shall be raised upon reception of the corresponding APDU defined in either TS 51.011[4] or TS 102 221[6].

EVENT_PROFILE_DOWNLOAD

EVENT_MENU_SELECTION, EVENT_MENU_SELECTION_HELP_REQUEST

EVENT_CALL_CONTROL_BY_NAA

EVENT_TIMER_EXPIRATION

EVENT_EVENT_DOWNLOAD_MT_CALL

EVENT_EVENT_DOWNLOAD_CALL_CONNECTED

EVENT_EVENT_DOWNLOAD_CALL_DISCONNECTED

EVENT_EVENT_DOWNLOAD_LOCATION_STATUS

EVENT_EVENT_DOWNLOAD_USER_ACTIVITY

EVENT_EVENT_DOWNLOAD_IDLE_SCREEN_AVAILABLE

EVENT_EVENT_DOWNLOAD_CARD_READER_STATUS

EVENT_STATUS_COMMAND

EVENT_EVENT_DOWNLOAD_LANGUAGE_SELECTION

EVENT_EVENT_DOWNLOAD_BROWSER_TERMINATION

EVENT_EVENT_DOWNLOAD_DATA_AVAILABLE

EVENT_EVENT_DOWNLOAD_CHANNEL_STATUS

EVENT_EVENT_DOWNLOAD_ACCESS_TECHNOLOGY_CHANGE

EVENT_EVENT_DOWNLOAD_DISPLAY_PARAMETER_CHANGED
EVENT_EVENT_DOWNLOAD_LOCAL_CONNECTION
EVENT_EVENT_DOWNLOAD_NETWORK_SEARCH_MODE_CHANGE
EVENT_EVENT_DOWNLOAD_BROWSING_STATUS
EVENT_PROACTIVE_HANDLER_AVAILABLE
EVENT_EXTERNAL_FILE_UPDATE
EVENT_FIRST_COMMAND_AFTER_ATR
EVENT_UNRECOGNIZED_ENVELOPE

6.3 Registration

A Toolkit Applet shall register to events described in 6.2 as defined in TS 102 241[2].

Constants for these events are available in *uicc.usim.toolkit.ToolkitConstants* interface in Annex A.

The *uicc.toolkit.ToolkitException* *TAR_NOT_DEFINED* shall be thrown if a Toolkit Applet has no TAR defined and registers to events: *EVENT_FORMATTED_SMS_PP_ENV*, *EVENT_FORMATTED_SMS_PP_UPD*, *EVENT_FORMATTED_SMS_CB*, [EVENT_FORMATTED_USSD](#).

The *uicc.toolkit.ToolkitException*.*EVENT_ALREADY_REGISTERED* shall be thrown if there is another Toolkit Applet already registered to *EVENT_MO_SHORT_MESSAGE_CONTROL_BY_NAA*.

6.5 Envelope response handling

For the events defined in the present document, the following rules apply:

A Toolkit Applet can post a response by using the *post()* method or the *postAsBERTLV()* method defined in TS 102 241 [2]. The (U)SAT Framework shall return the Status Word as defined in TS 31.111 [7] and in TS 51.014 [8] depending on the current NAA.

Case of *EVENT_MO_SHORT_MESSAGE_CONTROL_BY_NAA*:

- The rules defined for *EVENT_CALL_CONTROL_BY_NAA* in TS 102 241 [2] apply.

Case of *EVENT_UNFORMATTED_SMS_PP_ENV*:

- See TS 102 241 [2].

Case of *EVENT_FORMATTED_SMS_PP_ENV*:

- When the *post()* or the *postAsBERTLV()* method is invoked, the (U)SAT Framework shall, according to bit 6 of the second octet of the SPI defined in TS 31.115 [9], build a SMS-DELIVER-REPORT or a SMS-SUBMIT.

In case of a SMS-DELIVER-REPORT, the (U)SAT Framework shall return the Status Word for RP-ACK or RP-ERROR as defined in TS 31.111 [7] and in TS 51.014 [8] depending on the current NAA.

In case of SMS-SUBMIT the boolean value method parameter shall be ignored by the (U)SAT Framework. If the SMS-SUBMIT is to be used, the (U)SAT Framework shall build and issue a Send Short Message proactive command as defined in TS 31.111 [7] and in TS 51.014 [8] depending on the current NAA .

[Case of EVENT_FORMATTED_USSD:](#)

- When the *post()* or the *postAsBERTLV()* method is invoked, the (U)SAT Framework shall build a USSD-String to be sent back in the Return Result Component contained in the subsequent Facility message. In that case the (U)SAT Framework shall return the Status Word as defined in TS 31.111 [7].

Case of EVENT_UNFORMATTED_USSD:

- See TS 102 241 [2].

6.6 System Handler management

For the handler management of the *ProactiveHandler*, the *ProactiveResponseHandler*, the *EnvelopeHandler* and the *EnvelopeResponseHandler*, the rules defined in TS 102 241[2] apply.

USATEnvelopeHandler:

The single system instance of the *USATEnvelopeHandler* and the single system instance of the *EnvelopeHandler* are two distinct objects instances.

- When available the *USATEnvelopeHandler* shall remain available and its content shall remain unchanged from the invocation to the termination of the *processToolkit()* method.
- The TLV List provided in the *USATEnvelopeHandler* are the same as in the *EnvelopeHandler*.
- The handler availability of the *USATEnvelopeHandler* is the same handler availability as the *EnvelopeHandler* including all the events defined in TS 102 241[2].

The following table describes the minimum availability of the handlers for all the events at the invocation of the *processToolkit()* method of the Toolkit Applet. The rules described in this table apply in addition to the rules described in “UICC API for Java Card™”

Table 2: Handler availability for each event

EVENT_	Reply busy allowed	EnvelopeHandler / USATEnvelopeHandler	EnvelopeResponse Handler	Nb of triggered / registered Applet
_FORMATTED_SMS_PP_ENV	Y (see Note 1)	Y	Y	1 / n (per TAR)
_FORMATTED_SMS_PP_UPD	N	Y	N	1 / n (per TAR)
_UNFORMATTED_SMS_PP_ENV	Y	Y	Y	n / n
_UNFORMATTED_SMS_PP_UPD	N	Y	N	n / n
_FORMATTED_SMS_CB	Y	Y	N	1/n (per TAR)
UNFORMATTED_SMS_CB	Y	Y	N	n / n
MO_SHORT_MESSAGE_CONTROL_BY_NAA	N	Y	Y	1 / 1
<u>FORMATTED_USSD</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>1 / n (per TAR)</u>
<u>UNFORMATTED_USSD</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>n / n</u>

Note 1: The framework may reply busy and not trigger the toolkit applet if e.g. a PoR using SMS SUBMIT is required in the incoming message and a proactive session is ongoing.

Annex A

```
package uicc.usim.toolkit;
```

```
//import uicc.toolkit.ToolkitConstants;
```

```
/**
```

* `ToolkitConstants` encapsulates constants related to the USAT Toolkit applets.

*

* @version 2.0.0

* @author 3GPP T3 API

*/

```
public interface ToolkitConstants extends uicc.toolkit.ToolkitConstants {
    /** Event : Envelope SMS-PP Data Download (31.115 formatted) = 2 */
    public static final byte EVENT_FORMATTED_SMS_PP_ENV = (short)2;
    /** Event : Update Record EF sms APDU (31.115 formatted) = 3 */
    public static final byte EVENT_FORMATTED_SMS_PP_UPD = (short)3;
    /** Event : Envelope SMS-PP Data Download unformatted sms = 4 */
    public static final byte EVENT_UNFORMATTED_SMS_PP_ENV = (short)4;
    /** Event : Update Record EFsms APDU unformatted sms = 5 */
    public static final byte EVENT_UNFORMATTED_SMS_PP_UPD = (short)5;
    /** Event : Cell Broadcast Data Download = 6 */
    public static final byte EVENT_UNFORMATTED_SMS_CB = (short)6;
    /** Event : MO Short Message Control by SIM = 10 */
    public static final byte EVENT_MO_SHORT_MESSAGE_CONTROL_BY_SIM = (short)10;
    /** Event : Cell Broadcast Data Download Formatted = 24 */
    public static final byte EVENT_FORMATTED_SMS_CB = (short)24;
    /** Event : USSD Data Download Formatted = 121 */
    public static final byte EVENT_FORMATTED_USSD = (short)121;
    /** Event : USSD Data Download Unformatted = 122 */
    public static final byte EVENT_UNFORMATTED_USSD = (short)122;
}
```

//-----

// PACKAGE DEFINITION

//-----

package uicc.usim.toolkit;

//-----

// IMPORTS

//-----

```

import uicc.toolkit.ToolkitException;
import uicc.toolkit.EnvelopeHandler;
/**
 * The USATEnvelopeHandler interface contains basic methods to handle the <b>SMS Envelope
 * </b>data field. This interface will be used by the Toolkit applet in order to
 * have access to the current SMS Envelope information. No constructor is available
 * for the Toolkit applet.
 *
 * @author T3 SWG API
 * @see uicc.toolkit.EnvelopeHandler
 */
public interface USATEnvelopeHandler extends uicc.toolkit.EnvelopeHandler {

    /**
     * Looks for the Secured Data from the Command Packet in the first SMS TPDU
     * or Cell Broadcast Page Simple TLV or USSD String TLV contained in the Envelope handler.<br>
     * <br>
     * This can be used on the events:<ul>
     * <li>EVENT_FORMATTED_SMS_PP_ENV, EVENT_FORMATTED_SMS_PP_UPD, if the SMS TP-UD
     is formatted
     * according to TS 31.115 Single or Concatenated Short Message.
     * <li>EVENT_FORMATTED_SMS_CB, if the Cell Broadcast Page is formatted according to TS 31.115.
     * <li>EVENT\_FORMATTED\_USSD, if the USSD String is formatted according to TS 31.115.
     * If the element is available it becomes the TLV selected.</ul>
     * <br>
     * @return the offset of the Secured Data first byte in the first SMS TPDU or Cell Broadcast Page or USSD
     String TLV element.
     * If the Secured Data length is zero the value returned shall be the offset of the first byte following
     * the TS 31.115 Command Packet structure.
     *
     * @exception ToolkitException with the following reason codes: <ul>
     * <li><code>UNAVAILABLE_ELEMENT</code> in case of unavailable SMS TPDU or Cell Broadcast
     Page TLV element or wrong data format </ul>
     */
    public short getSecuredDataOffset() throws ToolkitException;

```

```

/**
 * Looks for the length of the Secured Data from the Command Packet in the first SMS TPDU
 * or Cell Broadcast Page Simple or USSD String TLV contained in the Envelope handler. <br>
 * <br>
 * This can be used on the events:<ul>
 * <li>EVENT_FORMATTED_SMS_PP_ENV, EVENT_FORMATTED_SMS_PP_UPD, if the SMS TP-UD
 * is formatted according to TS 31.115 Single or Concatenated Short Message.
 * <li>EVENT_FORMATTED_SMS_CB, if the Cell Broadcast Page is formatted according to TS 31.115.
 * <li>EVENT\_FORMATTED\_USSD, if the USSD String is formatted according to TS 31.115.
 * If the element is available it becomes the TLV selected.</ul>
 *
 * @return the length of the Secured Data contained in the first SMS TPDU or Cell Broadcast Page or USSD
String TLV element (without padding bytes).
 *
 * If the Secured Data length is zero, no exception shall be thrown.
 *
 * @exception ToolkitException with the following reason codes: <ul>
 * <li><code>UNAVAILABLE_ELEMENT</code> in case of unavailable SMS TPDU or Cell Broadcast
Page or USSD String TLV element wrong data format </ul>
 */
public short getSecuredDataLength() throws ToolkitException;

[...]
}

```

Title: LS on reservation of new values for 3GPP in Response Status Code and Event list

Release: 7

Work Item: USSD

Source: CT6

To: SCP TEC

Cc: SCP

Contact Person:

Name: Florence Martin

Tel. Number: +33 (0)1 46 00 54 18

E-mail Address: fmartin@axalto.com

Attachments: CT6-050418, CT6-050420

1. Overall Description:

CT6 would like to inform EP SCP TEC of two Change Requests (attached in CT6-050418 and CT6-050420) agreed during the CT6#35 meeting in Cancun.

- CT6-050418 is a Change Request to TS 31.115 Release 7.
A new Response Status Code "Actual response data to be sent using a ProcessUnstructuredSS-Request invoke component (i.e. using Send USSD proactive command)" has been added. The value '0C' has been allocated for this Response Status Code.
- CT6-050420 is a Change Request to TS 31.130 Release 7.
Two new events EVENT_FORMATTED_USSD and EVENT_UNFORMATTED_USSD have been added. The values '121' and '122' have been allocated for these events.

2. Actions:

To SCP TEC group.

ACTION: CT6 kindly asks EP SCP TEC to reserve:

- The '0C' value for 3GPP in the Response Status Codes defined in TS 102 225.
- The '121' and '122' values for 3GPP in the list of event values defined in TS 102 241.

3. Date of Next TSG-CT6 Meetings:

TSG-CT6 Meeting #36 9 – 12 August 2005 Dublin, Ireland.

TSG-CT6 Meeting #37 7 – 10 November 2005 Sophia Antipolis, France.