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

Source: T3

Title: CRs to TS 31.102: Characteristics of the USIM Application

Document for: Approval

This document contains the following change requests:

Spec	CR	Re v	Phas e	Subject		new	Doc-2nd- Level
						ver.	
31.102	163	-	R99	Removal of references to TS 02.07	F	3.15.0	T3-030959
31.102	164	-	Rel-4	Removal of references to TS 02.07	А	4.11.0	T3-030960
31.102	165	-	Rel-5	Removal of references to TS 02.07	А	5.7.0	T3-030961
31.102	166	-	Rel-6	Removal of references to TS 02.07	А	6.4.0	T3-030962
31.102	167	-	R99	Correction of T=0 protocol parameters	F	3.15.0	T3-030947
31.102	168	-	Rel-4	Correction of T=0 protocol parameters	Α	4.11.0	T3-030979
31.102	169	-	Rel-5	Correction of T=0 protocol parameters	А	5.7.0	T3-030982
31.102	170	-	R99	Corrections on files for support of GSM services using USIM / NIA	F	3.15.0	T3-030989
31.102	171	-	Rel-4	Corrections on files for support of GSM services using USIM / NIA	A	4.11.0	T3-030990
31.102	172	-	Rel-5	Corrections on files for support of GSM services using USIM / NIA	А	5.7.0	T3-030991
31.102	173	-	Rel-6	Corrections on files for support of GSM services using USIM / NIA	А	6.4.0	T3-030992
31.102	174	-	R99	Support of GSM services on USIM	F	3.15.0	T3-030993
31.102	175	-	Rel-4	Support of GSM services on USIM	Α	4.11.0	T3-030994
31.102	176	-	Rel-5	Support of GSM services on USIM	А	5.7.0	T3-030995
31.102	177	-	Rel-6	Support of GSM services on USIM	А	6.4.0	T3-030996
31.102	178	-	R99	Corrections on files for support of GSM services using USIM - ASCI Files	F	3.15.0	T3-030997
31.102	179	-	Rel-4	Corrections on files for support of GSM services using USIM - ASCI Files	A	4.11.0	T3-030998
31.102	180	-	Rel-5	Corrections on files for support of GSM services using USIM - ASCI Files	А	5.7.0	T3-030999

31.102	181	-	Rel-6	Corrections on files for support of GSM services using USIM - ASCI Files	А	6.4.0	T3-031000
31.102	182	-	R99	Alignment of EF-HPLMN Search Period with 22.011 and 23.122	F	3.15.0	T3-031019
31.102	183	-	Rel-4	Alignment of EF-HPLMN Search Period with 22.011 and 23.122	А	4.11.0	T3-031020
31.102	184	-	Rel-5	Alignment of EF-HPLMN Search Period with 22.011 and 23.122	А	5.7.0	T3-031021
31.102	185	-	Rel-6	Alignment of EF-HPLMN Search Period with 22.011 and 23.122	Α	6.4.0	T3-031022
31.102	186	-	R99	Correction of SFI support	F	3.15.0	T3-030955
31.102	187	-	Rel-4	Correction of SFI support	Α	4.11.0	T3-030956
31.102	188	-	Rel-5	Correction of SFI support	Α	5.7.0	T3-030957
31.102	189	-	Rel-6	Editorial corrections for Image files	D	6.4.0	T3-030958
31.102	190	-	Rel-6	Expansion of Message Waiting Indication Status EFs	С	6.4.0	T3-030977
31.102	191	-	R99	Correction to the description of mandatory SFIs	F	3.15.0	T3-030980
31.102	192	-	Rel-4	Correction to the description of mandatory SFIs	A	4.11.0	T3-031033
31.102	193	-	Rel-5	Correction to the description of mandatory SFIs	A	5.7.0	T3-031034
31.102	194	-	Rel-6	Correction to the description of mandatory SFIs	A	6.4.0	T3-031035
31.102	195	-	R99	Clarification of "free" entry in EF_EXT1/EF_EXT4	F	3.15.0	T3-030963
31.102	196	-	Rel-4	Clarification of "free" entry in EF_EXT1/EF_EXT4	F	4.11.0	T3-030964
31.102	197	-	Rel-5	Clarification of "free" entry in EF_EXT1/4/8	F	5.7.0	T3-031036
31.102	198	-	Rel-6	Clarification of "free" entry in EF_EXT1/4/8	F	6.4.0	T3-031037
31.102	199	-	Rel-6	Correction to Annex G Phonebook Example	F	6.4.0	T3-030954

Tdoc T3-030959[⋇]

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

(revised from T3-030907)

	С	HANG	E REQ	UES1	Γ	C	R-Form-v7
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*	31.102	CR 163	≋rev	- #	Current version: 3.14.0 [#]
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		r references to re	02.07		
Source: #	T3				
Work item code: ₩	TEI				<i>Date:</i>
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Clauses affected:	Ψ <u>2.42</u>	.12, 4.2.18, 4.4.2.	2		
Other specs affected:	Y N X X	Other core specifi Test specification O&M Specification	ications s ns	₩	os (P00 to Pol 6)
Other comments:	器 CR ne	eds to be applied	to all existin	ig release	35 (M33 10 Kel-0).

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TS 21.111: "USIM and IC Card Requirements". [2] 3GPP TS 22.011: "Service accessibility". [3] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)". [4] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)". 3GPP TS 23.038: "Alphabets and language". [5] [6] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS) Point-to-Point (PP)". 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2". [7] [8] 3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1". [9] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3". [10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio 3GPP TS 31.101: "UICC-Terminal Interface, Physical and Logical Characteristics". [11] [12] 3GPP TS 31.111: "USIM Application Toolkit (USAT)". 3GPP TS 33.102: "3GPP Security; Security Architecture". [13] 3GPP TS 33.103: "3GPP Security; Integration Guidelines". [14] 3GPP TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1". [15] 3GPP TS 23.041: "Technical realization of Cell Broadcast (CB)". [16] 3GPP TS 02.07: "Mobile Stations (MS) features". Void. [17] [18] 3GPP TS 11.11: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM -ME) interface". [19] ISO 639 (1988): "Code for the representation of names of languages". [20] ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Interindustry commands for interchange". ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts, [21] Part 5: Numbering system and registration procedure for application identifiers". ITU-T Recommendation E.164: "The international public telecommunication numbering plan". [22] ITU-T Recommendation T.50: "International Alphabet No. 5 Information technology - 7-bit coded [23] character set for information interchange").

[24]	3GPP TS 22.101: "Service aspects; service principles".
[25]	3GPP TS 23.003: "Numbering, Addressing and Identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts, Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalisation of GSM Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 04.18 "Mobile Interface Layer3 Specification, Radio Resource control protocol"
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE);Functional description; Stage 2".
[31]	3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode"
[32]	ISO/IEC 7816-6 (1996): "Identification cards Integrated circuit(s) cards with contacts Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio Transmission and Reception (FDD)"
[34]	3GPP TS 05.05: "Radio Transmission and Reception"
[35]	ISO/IEC 8825(1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"

4.2.12 EF_{SPN} (Service Provider Name)

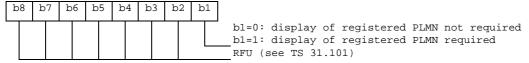
This EF contains the service provider name and appropriate requirements for the display by the ME.

Identifier: '6F46'		Structure: transparent			Optional		
Fi	le Size: 17 bytes		Update	: low			
Access Condit READ UPDAT DEACT ACTIVA	ΓΕ ΓΙVATE	ALW, ADM ADM ADM					
Bytes	Description		n	M/O	Length		
1	Display Condition			M	1 byte		
2 to 17	Service Provider Name			M	16 bytes		

- Display Condition

Contents: display condition for the service provider name in respect to the registered PLMN (see GSM 02.07 [17]TS 22.101 [24]).

Coding:



- Service Provider Name

Contents:

service provider string to be displayed

Coding:

the string shall use:

- either the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The string shall be left justified. Unused bytes shall be set to 'FF'.
- or one of the UCS2 code options defined in the annex of TS 31.101 [11].

4.2.18 EF_{AD} (Administrative Data)

This EF contains information concerning the mode of operation according to the type of USIM, such as normal (to be used by PLMN subscribers for 3G 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).

Identifie	ifier: '6FAD' Struc		ucture: transparent		Mandatory	
	SFI: '03'					
File	e size: 4+X bytes		Update	activity	v: low	
Access Condit READ UPDAT DEACT ACTIV	ΓΕ ΓΙVATE	ALW ADM ADM ADM				
Bytes		Descriptio	n	M/O	Length	
1	UE operation mo	ode		М	1 byte	
2 to 3	Additional information			М	2 bytes	
4	length of MNC ir	the IMSI		М	1 byte	
5 to 4+X	RFU			0	X bytes	

- UE operation mode:

Contents:

mode of operation for the UE

Coding:

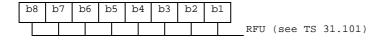
Initial value

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

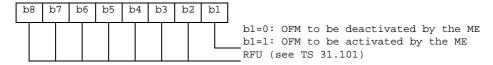
Coding:

- 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 22.101 [24].

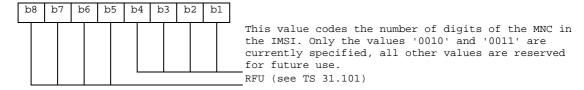
- ME manufacturer specific information (if b2=1 in byte 1).

- 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:



The OFM bit is used to control the Ciphering Indicator as specified in GSM 02.07 [17].

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

4.4.2.3 EF_{ADN} (Abbreviated dialling numbers)

This EF contains Abbreviated Dialling Numbers (ADN) and/or Supplementary Service Control strings (SSC). In addition it contains identifiers of associated network/bearer capabilities and identifiers of extension records. It may also contain an associated alpha-tagging.

Identifier: '4FXX'		Sti	Structure: linear fixed Con (see		
SFI:	'YY'				
Record	length: X+14 by	tes	U	pdate activity	: low
Access Conditions: READ UPDATE DEACTIVATE ACTIVATE		PIN PIN ADM ADM			
Bytes		Descripti	on	M/O	Length
1 to X	Alpha Identifie	r		0	X bytes
X+1	Length of BCD	number/SS	C contents	M	1 byte
X+2	TON and NPI			M	1 byte
X+3 to X+12	Dialling Number	er/SSC String	g	M	10 bytes
X+13	Capability/Con	figuration1 lo	dentifier	M	1 byte
X+14	Extension1 Re	cord Identifie	er	M	1 byte
NOTE: This file is mandatory if and only if DF _{PHONEBOOK} is present.					

- Alpha Identifier.

Contents:

- Alpha-tagging of the associated dialling number.

Coding:

- this alpha-tagging shall use
 - either:
 - the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'.

or:

- one of the UCS2 coded options as defined in the annex of TS 31.101 [11].

NOTE 1: The value of X may be from zero to 241. Using the command GET RESPONSE the ME can determine the value of X.

- Length of BCD number/SSC contents.

Contents:

- this byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself (see clause 4.4.2.4).

Coding:

- according to TS 24.008 [9].
- TON and NPI.

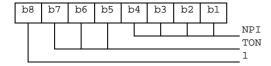
Contents:

- Type of number (TON) and numbering plan identification (NPI).

Coding:

- according to TS 24.008 [9]. If the Dialling Number/SSC String does not contain a dialling number, e.g. a control string deactivating a service, the TON/NPI byte shall be set to 'FF' by the ME (see note 2).

NOTE 2: If a dialling number is absent, no TON/NPI byte is transmitted over the radio interface (see TS 24.008 [9]). Accordingly, the ME should not interpret the value 'FF' and not send it over the radio interface.

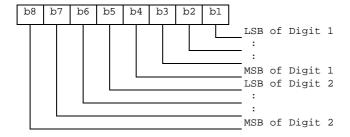


- Dialling Number/SSC String
 - Contents:
 - up to 20 digits of the telephone number and/or SSC information.

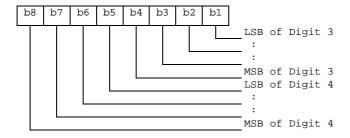
Coding:

according to TS 24.008 [9], TS 22.030 [4] and the extended BCD-coding (see table 4.4). If the telephone number or SSC is longer than 20 digits, the first 20 digits are stored in this data item and the remainder is stored in an associated record in the EF_{EXT1} . The record is identified by the Extension1 Record Identifier. If ADN/SSC require less than 20 digits, excess nibbles at the end of the data item shall be set to 'F'. Where individual dialled numbers, in one or more records, of less than 20 digits share a common appended digit string the first digits are stored in this data item and the common digits stored in an associated record in the EF_{EXT1} . The record is identified by the Extension 1 Record Identifier. Excess nibbles at the end of the data item shall be set to 'F'.

Byte X+3



Byte X+4:



etc.

- Capability/Configuration1 Identifier.
 - Contents:
 - capability/configuration identification byte. This byte identifies the number of a record in the EF_{CCP1} containing associated capability/configuration parameters required for the call. The use of this byte is optional. If it is not used it shall be set to 'FF'.

Coding:

- binary.
- Extension1 Record Identifier.

Contents:

- extension1 record identification byte. This byte identifies the number of a record in the EF_{EXT1} containing an
 associated called party subaddress or additional data. The use of this byte is optional. If it is not used it shall
 be set to 'FF'.
- if the ADN/SSC requires both additional data and called party subaddress, this byte identifies the additional record. A chaining mechanism inside EF_{EXT1} identifies the record of the appropriate called party subaddress (see clause 4.4.2.4).

Coding:

- binary.

NOTE 3: EF_{ADN} in the public phone book under DF_{TELECOM} may be used by USIM, GSM and also other applications in a multi-application card. If the non-GSM application does not recognise the use of Type of Number (TON) and Number Plan Identification (NPI), then the information relating to the national dialling plan shall be held within the data item dialling number/SSC and the TON and NPI fields set to UNKNOWN. This format would be acceptable for 3G operation and also for the non-GSM application where the TON and NPI fields shall be ignored.

EXAMPLE: SIM storage of an International Number using E.164 [22] numbering plan.

	TON	NPI	Digit field.
USIM application	001	0001	abc
Other application compatible with 3G	000	0000	xxxabc
where "abc" denotes the subscriber number	digits (incl	uding its c	country code), and "xxx

denotes escape digits or a national prefix replacing TON and NPI.

NOTE 4: When the ME acts upon the EF_{ADN} with a SEARCH RECORD command in order to identify a character string in the alpha-identifier, it is the responsibility of the ME to ensure that the number of characters used as SEARCH RECORD parameters are less than or equal to the value of X if the MMI allows the user to offer a greater number.

Table 4.4: Extended BCD coding

BCD Value	Character/Meaning
'0'	"0"
:	:
'9'	"9"
'A'	
'B'	"#"
'C'	DTMF Control digit separator (GSM 02.07 [17]see TS 22.101 [24]).
'D'	"Wild" value. This will cause the MMI to prompt the user for a single digit (see GSM 02.07 [17]TS 22.101 [24]).
'E'	RFU.
'F'	Endmark e.g. in case of an odd number of digits.

BCD values 'C', 'D' and 'E' are never sent across the radio interface.

NOTE 5: A second or subsequent 'C' BCD value will be interpreted as a 3 second PAUSE (see GSM 02.07 [17]TS 22.101 [24]).

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Other comments:

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Course	ω <u>Τ</u> ο										
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Consequences not approved:	if ૠ	Inco	nsistend	y of the spe	ecification.						
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Other specs affected:	ж	Y N X X X	Test s	core specifi pecification Specification	S	Ж					

CR needs to be applied to all existing releases (R99 to Rel-6).

2 References

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[1]	3GPP TS 21.111: "USIM and IC Card Requirements".
[2]	3GPP TS 22.011: "Service accessibility".
[3]	3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
[4]	3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".
[5]	3GPP TS 23.038: "Alphabets and language".
[6]	3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
[7]	3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
[8]	3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1".
[9]	3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".
[10]	3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
[11]	3GPP TS 31.101: "UICC-Terminal Interface, Physical and Logical Characteristics".
[12]	3GPP TS 31.111: "USIM Application Toolkit (USAT)".
[13]	3GPP TS 33.102: "3GPP Security; Security Architecture".
[14]	3GPP TS 33.103: "3GPP Security; Integration Guidelines".
[15]	3GPP TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1".
[16]	3GPP TS 23.041: "Technical realization of Cell Broadcast (CB)".
[17]	3GPP TS 02.07: "Mobile Stations (MS) features". Void.
[18]	3GPP TS 51.011: "Specification of the Subscriber Identity Module – Mobile Equipment (SIM – ME) interface".
[19]	ISO 639 (1988): "Code for the representation of names of languages".
[20]	ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Interindustry commands for interchange".
[21]	ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts, Part 5: Numbering system and registration procedure for application identifiers".
[22]	ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
[23]	ITU-T Recommendation T.50: "International Alphabet No. 5 Information technology - 7-bit coded character set for information interchange").

[24]	3GPP TS 22.101: "Service aspects; service principles".
[25]	3GPP TS 23.003: "Numbering, Addressing and Identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts, Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalisation of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile Interface Layer3 Specification, Radio Resource control protocol"
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[31]	3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode"
[32]	ISO/IEC 7816-6 (1996): "Identification cards Integrated circuit(s) cards with contacts Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio Transmission and Reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception"
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP)"
[37]	ETSI TS 102 221 "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)"
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; stage 2".

4.2.18 EF_{AD} (Administrative Data)

This EF contains information concerning the mode of operation according to the type of USIM, such as normal (to be used by PLMN subscribers for 3G 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).

Identifie	er: '6FAD'	Stru	ucture: transparent		Mandatory
	SFI: '03'				
File	e size: 4+X bytes		Update	activity	: low
Access Condition	ons:				
READ		ALW			
UPDAT	E	ADM			
DEACTIVATE		ADM			
ACTIVATE		ADM			
Bytes		Description	n	M/O	Length
1	UE operation mode			M	1 byte
2 to 3	Additional information			M	2 bytes
4	length of MNC in the IMSI			M	1 byte
5 to 4+X	RFU			0	X bytes

UE operation mode:

Contents:

mode of operation for the UE

Coding:

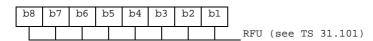
Initial value

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

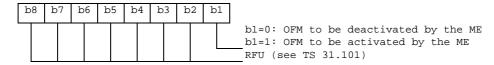
Coding:

- 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 22.101 [24].

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

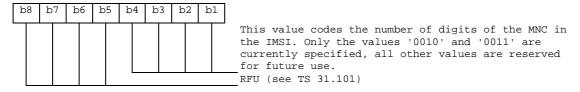
- Length of MNC in the IMSI:

Contents:

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

Coding:

Byte 4:



The OFM bit is used to control the Ciphering Indicator as specified in TS 02.07 [17].

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

4.4.2.3 EF_{ADN} (Abbreviated dialling numbers)

This EF contains Abbreviated Dialling Numbers (ADN) and/or Supplementary Service Control strings (SSC). In addition it contains identifiers of associated network/bearer capabilities and identifiers of extension records. It may also contain an associated alpha-tagging.

Identifier: '4FXX'		Sti			Conditional (see Note)
SFI:	'YY'				
Record	length: X+14 by	tes	U	pdate activity	: low
Access Conditio READ UPDATE DEACTI' ACTIVA	E VATE	PIN PIN ADM ADM			
Bytes		Descripti	on	M/O	Length
1 to X	Alpha Identifie	r		0	X bytes
X+1	Length of BCD	number/SS	C contents	M	1 byte
X+2	TON and NPI			M	1 byte
X+3 to X+12	Dialling Number/SSC String M 1				10 bytes
X+13	Capability/Configuration1 Identifier N			M	1 byte
X+14	Extension1 Record Identifier M 1 by				1 byte
NOTE: This f	ile is mandatory	if and only if	DF _{PHONEBOOK} is	present.	

- Alpha Identifier.

Contents:

Alpha-tagging of the associated dialling number.

Coding:

- this alpha-tagging shall use

either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'.

or:

one of the UCS2 coded options as defined in the annex of TS 31.101 [11].

NOTE 1: The value of X may be from zero to 241. Using the command GET RESPONSE the ME can determine the value of X.

- Length of BCD number/SSC contents.

Contents:

- this byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself (see clause 4.4.2.4).

Coding:

- according to TS 24.008 [9].
- TON and NPI.

Contents:

- Type of number (TON) and numbering plan identification (NPI).

Coding:

- according to TS 24.008 [9]. If the Dialling Number/SSC String does not contain a dialling number, e.g. a control string deactivating a service, the TON/NPI byte shall be set to 'FF' by the ME (see note 2).

NOTE 2: If a dialling number is absent, no TON/NPI byte is transmitted over the radio interface (see TS 24.008 [9]). Accordingly, the ME should not interpret the value 'FF' and not send it over the radio interface.

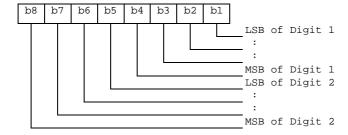


- Dialling Number/SSC String
 - Contents:
 - up to 20 digits of the telephone number and/or SSC information.

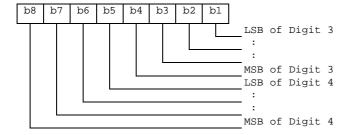
Coding:

according to TS 24.008 [9], TS 22.030 [4] and the extended BCD-coding (see table 4.4). If the telephone number or SSC is longer than 20 digits, the first 20 digits are stored in this data item and the remainder is stored in an associated record in the EF_{EXT1} . The record is identified by the Extension1 Record Identifier. If ADN/SSC require less than 20 digits, excess nibbles at the end of the data item shall be set to 'F'. Where individual dialled numbers, in one or more records, of less than 20 digits share a common appended digit string the first digits are stored in this data item and the common digits stored in an associated record in the EF_{EXT1} . The record is identified by the Extension 1 Record Identifier. Excess nibbles at the end of the data item shall be set to 'F'.

Byte X+3



Byte X+4:



etc.

- Capability/Configuration1 Identifier.
 - Contents:
 - capability/configuration identification byte. This byte identifies the number of a record in the EF_{CCP1} containing associated capability/configuration parameters required for the call. The use of this byte is optional. If it is not used it shall be set to 'FF'.

Coding:

- binary.
- Extension1 Record Identifier.

Contents:

- extension1 record identification byte. This byte identifies the number of a record in the EF_{EXT1} containing an
 associated called party subaddress or additional data. The use of this byte is optional. If it is not used it shall
 be set to 'FF'.
- if the ADN/SSC requires both additional data and called party subaddress, this byte identifies the additional record. A chaining mechanism inside EF_{EXT1} identifies the record of the appropriate called party subaddress (see clause 4.4.2.4).

Coding:

- binary.

NOTE 3: EF_{ADN} in the public phone book under DF_{TELECOM} may be used by USIM, GSM and also other applications in a multi-application card. If the non-GSM application does not recognise the use of Type of Number (TON) and Number Plan Identification (NPI), then the information relating to the national dialling plan shall be held within the data item dialling number/SSC and the TON and NPI fields set to UNKNOWN. This format would be acceptable for 3G operation and also for the non-GSM application where the TON and NPI fields shall be ignored.

EXAMPLE: SIM storage of an International Number using E.164 [22] numbering plan.

	TON	NPI	Digit field.
USIM application	001	0001	abc
Other application compatible with 3G	000	0000	xxxabc
where "abc" denotes the subscriber number of	digits (incl	uding its c	country code), and "xxx"
denotes escape digits or a national prefix repla	cing TON	and NPI.	

NOTE 4: When the ME acts upon the EF_{ADN} with a SEARCH RECORD command in order to identify a character string in the alpha-identifier, it is the responsibility of the ME to ensure that the number of characters used as SEARCH RECORD parameters are less than or equal to the value of X if the MMI allows the user to offer a greater number.

Table 4.4: Extended BCD coding

BCD Value	Character/Meaning
'0'	"0"
:	:
'9'	"9"
'A'	
'B'	"#"
'C'	DTMF Control digit separator (GSM 02.07 [17]see TS 22.101 [24]).
'D'	"Wild" value. This will cause the MMI to prompt the user for a single digit (see GSM 02.07 [17]TS 22.101 [24]).
'E'	RFU.
'F'	Endmark e.g. in case of an odd number of digits.

BCD values 'C', 'D' and 'E' are never sent across the radio interface.

NOTE 5: A second or subsequent 'C' BCD value will be interpreted as a 3 second PAUSE (see GSM 02.07 [17]TS 22.101 [24]).

Other comments:

Dallas, USA, 18-21 November 2003											
			(CHANG	E REQ	UE	ST	•			CR-Form
*	31.	102	CR	165	жrev	-	Ж	Current vers	ion:	5.6.0	¥
For <u>HELP</u> or	using	this for	m, see	bottom of th	his page or	look	at th	e pop-up text	over	the % syr	nbols.
Proposed chang	e affec	ts: \	JICC a	pps# <mark>X</mark>	ME X	Rad	dio A	ccess Networ	k	Core Ne	etwork
Title:	₩ Re	moval	of refe	rences to TS	S 02 07						
		ovai		10/1003 10 10	02.01						
Source:	光 T3										
Work item code:	ж TE	l						Date: ₩	19/	11/2003	
Category:	₩ A	one of	the follo	owing categor	ios:			Release: 光 Use <u>one</u> of	Re	-	22505.
	USE	F (cor	rection)	_				2	(GSA	л Phase 2)	eases.
				ds to a correct feature),	tion in an ea	rlier re	eleas	e) R96 R97		ease 1996) ease 1997)	
				modification o	of feature)			R98		ease 1998)	
	_			odification)				R99		ease 1999)	
				ns of the abo	ve categories	s can				ease 4)	
	be ic	ouna in	3GPP_	TR 21.900.				Rel-5 Rel-6		ease 5) ease 6)	
									(
Reason for chan	ge: ∺	Refe	rence t	to a non-exis	stent specif	icatio	n (T	S 02.07)			
Summary of cha	nae: #	Rem	oved T	S 02.07 in t	he list of re	feren	ces.				
,								ces to TS 22.	101.		
C:	. 0.0	lass		av af tha an	a aifi a ati a n						
Consequences i not approved:	f ∺	inco	nsisten	cy of the spe	ecilication.						
Clauses affected	! : ₩	2, 4.	2.18, 4	.4.2.3							
		YN]								
Other specs	ж	X	Other	core specifi	ications	æ					
affected:		X	Test	specification	S						
		X	O&M	Specificatio	ns						

CR needs to be applied to all existing releases (R99 to Rel-6).

2 References

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

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

[1]	3GPP TS 21.111: "USIM and IC Card Requirements".
[2]	3GPP TS 22.011: "Service accessibility".
[3]	3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
[4]	3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".
[5]	3GPP TS 23.038: "Alphabets and language".
[6]	3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
[7]	3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
[8]	3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1".
[9]	3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".
[10]	3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
[11]	3GPP TS 31.101: "UICC-Terminal Interface, Physical and Logical Characteristics".
[12]	3GPP TS 31.111: "USIM Application Toolkit (USAT)".
[13]	3GPP TS 33.102: "3GPP Security; Security Architecture".
[14]	3GPP TS 33.103: "3GPP Security; Integration Guidelines".
[15]	3GPP TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1".
[16]	3GPP TS 23.041: "Technical realization of Cell Broadcast (CB)".
[17]	3GPP TS 02.07: "Mobile Stations (MS) features". Void.
[18]	3GPP TS 51.011: "Specification of the Subscriber Identity Module – Mobile Equipment (SIM – ME) interface".
[19]	ISO 639 (1988): "Code for the representation of names of languages".
[20]	ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Interindustry commands for interchange".
[21]	ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts, Part 5: Numbering system and registration procedure for application identifiers".
[22]	ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
[23]	ITU-T Recommendation T.50: "International Alphabet No. 5 Information technology - 7-bit coded character set for information interchange").

[24]	3GPP TS 22.101: "Service aspects; service principles".
[25]	3GPP TS 23.003: "Numbering, Addressing and Identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts, Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalisation of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile Interface Layer3 Specification, Radio Resource control protocol"
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".
[31]	3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode"
[32]	ISO/IEC 7816-6 (1996): "Identification cards Integrated circuit(s) cards with contacts Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio Transmission and Reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception"
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP)"
[37]	ETSI TS 102 221 "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)"
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; stage 2".

4.2.18 EF_{AD} (Administrative Data)

This EF contains information concerning the mode of operation according to the type of USIM, such as normal (to be used by PLMN subscribers for 3G 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).

Identifie	er: '6FAD'	Stru	ucture: transparent		Mandatory
	SFI: '03'				
File	e size: 4+X bytes		Update	activity	: low
Access Condition	ons:				
READ		ALW			
UPDAT	E	ADM			
DEACTIVATE		ADM			
ACTIVATE		ADM			
Bytes		Description	n	M/O	Length
1	UE operation mode			M	1 byte
2 to 3	Additional information			M	2 bytes
4	length of MNC in the IMSI			M	1 byte
5 to 4+X	RFU			0	X bytes

UE operation mode:

Contents:

mode of operation for the UE

Coding:

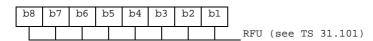
Initial value

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

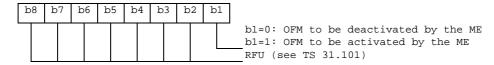
Coding:

- 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 22.101 [24].

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

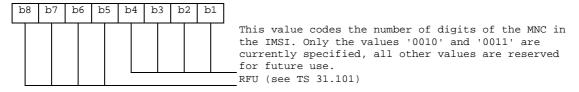
- Length of MNC in the IMSI:

Contents:

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

Coding:

Byte 4:



The OFM bit is used to control the Ciphering Indicator as specified in TS 02.07 [17].

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

4.4.2.3 EF_{ADN} (Abbreviated dialling numbers)

This EF contains Abbreviated Dialling Numbers (ADN) and/or Supplementary Service Control strings (SSC). In addition it contains identifiers of associated network/bearer capabilities and identifiers of extension records. It may also contain an associated alpha-tagging.

Identifier: '4FXX'		Sti			Conditional (see Note)
SFI:	'YY'				
Record	length: X+14 by	tes	U	pdate activity	: low
Access Conditio READ UPDATE DEACTI' ACTIVA	E VATE	PIN PIN ADM ADM			
Bytes		Descripti	on	M/O	Length
1 to X	Alpha Identifie	r		0	X bytes
X+1	Length of BCD	number/SS	C contents	M	1 byte
X+2	TON and NPI			M	1 byte
X+3 to X+12	Dialling Number/SSC String M 1				10 bytes
X+13	Capability/Configuration1 Identifier N			M	1 byte
X+14	Extension1 Record Identifier M 1 by				1 byte
NOTE: This f	ile is mandatory	if and only if	DF _{PHONEBOOK} is	present.	

- Alpha Identifier.

Contents:

Alpha-tagging of the associated dialling number.

Coding:

- this alpha-tagging shall use

either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'.

or:

one of the UCS2 coded options as defined in the annex of TS 31.101 [11].

NOTE 1: The value of X may be from zero to 241. Using the command GET RESPONSE the ME can determine the value of X.

- Length of BCD number/SSC contents.

Contents:

- this byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself (see clause 4.4.2.4).

Coding:

- according to TS 24.008 [9].
- TON and NPI.

Contents:

- Type of number (TON) and numbering plan identification (NPI).

Coding:

- according to TS 24.008 [9]. If the Dialling Number/SSC String does not contain a dialling number, e.g. a control string deactivating a service, the TON/NPI byte shall be set to 'FF' by the ME (see note 2).

NOTE 2: If a dialling number is absent, no TON/NPI byte is transmitted over the radio interface (see TS 24.008 [9]). Accordingly, the ME should not interpret the value 'FF' and not send it over the radio interface.

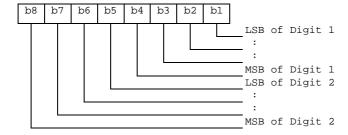


- Dialling Number/SSC String
 - Contents:
 - up to 20 digits of the telephone number and/or SSC information.

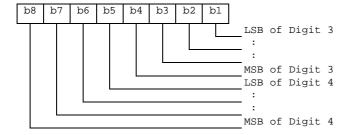
Coding:

according to TS 24.008 [9], TS 22.030 [4] and the extended BCD-coding (see table 4.4). If the telephone number or SSC is longer than 20 digits, the first 20 digits are stored in this data item and the remainder is stored in an associated record in the EF_{EXT1} . The record is identified by the Extension1 Record Identifier. If ADN/SSC require less than 20 digits, excess nibbles at the end of the data item shall be set to 'F'. Where individual dialled numbers, in one or more records, of less than 20 digits share a common appended digit string the first digits are stored in this data item and the common digits stored in an associated record in the EF_{EXT1} . The record is identified by the Extension 1 Record Identifier. Excess nibbles at the end of the data item shall be set to 'F'.

Byte X+3



Byte X+4:



etc.

- Capability/Configuration1 Identifier.
 - Contents:
 - capability/configuration identification byte. This byte identifies the number of a record in the EF_{CCP1} containing associated capability/configuration parameters required for the call. The use of this byte is optional. If it is not used it shall be set to 'FF'.

Coding:

- binary.
- Extension1 Record Identifier.

Contents:

- extension1 record identification byte. This byte identifies the number of a record in the EF_{EXT1} containing an
 associated called party subaddress or additional data. The use of this byte is optional. If it is not used it shall
 be set to 'FF'.
- if the ADN/SSC requires both additional data and called party subaddress, this byte identifies the additional record. A chaining mechanism inside EF_{EXT1} identifies the record of the appropriate called party subaddress (see clause 4.4.2.4).

Coding:

- binary.

NOTE 3: EF_{ADN} in the public phone book under DF_{TELECOM} may be used by USIM, GSM and also other applications in a multi-application card. If the non-GSM application does not recognise the use of Type of Number (TON) and Number Plan Identification (NPI), then the information relating to the national dialling plan shall be held within the data item dialling number/SSC and the TON and NPI fields set to UNKNOWN. This format would be acceptable for 3G operation and also for the non-GSM application where the TON and NPI fields shall be ignored.

EXAMPLE: SIM storage of an International Number using E.164 [22] numbering plan.

	TON	NPI	Digit field.
USIM application	001	0001	abc
Other application compatible with 3G	000	0000	xxxabc
where "abc" denotes the subscriber number of	digits (incl	uding its c	country code), and "xxx"
denotes escape digits or a national prefix repla	cing TON	and NPI.	

NOTE 4: When the ME acts upon the EF_{ADN} with a SEARCH RECORD command in order to identify a character string in the alpha-identifier, it is the responsibility of the ME to ensure that the number of characters used as SEARCH RECORD parameters are less than or equal to the value of X if the MMI allows the user to offer a greater number.

Table 4.4: Extended BCD coding

BCD Value	Character/Meaning
'0'	"0"
:	:
'9'	"9"
'A'	
'B'	"#"
'C'	DTMF Control digit separator (GSM 02.07 [17]see TS 22.101 [24]).
'D'	"Wild" value. This will cause the MMI to prompt the user for a single digit (see GSM 02.07 [17]TS 22.101 [24]).
'E'	RFU.
'F'	Endmark e.g. in case of an odd number of digits.

BCD values 'C', 'D' and 'E' are never sent across the radio interface.

NOTE 5: A second or subsequent 'C' BCD value will be interpreted as a 3 second PAUSE (see GSM 02.07 [17]TS 22.101 [24]).

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Dallas, USA, 18-21 November 2003											
CHANGE REQUEST											
¥		31.102	CR	166	жrev	-	\mathbb{H}	Current version:	6.3.0	*	
For HELP on using this form, see bottom of this page or look at the pop-up text over the % symbols. Proposed change affects: UICC apps% X ME X Radio Access Network Core Network											
Title:	9	Removal	of refer	ences to TS (2.07						

光 T3 Source: Date: 第 19/11/2003 ₩ A Release:

Rel-6 Category: Use one of the following categories: Use one of the following releases: **F** (correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) (Release 1996) R96 **B** (addition of feature), (Release 1997) R97 **C** (functional modification of feature) R98 (Release 1998) **D** (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can Rel-4 (Release 4) be found in 3GPP TR 21.900. Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	Reference to	Reference to a non-existent specification (TS 02.07)							
Summary of change		Removed TS 02.07 in the list of references. Replaced references to TS 02.07 by references to TS 22.101.							
Consequences if not approved:	Inconsistend	Inconsistency of the specification.							
Clauses affected:	2, 4.2.18, 4.	4.2.3							
Other specs affected:		core specifications							
		Specifications							

Other comments: # CR needs to be applied to all existing releases (R99 to Rel-6).

2 References

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

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

[1]	3GPP TS 21.111: "USIM and IC Card Requirements".
[2]	3GPP TS 22.011: "Service accessibility".
[3]	3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
[4]	3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".
[5]	3GPP TS 23.038: "Alphabets and language".
[6]	3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
[7]	3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
[8]	3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1".
[9]	3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".
[10]	3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
[11]	3GPP TS 31.101: "UICC-Terminal Interface, Physical and Logical Characteristics".
[12]	3GPP TS 31.111: "USIM Application Toolkit (USAT)".
[13]	3GPP TS 33.102: "3GPP Security; Security Architecture".
[14]	3GPP TS 33.103: "3GPP Security; Integration Guidelines".
[15]	3GPP TS 22.086: "Advice of charge (AoC) Supplementary Services - Stage 1".
[16]	3GPP TS 23.041: "Technical realization of Cell Broadcast (CB)".
[17]	3GPP TS 02.07: "Mobile Stations (MS) features".
[18]	3GPP TS 51.011: "Specification of the Subscriber Identity Module – Mobile Equipment (SIM – ME) interface".
[19]	ISO 639 (1988): "Code for the representation of names of languages".
[20]	ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts, Part 4: Interindustry commands for interchange".
[21]	ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts, Part 5: Numbering system and registration procedure for application identifiers".
[22]	ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
[23]	¥ <u>V</u> oid <u>.</u>

[24]	3GPP TS 22.101: "Service aspects; service principles". Void.
[25]	3GPP TS 23.003: "Numbering, Addressing and Identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts, Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalisation of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile Interface Layer3 Specification, Radio Resource control protocol"
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE);Functional description; Stage 2".
[31]	3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode"
[32]	ISO/IEC 7816-6 (1996): "Identification cards Integrated circuit(s) cards with contacts Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio Transmission and Reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception"
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP)"
[37]	ETSI TS 102 221 "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)"
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; stage 2".

4.2.18 EF_{AD} (Administrative Data)

This EF contains information concerning the mode of operation according to the type of USIM, such as normal (to be used by PLMN subscribers for 3G 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).

Identifie	er: '6FAD'	Stru	ucture: transparent	Mandatory	
	SFI: '03'				
File	e size: 4+X bytes		Update	activity	: low
Access Condition	ons:				
READ		ALW			
UPDAT	E	ADM			
DEACT	IVATE	ADM			
ACTIVATE		ADM			
Bytes		Description	n	M/O	Length
1	UE operation mod	de		M	1 byte
2 to 3	Additional informa	ation		M	2 bytes
4	length of MNC in	the IMSI		M	1 byte
5 to 4+X	RFU			0	X bytes

UE operation mode:

Contents:

mode of operation for the UE

Coding:

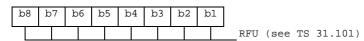
Initial value

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

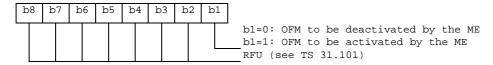
Coding:

- 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 22.101 [24].

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

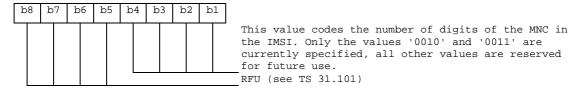
- Length of MNC in the IMSI:

Contents:

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

Coding:

Byte 4:



The OFM bit is used to control the Ciphering Indicator as specified in TS 02.07 [17].

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

4.4.2.3 EF_{ADN} (Abbreviated dialling numbers)

This EF contains Abbreviated Dialling Numbers (ADN) and/or Supplementary Service Control strings (SSC). In addition it contains identifiers of associated network/bearer capabilities and identifiers of extension records. It may also contain an associated alpha-tagging.

Identifier	: '4FXX'	Sti	Conditional (see Note)				
SFI:	'YY'						
Record	length: X+14 by	tes	U	pdate activity	: low		
Access Conditio READ UPDATE DEACTI' ACTIVA	E VATE	PIN PIN ADM ADM					
Bytes		Descripti	on	M/O	Length		
1 to X	Alpha Identifie	r		0	X bytes		
X+1	Length of BCD	number/SS	C contents	M	1 byte		
X+2	TON and NPI			M	1 byte		
X+3 to X+12	Dialling Number	er/SSC String	g	M	10 bytes		
X+13	Capability/Con	figuration1 lo	dentifier	M	1 byte		
X+14	Extension1 Re	cord Identifie	1 byte				
NOTE: This file is mandatory if and only if DF _{PHONEBOOK} is present.							

- Alpha Identifier.

Contents:

Alpha-tagging of the associated dialling number.

Coding:

- this alpha-tagging shall use
 - either
 - the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'.

or:

one of the UCS2 coded options as defined in the annex of TS 31.101 [11].

NOTE 1: The value of X may be from zero to 241. Using the command GET RESPONSE the ME can determine the value of X.

- Length of BCD number/SSC contents.

Contents

- this byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself (see clause 4.4.2.4).

Coding:

- according to TS 24.008 [9].
- TON and NPI.

Contents:

- Type of number (TON) and numbering plan identification (NPI).

Coding:

- according to TS 24.008 [9]. If the Dialling Number/SSC String does not contain a dialling number, e.g. a control string deactivating a service, the TON/NPI byte shall be set to 'FF' by the ME (see note 2).
- NOTE 2: If a dialling number is absent, no TON/NPI byte is transmitted over the radio interface (see TS 24.008 [9]). Accordingly, the ME should not interpret the value 'FF' and not send it over the radio interface.

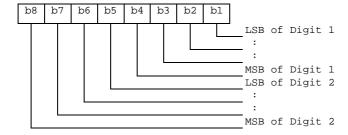


- Dialling Number/SSC String
 - Contents:
 - up to 20 digits of the telephone number and/or SSC information.

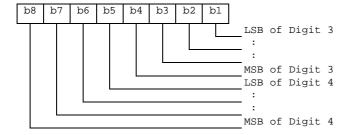
Coding:

according to TS 24.008 [9], TS 22.030 [4] and the extended BCD-coding (see table 4.4). If the telephone number or SSC is longer than 20 digits, the first 20 digits are stored in this data item and the remainder is stored in an associated record in the EF_{EXT1} . The record is identified by the Extension1 Record Identifier. If ADN/SSC require less than 20 digits, excess nibbles at the end of the data item shall be set to 'F'. Where individual dialled numbers, in one or more records, of less than 20 digits share a common appended digit string the first digits are stored in this data item and the common digits stored in an associated record in the EF_{EXT1} . The record is identified by the Extension 1 Record Identifier. Excess nibbles at the end of the data item shall be set to 'F'.

Byte X+3



Byte X+4:



etc.

- Capability/Configuration1 Identifier.
 - Contents:
 - capability/configuration identification byte. This byte identifies the number of a record in the EF_{CCP1} containing associated capability/configuration parameters required for the call. The use of this byte is optional. If it is not used it shall be set to 'FF'.

Coding:

- binary.
- Extension1 Record Identifier.

Contents:

- extension1 record identification byte. This byte identifies the number of a record in the EF_{EXT1} containing an
 associated called party subaddress or additional data. The use of this byte is optional. If it is not used it shall
 be set to 'FF'.
- if the ADN/SSC requires both additional data and called party subaddress, this byte identifies the additional record. A chaining mechanism inside EF_{EXT1} identifies the record of the appropriate called party subaddress (see clause 4.4.2.4).

Coding:

- binary.

NOTE 3: EF_{ADN} in the public phone book under DF_{TELECOM} may be used by USIM, GSM and also other applications in a multi-application card. If the non-GSM application does not recognise the use of Type of Number (TON) and Number Plan Identification (NPI), then the information relating to the national dialling plan shall be held within the data item dialling number/SSC and the TON and NPI fields set to UNKNOWN. This format would be acceptable for 3G operation and also for the non-GSM application where the TON and NPI fields shall be ignored.

EXAMPLE: SIM storage of an International Number using E.164 [22] numbering plan.

	TON	NPI	Digit field.					
USIM application	001	0001	abc					
Other application compatible with 3G	000	0000	xxxabc					
where "abc" denotes the subscriber number digits (including its country code), and "xxx"								
denotes escape digits or a national prefix replacing TON and NPI.								

NOTE 4: When the ME acts upon the EF_{ADN} with a SEARCH RECORD command in order to identify a character string in the alpha-identifier, it is the responsibility of the ME to ensure that the number of characters use

string in the alpha-identifier, it is the responsibility of the ME to ensure that the number of characters used as SEARCH RECORD parameters are less than or equal to the value of X if the MMI allows the user to offer a greater number.

Table 4.4: Extended BCD coding

BCD Value	Character/Meaning
'0'	"0"
:	:
'9'	"9"
'A'	
'B'	"#"
'C'	DTMF Control digit separator (GSM 02.07 [17]see TS 22.101 [24]).
'D'	"Wild" value. This will cause the MMI to prompt the user for a single digit (see GSM 02.07 [17]TS 22.101 [24]).
'E'	RFU.
'F'	Endmark e.g. in case of an odd number of digits.

BCD values 'C', 'D' and 'E' are never sent across the radio interface.

NOTE 5: A second or subsequent 'C' BCD value will be interpreted as a 3 second PAUSE (see GSM 02.07 [17]TS 22.101 [24]).

3GPP TSG T3 Meeting #29 Dallas, USA, 18-21 November 2003

Other comments: #

Dallas, USA, 18-21 November 2003																		
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For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.																		
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8.3 Interface protocol

No extra guard time, indicated in TC1 in the ATR, needs to be supported when sending characters from the terminal to the card. The terminal may reject a UICC indicating values other than 0 or 255 in TC1.

The T=0 protocol timing is designed according to TS 11.11 [18]. However it is recommended that the time between the start bit of the last character received by the UICC/terminal and the start bit of the first character sent in opposite direction for T=0 of 16 etu is respected by the terminal/UICC.

NOTE: In previous versions of this release a value for the time between the start bit of the last character received by the UICC or the terminal and the start bit of the first character sent in opposite direction for T=0 has been referenced to as 16 etu.

3GPP TSG T3 Meeting #29 Dallas, USA, 18-21 November 2003

CHANGE REQUEST							
*	31.102 CR 168	Current version: 4.10.0 #					
For <u>HELP</u> on us	ing this form, see bottom of this page or look at the	pop-up text over the 光 symbols.					
Proposed change affects: UICC apps X ME X Radio Access Network Core Network							
Title: 第	Correction of T=0 protocol parameters						
Source: #	Т3						
Work item code: ₩	TEI	<i>Date:</i>					
	Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Release: # Rel-4 Use one of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)					
Reason for change: Summary of change	TS 11.11/TS 51.011	fications in order to draw the					
Consequences if not approved:	to previous versions for this release **Descrepancy between the T=0 timing definition 11.11/TS 51.011 will persist causing potential	ns between 31.102 and TS					
Clauses affected:	₩ 8.4						
Other specs affected:	Y N X Other core specifications						
Other comments:	x						

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:

- 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.

8.4 Interface protocol

No extra guard time, indicated in TC1 in the ATR, needs to be supported when sending characters from the terminal to the card. The terminal may reject a UICC indicating values other than 0 or 255 in TC1.

The T=0 protocol timing is designed according to TS 51.011 [18]. However it is recommended that the time between the start bit of the last character received by the UICC/terminal and the start bit of the first character sent in opposite direction for T=0 of 16 etu is respected by the terminal/UICC.

NOTE: In previous versions of this release a value for the time between the start bit of the last character received by the UICC or the terminal and the start bit of the first character sent in opposite direction for T=0 has been referenced to as 16 etu.

3GPP TSG T3 Meeting #29 Dallas, USA, 18-21 November 2003

CHANGE REQUEST							
*	31.102 CR 169 #rev	- # Current version: 5.6.0 #					
For <u>HELP</u> on us	ng this form, see bottom of this page or lo	ok at the pop-up text over the 発 symbols.					
Proposed change af	fects: UICC apps光 <mark>X</mark> ME <mark>X</mark> I	Radio Access Network Core Network					
Title:	Correction of T=0 protocol parameters						
Source: #	Т3						
Work item code: ₩	TEI	Date: 第 20/11/2003					
	A Jose one of the following categories: F (correction) A (corresponds to a correction in an earlie B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories of the found in 3GPP TR 21.900.	R97 (Release 1997) R98 (Release 1998) R99 (Release 1999)					
		T. 0. 1. 1. 1. 1. T. 0.1.100					
Reason for change:	There is a descrepancy between the TS 11.11/TS 51.011	T=0 protocol timing between TS 31.102 and					
Summary of change	: A health warning has been added to	the specifications in order to draw the anged in the core specification with respect					
Consequences if not approved:	# Descrepancy between the T=0 timing 11.11/TS 51.011 will persist causing						
Clauses affected:	策 8.4						
Other specs affected:	Y N X Other core specifications Test specifications O&M Specifications	H.					

How to create CRs using this form:

Other comments:

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.

8.4 Interface protocol

No extra guard time, indicated in TC1 in the ATR, needs to be supported when sending characters from the terminal to the card. The terminal may reject a UICC indicating values other than 0 or 255 in TC1.

NOTE: In previous versions of this release a value for the time between the start bit of the last character received by the UICC or the terminal and the start bit of the first character sent in opposite direction for T=0 has been referenced to as 16 etu.

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4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifie	Identifier: '6F38' Stru		ucture: transparent		Mandatory
	SFI: '04'				
File s	ize: X bytes, X >=	1	Update	activity	: low
Access Condition	ons:				
READ		PIN			
UPDAT	E	ADM			
DEACT	IVATE	ADM			
ACTIVA	TE.	ADM			
Bytes		Description	า	M/O	Length
1	Services no1 to n	ı°8		M	1 byte
2	Services n°9 to n	ı°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services n°25 to n°32			0	1 byte
etc.			·		
X	Services n° (8X-7) to n°(8X)	_	0	1 byte

-Services		
Contents:	Service n°1:	Local Phone Book
	Service n°2:	Fixed Dialling Numbers (FDN)
	Service n°3:	Extension 2
	Service n°4:	Service Dialling Numbers (SDN)
	Service n°5:	Extension3
	Service n°6:	Barred Dialling Numbers (BDN)
	Service n°7:	Extension4
	Service n°8:	Outgoing Call Information (OCI and OCT)
	Service n°9:	Incoming Call Information (ICI and ICT)
	Service n°10:	Short Message Storage (SMS)
	Service n°11:	Short Message Status Reports (SMSR)
	Service n°12:	Short Message Service Parameters (SMSP)
	Service n°13: Service n°14:	Advice of Charge (AoC)
	Service n°15:	Capability Configuration Parameters (CCP) Cell Broadcast Message Identifier
	Service n°16:	Cell Broadcast Message Identifier Ranges
	Service n°17:	Group Identifier Level 1
	Service n°18:	Group Identifier Level 2
	Service n°19:	Service Provider Name
	Service n°20:	User controlled PLMN selector with Access Technology
	Service n°21:	MSISDN
	Service n°22:	Image (IMG)
	Service n°23:	Not used (reserved for SoLSA)
	Service n°24:	Enhanced Multi-Level Precedence and Pre-emption Service
	Service n°25:	Automatic Answer for eMLPP
	Service n°26:	RFU
	Service n°27:	GSM Access
	Service n°28:	Data download via SMS-PP
	Service n°29:	Data download via SMS-CB
	Service n°30:	Call Control by USIM
	Service n°31:	MO-SMS Control by USIM
	Service n°32:	RUN AT COMMAND command
	Service n°33:	shall be set to '1'
	Service n°34:	Enabled Services Table
	Service n°35:	APN Control List (ACL)
	Service n°36: Service n°37:	Depersonalisation Control Keys Co-operative Network List
	Service n°38:	GSM security context
	Service n°39:	CPBCCH Information
	Service n°40:	Investigation Scan
	Service n°41:	MexE
	Service n°42:	Operator controlled PLMN selector with Access Technology
	Service n°43:	HPLMN selector with Access Technology
	Service n°44:	Extension 5
	Service n°45:	PLMN Network Name
	Service n°46:	Operator PLMN List
	Service n°47:	Mailbox Dialling Numbers
	Service n°48:	Message Waiting Indication Status
	Service n°49:	Call Forwarding Indication Status
	Service n°50:	RPLMN Last used Access Technology
	Service n°51:	Service Provider Display Information
	Service n°52	Multimedia Messaging Service (MMS)
	Service n°53	Extension 8
	Service n°54	Call control on GPRS by USIM
	Service n°55	MMS User Connectivity Parameters

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

Network's indication of alerting in the MS (NIA)

Coding:

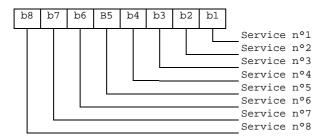
```
1 bit is used to code each service:
bit = 1: service available;
```

bit = 0: service not available.

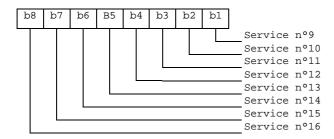
Service n°XX

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.XX EF_{NIA} (Network's Indication of Alerting)

This EF contains categories and associated text related to the Network's indication of alerting in the MS service defined in TS 22.101 [24].

<u>Identifie</u>	ifier: '6FXX' Stru		Structure: linear fixed		<u>Optional</u>
Reco	d length: X+1 byt	es	<u>Update</u>	activity	<u>r: low</u>
Access Condit	ions:				
READ		PIN			
UPDAT	ГЕ	ADM			
INVALIDATE		ADM			
REHABILITATE		ADM			
<u>Bytes</u>		Descriptio	<u>n</u>	M/O	<u>Length</u>
<u>1</u>	Alerting category	<u>/</u>		M	1 byte
2 to X+1	Informative text			<u>M</u>	X bytes

- Alerting category

Contents:

category of alerting for terminating traffic.

Coding:

according to TS 24.008 [9]. Value 'FF' means that no information on alerting category is available.

- Informative text

Contents:

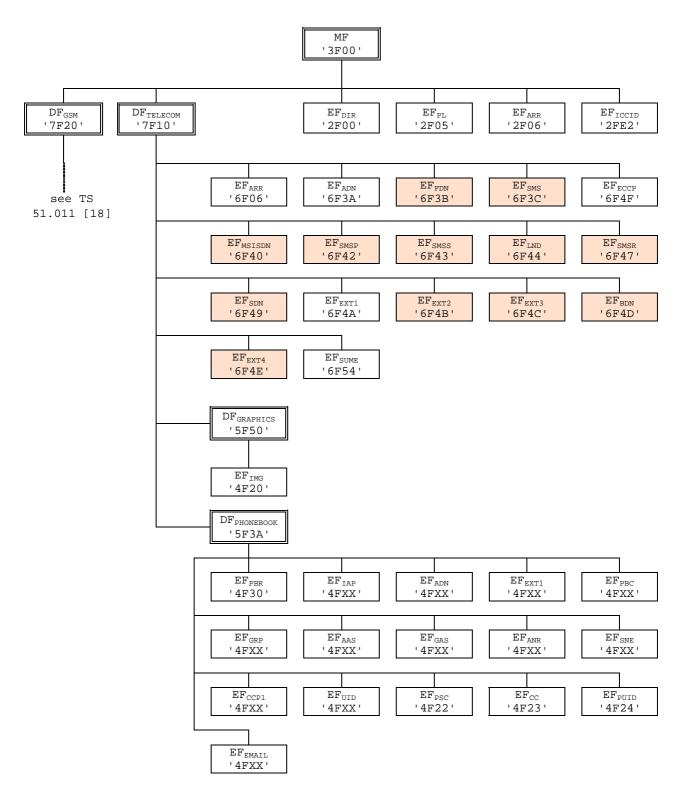
text describing the type of terminating traffic associated with the category.

Coding:

see the coding of the Alpha Identifier item of the EF_{ADN}. The maximum number of characters for this informative text is indicated in TS 22.101 [24].

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

EF_{ORPK}
' 4F41' EF_{TKCDF} ADF_{USIM} DF_{GSM-ACCESS}
'5F3B' $DF_{PHONEBOOK}$ DF_{MEXE} $\text{EF}_{\text{MExE-ST}}$ EF_{ARPK} $\mathtt{EF}_{\mathtt{TPRK}}$ '5F3A' '5F3C' '4F40' '4F43' '4F42' EF_{KCGPRS} EFinvSCAN EFK EF_{CPBCCH} '4F20' '4F52' '4F63' '4F64' EF $\overline{\mathrm{EF}}_{\mathrm{CC}}$ EF_{PBR} EF_{UID} EF_{PUID} '4F22 '4F30' '4FXX '4F23 '4F24' EF_{CCP1} EF_{IAP} EF_{EXT1} EF_{ADN} EF_{PBC} '4FXX '4FXX' '4FXX '4FXX' '4FXX' EF_{GRP} EF_{AAS} EF_{GAS} EF_{ANR} EF_{SNE} EF_{EMAIL} 4FXX' '4FXX 4FXX 4FXX '4FXX '4FXX $EF_{T,T}$ EF_{ARR} EF_{IMSI} EF_{Keys} EF_{KeysPS} $\mathrm{EF}_{\mathrm{DCK}}$ EF_{HPLMN} 6F05 '6F09' 6F2C '6F31' 6F06' '6F07 '6F08' EFCNL **EF**_{ACMmax} EF_{ACM} EF_{FDN} EF_{SMS} EF_{GID1} EFILST '6F32 '6F37' '6F38 '6F39' 6F3B '6F3C' '6F3E' EF_{PUCT} EF_{SMSP} EF_{CBMI} EF_{SPN} EF_{GID2} EF_{SMSS} EF_{MSISDN} '6F3F' '6F40' '6F41 '6F42' '6F43 '6F45' '6F46' EF_{SMSR} EF_{CBMID} EF_{SDN} EF_{EXT2} EF_{EXT3} $\mathrm{EF}_{\mathrm{BDN}}$ EF_{EXT5} '6F47 '6F48' 6F49 6F4B 6F4C 6F4D' '6F4E' EF_{CBMIR} EF_{EXT4} EFEST EF_{ACL} EF_{CMI} EF_{THRESHOLD} EF_{START-HFN} '6F50' '6F55' '6F56 '6F57' '6F58 '6F5B' '6F5C' EF_{PLMNwAcT} EF_{PSLOCI} EFACC EF_{FPLMN} EF_{OPLMNwAcT} EF_{HPLMNwAcT} EF_{RPLMNACT} '6F60' '6F61' '6F62' '6F65' '6F73' '6F78' '6F7B' EFICT EFOCT EF_{AD} EFICI $\mathrm{EF}_{\mathrm{LOCI}}$ $\mathrm{EF}_{\mathrm{OCI}}$ $\mathrm{EF}_{\mathrm{eMLPP}}$ '6F82' '6FB5' '6F7E 6F80 '6F81 6F83 6FAD' EF_{AAeM} EF_{ECC} **EF**_{Hiddenkey} EF_{NETPAR} EF_{PNN} EF_{OPL} EF_{MBDN} '6FC7' '6FB6' '6FB7' '6FC3' '6FC4' '6FC5' '6FC6' $\mathtt{EF}_{\mathtt{CFIS}}$ EF_{MMSN} $\mathrm{EF}_{\mathrm{EXT6}}$ EF_{MBI} EF_{MWIS} EF_{EXT7} $\mathtt{EF}_{\mathtt{SPDI}}$ 6FC8 6FC9' '6FCA '6FCB' '6FCC '6FCD' '6FCE' EF_{MMSICP} EF_{MMSUCP} EF_{MMSUCP}

Figure 4.1: File identifiers and directory structures of UICC

'6FCF' '6FD0' '6FD1' '6FD2' '6FXX'

Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.3.XX Network's indication of alerting

Requirement: Service n°XX "allocated and activated".

Request: The ME performs the reading procedure with EF_{NIA}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised	
'2F00'	Application directory		
'2F05'	Preferred languages	Yes	
'2F06'	Access rule reference		
'2FE2'	ICC identification	No	
'4F20'	Image data	Yes	
'4FXX'	Image Instance data Files	Yes	
'4FXX'	Unique identifier	Yes	
'4F22'	Phone book synchronisation counter	Yes	
'4F23'	Change counter	Yes	
'4F24'	Previous unique identifier	Yes	
'4F30'	Phone book reference file	Yes	
'4FXX'	Capability configuration parameters 1	Yes	
'4F75'	CPBCCH Information	No	
'4F76	Investigation Scan	Caution	
'4FXX'	Additional number alpha string	Yes	
'4FXX'	Additional number	Yes	
'4FXX'	Second name entry	Yes	
'4FXX'	Grouping information alpha string	Yes	
'4FXX'	Phone book control	Yes	
'4FXX'	E-mail addresses	Yes	
'4FXX'	Index administration phone book	Yes	
'4FXX'	Extension 1	Yes	
'4FXX'	Abbreviated dialling numbers	Yes	
'4FXX'	Grouping file	Yes	
'6F05'	Language indication	Yes	
'6F07'	IMSI	Caution (Note 1)	
'6F08'	Ciphering and integrity keys	No	
'6F09'	Ciphering and integrity keys for packet switched domain	No	
'6F20'	Ciphering key Kc	No	
'6F2C'	De-personalization Control Keys	Caution	
'6F31'	HPLMN search period	Caution	
'6F32'	Co-operative network list	Caution	
'6F37'	ACM maximum value	Yes	
'6F38'	USIM service table	Caution	
'6F39'	Accumulated call meter	Yes	
'6F3B'	Fixed dialling numbers	Yes	
'6F3C'	Short messages	Yes	
'6F4F'	Extended Capability configuration parameters	Yes	
'6F3E'	Group identifier level 1	Yes	
'6F3F'	Group identifier level 2	Yes	

File identification	Description	Change advised
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F44'	Last number dialled	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F52'	GPRS Ciphering key KcGPRS	No
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	
'6F57'	Access point name control list	
'6F58'	Comparison method information	
'6F5B'	Initialisation value for Hyperframe number	Caution
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access Technology	Caution
'6F62'	HPLMN selector with Access Technology	Caution
'6F63'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC2'	Group identity	No
'6FC3'	Key for hidden phone book entries	
'6FC4'	Network Parameters	No
<u>'6FXX'</u>	Network's indication of alerting (NIA)	<u>Caution</u>

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
	switched domain	
'6F20'	Ciphering key Kc	'FFFF07'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
'6F4B'	Extension 2	'00FFFF'
'6F4C'	Extension 3	'00FFFF'

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F52'	GPRS Ciphering key KcGPRS	'FFFF07'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'0000'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC2'	Group identity	'FFFFFFF'
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
<u>'6FXX'</u>	Network's Indication of Alerting (NIA)	<u>'FFFF'</u>

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

CHANGE REQUEST CHANGE REQUEST							
*	31.102 CR 171						
For <u>HELP</u> on us	sing this form, see bottom of this page or look at the pop-up text over the 光 symbols.						
Proposed change a	ffects: UICC apps						
Title: Ж	Corrections on files for support of GSM services using USIM / NIA						
Source: #	Т3						
Work item code: 郑	TEI						
	Release: Release: Rel-4 Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. Release: Rel-4 Use one of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)						
Reason for change:	It has been clarified at the last TSG T meeting that R5 and beyond GERAN ME's shall support the USIM. Therefore TS 31.102 must be amended to allow for files pertaining to GSM specific services under ADFusim. This applies, in particular, to the support of Network's Indication of Alerting (NIA), which had its specific file under in TS 51.011.						
Summary of change	Add NIA support to USIM Service Table (UST) Add EF _{NIA} under ADFusim to have a similar content as EF _{NIA} under DF _{GSM} specified in TS 11.11/51.011 Add the EF _{NIA} to the graphical representation of the file system. Add the procedure for Network's Indication of Alerting (NIA), Add EF change via OTA data download. Add the suggested content at personalisation in Annex D.						
Consequences if not approved:	₩ NIA service not available when using a USIM.						
Clauses affected:	# 4.2.8, 4.2.XX (new section), 4.7, 5.3.XX (new section), Annex A, Annex E						
Other specs affected:	Y N X Other core specifications Test specifications O&M Specifications						
Other comments:	# 2 other CRs are raised for the SIM files related to ASCI and SoLSA						

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifie	Identifier: '6F38' Stru		ucture: transparent		Mandatory
	SFI: '04'				
File s	ize: X bytes, X >=	1	Update	activity	: low
Access Condition	ons:				
READ		PIN			
UPDAT	E	ADM			
DEACT	IVATE	ADM			
ACTIVA	TE.	ADM			
Bytes		Description	า	M/O	Length
1	Services no1 to n	ı°8		M	1 byte
2	Services n°9 to n	ı°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services n°25 to n°32			0	1 byte
etc.			·		
X	Services n° (8X-7) to n°(8X)	_	0	1 byte

-Services		
Contents:	Service n°1:	Local Phone Book
	Service n°2:	Fixed Dialling Numbers (FDN)
	Service n°3:	Extension 2
	Service n°4:	Service Dialling Numbers (SDN)
	Service n°5:	Extension3
	Service n°6:	Barred Dialling Numbers (BDN)
	Service n°7:	Extension4
	Service n°8:	Outgoing Call Information (OCI and OCT)
	Service n°9:	Incoming Call Information (ICI and ICT)
	Service n°10:	Short Message Storage (SMS)
	Service n°11:	Short Message Status Reports (SMSR)
	Service n°12:	Short Message Service Parameters (SMSP)
	Service n°13:	Advice of Charge (AoC)
	Service n°14:	Capability Configuration Parameters (CCP)
	Service n°15: Service n°16:	Cell Broadcast Message Identifier
	Service n°17:	Cell Broadcast Message Identifier Ranges Group Identifier Level 1
	Service n°18:	Group Identifier Level 2
	Service n°19:	Service Provider Name
	Service n°20:	User controlled PLMN selector with Access Technology
	Service n°21:	MSISDN
	Service n°22:	Image (IMG)
	Service n°23:	Not used (reserved for SoLSA)
	Service n°24:	Enhanced Multi-Level Precedence and Pre-emption Service
	Service n°25:	Automatic Answer for eMLPP
	Service n°26:	RFU
	Service n°27:	GSM Access
	Service n°28:	Data download via SMS-PP
	Service n°29:	Data download via SMS-CB
	Service n°30:	Call Control by USIM
	Service n°31:	MO-SMS Control by USIM
	Service n°32:	RUN AT COMMAND command
	Service n°33:	shall be set to '1'
	Service n°34:	Enabled Services Table
	Service n°35:	APN Control List (ACL)
	Service n°36:	Depersonalisation Control Keys
	Service n°37:	Co-operative Network List
	Service n°38:	GSM security context
	Service n°39:	CPBCCH Information
	Service n°40: Service n°41:	Investigation Scan MexE
	Service n°42:	Operator controlled PLMN selector with Access Technology
	Service n°43:	HPLMN selector with Access Technology
	Service n°44:	Extension 5
	Service n°45:	PLMN Network Name
	Service n°46:	Operator PLMN List
	Service n°47:	Mailbox Dialling Numbers
	Service n°48:	Message Waiting Indication Status
	Service n°49:	Call Forwarding Indication Status
	Service n°50:	RPLMN Last used Access Technology
	Service n°51:	Service Provider Display Information
	Service n°52	Multimedia Messaging Service (MMS)
	Service n°53	Extension 8
	Service n°54	Call control on GPRS by USIM
	Service n°55	MMS User Connectivity Parameters
	Contino nºVV	Notwork's indication of clarting in the MC (NIA)

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

Network's indication of alerting in the MS (NIA)

Coding:

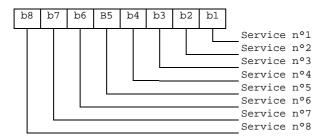
```
1 bit is used to code each service:
bit = 1: service available;
```

bit = 0: service not available.

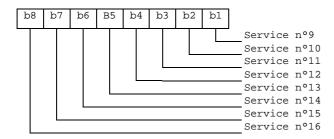
Service n°XX

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.XX EF_{NIA} (Network's Indication of Alerting)

This EF contains categories and associated text related to the Network's indication of alerting in the MS service defined in TS 22.101 [24].

<u>Identifie</u>	er: '6FXX'	Str	ucture: linear fixed		<u>Optional</u>					
Reco	d length: X+1 byt	es	Update activity: low							
Access Condit	ions:									
READ		PIN								
UPDAT	ГЕ	ADM	ADM							
INVALI	DATE	ADM								
REHAE	BILITATE	ADM								
<u>Bytes</u>		Descriptio	<u>n</u>	M/O	<u>Length</u>					
<u>1</u>	Alerting category	<u>/</u>		M	1 byte					
2 to X+1	Informative text			<u>M</u>	X bytes					

- Alerting category

Contents:

category of alerting for terminating traffic.

Coding:

according to TS 24.008 [9]. Value 'FF' means that no information on alerting category is available.

- Informative text

Contents:

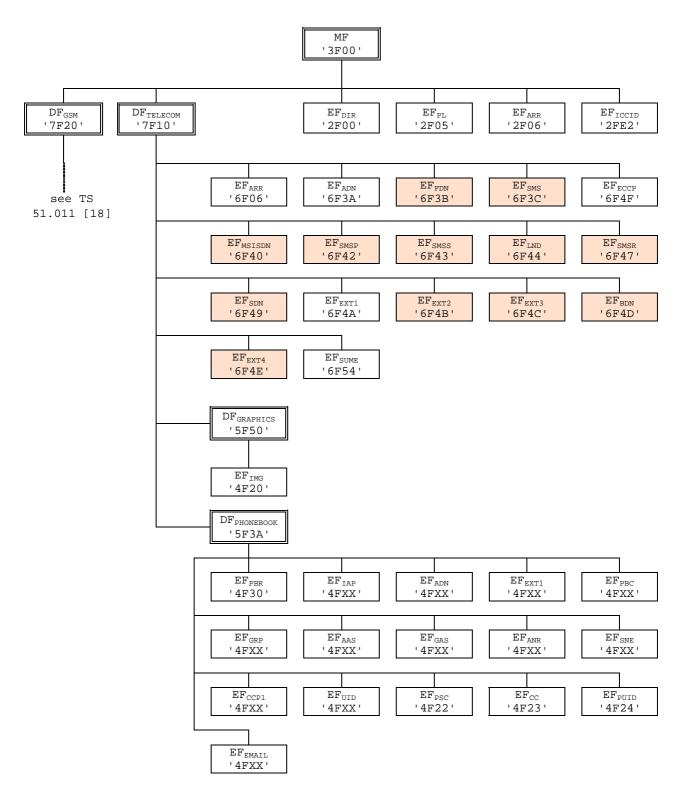
text describing the type of terminating traffic associated with the category.

Coding:

see the coding of the Alpha Identifier item of the EF_{ADN}. The maximum number of characters for this informative text is indicated in TS 22.101 [24].

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

EF_{ORPK}
' 4F41' EF_{TKCDF} ADF_{USIM} DF_{GSM-ACCESS}
'5F3B' $DF_{PHONEBOOK}$ DF_{MEXE} $\text{EF}_{\text{MExE-ST}}$ EF_{ARPK} $\mathtt{EF}_{\mathtt{TPRK}}$ '5F3A' '5F3C' '4F40' '4F43' '4F42' EF_{KCGPRS} EFinvSCAN EFK EF_{CPBCCH} '4F20' '4F52' '4F63' '4F64' EF $\overline{\mathrm{EF}}_{\mathrm{CC}}$ EF_{PBR} EF_{UID} EF_{PUID} '4F22 '4F30' '4FXX '4F23 '4F24' EF_{CCP1} EF_{IAP} EF_{EXT1} EF_{ADN} EF_{PBC} '4FXX '4FXX' '4FXX '4FXX' '4FXX' EF_{GRP} EF_{AAS} EF_{GAS} EF_{ANR} EF_{SNE} EF_{EMAIL} 4FXX' '4FXX 4FXX 4FXX '4FXX '4FXX $EF_{T,T}$ EF_{ARR} EF_{IMSI} EF_{Keys} EF_{KeysPS} $\mathrm{EF}_{\mathrm{DCK}}$ EF_{HPLMN} 6F05 '6F09' 6F2C '6F31' 6F06' '6F07 '6F08' EFCNL **EF**_{ACMmax} EF_{ACM} EF_{FDN} EF_{SMS} EF_{GID1} EFILST '6F32 '6F37' '6F38 '6F39' 6F3B '6F3C' '6F3E' EF_{PUCT} EF_{SMSP} EF_{CBMI} EF_{SPN} EF_{GID2} EF_{SMSS} EF_{MSISDN} '6F3F' '6F40' '6F41 '6F42' '6F43 '6F45' '6F46' EF_{SMSR} EF_{CBMID} EF_{SDN} EF_{EXT2} EF_{EXT3} $\mathrm{EF}_{\mathrm{BDN}}$ EF_{EXT5} '6F47 '6F48' 6F49 6F4B 6F4C 6F4D' '6F4E' EF_{CBMIR} EF_{EXT4} EFEST EF_{ACL} EF_{CMI} EF_{THRESHOLD} EF_{START-HFN} '6F50' '6F55' '6F56 '6F57' '6F58 '6F5B' '6F5C' EF_{PLMNwAcT} EF_{PSLOCI} EFACC EF_{FPLMN} EF_{OPLMNwAcT} EF_{HPLMNwAcT} EF_{RPLMNACT} '6F60' '6F61' '6F62' '6F65' '6F73' '6F78' '6F7B' EFICT EFOCT EF_{AD} EFICI $\mathrm{EF}_{\mathrm{LOCI}}$ $\mathrm{EF}_{\mathrm{OCI}}$ $\mathrm{EF}_{\mathrm{eMLPP}}$ '6F82' '6FB5' '6F7E 6F80 '6F81 6F83 6FAD' EF_{AAeM} EF_{ECC} **EF**_{Hiddenkey} EF_{NETPAR} EF_{PNN} EF_{OPL} EF_{MBDN} '6FC7' '6FB6' '6FB7' '6FC3' '6FC4' '6FC5' '6FC6' $\mathtt{EF}_{\mathtt{CFIS}}$ EF_{MMSN} $\mathrm{EF}_{\mathrm{EXT6}}$ EF_{MBI} EF_{MWIS} EF_{EXT7} $\mathtt{EF}_{\mathtt{SPDI}}$ 6FC8 6FC9' '6FCA '6FCB' '6FCC '6FCD' '6FCE' EF_{MMSICP} EF_{MMSUCP} EF_{MMSUCP}

Figure 4.1: File identifiers and directory structures of UICC

'6FCF' '6FD0' '6FD1' '6FD2' '6FXX'

Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.3.XX Network's indication of alerting

Requirement: Service n°XX "allocated and activated".

Request: The ME performs the reading procedure with EF_{NIA}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised		
'2F00'	Application directory			
'2F05'	Preferred languages	Yes		
'2F06'	Access rule reference			
'2FE2'	ICC identification	No		
'4F20'	Image data	Yes		
'4FXX'	Image Instance data Files	Yes		
'4FXX'	Unique identifier	Yes		
'4F22'	Phone book synchronisation counter	Yes		
'4F23'	Change counter	Yes		
'4F24'	Previous unique identifier	Yes		
'4F30'	Phone book reference file	Yes		
'4FXX'	Capability configuration parameters 1	Yes		
'4F75'	CPBCCH Information	No		
'4F76	Investigation Scan	Caution		
'4FXX'	Additional number alpha string	Yes		
'4FXX'	Additional number	Yes		
'4FXX'	Second name entry	Yes		
'4FXX'	Grouping information alpha string	Yes		
'4FXX'	Phone book control	Yes		
'4FXX'	E-mail addresses	Yes		
'4FXX'	Index administration phone book	Yes		
'4FXX'	Extension 1	Yes		
'4FXX'	Abbreviated dialling numbers	Yes		
'4FXX'	Grouping file	Yes		
'6F05'	Language indication	Yes		
'6F07'	IMSI	Caution (Note 1)		
'6F08'	Ciphering and integrity keys	No		
'6F09'	Ciphering and integrity keys for packet switched domain	No		
'6F20'	Ciphering key Kc	No		
'6F2C'	De-personalization Control Keys	Caution		
'6F31'	HPLMN search period	Caution		
'6F32'	Co-operative network list	Caution		
'6F37'	ACM maximum value	Yes		
'6F38'	USIM service table	Caution		
'6F39'	Accumulated call meter	Yes		
'6F3B'	Fixed dialling numbers	Yes		
'6F3C'	Short messages	Yes		
'6F4F'	Extended Capability configuration parameters	Yes		
'6F3E'	Group identifier level 1	Yes		
'6F3F'	Group identifier level 2	Yes		
	Continued	122		

File identification	Description	Change advised
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F44'	Last number dialled	Yes
'6F45'	СВМІ	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F52'	GPRS Ciphering key KcGPRS	No
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	
'6F57'	Access point name control list	
'6F58'	Comparison method information	
'6F5B'	Initialisation value for Hyperframe number	Caution
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access Technology	Caution
'6F62'	HPLMN selector with Access Technology	Caution
'6F63'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC2'	Group identity	No
'6FC3'	Key for hidden phone book entries	INU
'6FC4'	Network Parameters	No
'6FXX'	Network's indication of alerting (NIA)	Caution
<u> </u>	INCLINOTE S INCIDENTIAL OF A REPUBLIC (INIA)	Caulion

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value		
'2F00'	Application directory	Card issuer/operator dependant		
'2F05'	Preferred languages	'FFFF'		
'2F06'	Access rule reference	Card issuer/operator dependant		
'2FE2'	ICC identification	operator dependant		
'4F20'	Image data	'00FFFF'		
'4FXX'	Image instance data files	'FFFF'		
'4FXX'	Unique identifier	'0000'		
'4F22'	Phone book synchronisation counter	'0000000'		
'4F23'	Change counter	'0000'		
'4F24'	Previous unique identifier	'0000'		
'4F30'	Phone book reference file	Operator dependant		
'4FXX'	Capability configuration parameters 1	'FFFF'		
'4F63'	CPBCCH Information	'FFFF'		
'4F64'	Investigation PLMN scan	'00'		
'4FXX'	E-mail addresses	'FFFF'		
'4FXX'	Additional number alpha string	'FFFF'		
'4FXX'	Second name entry	'FFFF'		
'4FXX'	Abbreviated dialling numbers	'FFFF'		
'4FXX'	Grouping file	'0000'		
'4FXX'	Grouping information alpha string	'FFFF'		
'4FXX'	Phone book control	'0000'		
'4FXX'	Index administration phone book	'FFFF'		
'4FXX'	Additional number	'FFFF'		
'4FXX'	Extension 1	'00FFFF'		
'6F05'	Language indication	'FFFF'		
'6F07'	IMSI	Operator dependant		
'6F08'	Ciphering and integrity keys	'07FFFF'		
'6F09'	Ciphering and integrity keys for packet '07FFFF'			
01 03	switched domain	0/111		
'6F20'	Ciphering key Kc	'FFFF07'		
'6F2C'	De-personalization control keys	'FFFF'		
'6F31'	HPLMN search period	'FF'		
'6F32'	Co-operative network list	'FFFF'		
'6F37'	ACM maximum value	'000000' (see note 1)		
'6F38'	USIM service table	Operator dependant		
'6F39'	Accumulated call meter	'000000'		
'6F3B'	Fixed dialling numbers	'FFFF'		
'6F3C'	Short messages	'00FFFF'		
'6F3E'	Group identifier level 1			
'6F3F'	Group identifier level 2	Operator dependant Operator dependant		
'6F40'	MSISDN storage	'FFFF'		
'6F41'	PUCT	'FFFFF0000'		
'6F42'	SMS parameters			
'6F43'	SMS status	'FFFF'		
'6F45'	CBMI	'FFFF'		
'6F46'	Service provider name	Operator dependant		
6F46 '6F47'		'00FFFF'		
'6F48'	Short message status reports	'FFFF'		
	CBMID			
'6F49'	Service Dialling Numbers Extension 2	'FFFF'		
'6F4B' '6F4C'	Extension 2 Extension 3	'00FFFF' '00FFFF'		

File Identification	Description	Value			
'6F4D'	Barred Dialling Numbers	'FFFF'			
'6F4E'	Extension 5	'00FFFF'			
'6F4F'	Capability configuration parameters 2	'FFFF'			
'6F50'	CBMIR	'FFFF'			
'6F52'	GPRS Ciphering key KcGPRS	'FFFF07'			
'6F54'	SetUp Menu Elements	Operator dependant			
'6F55'	Extension 4	'FFFF'			
'6F56'	Enabled services table	Operator dependant			
'6F57'	Access point name control list	'00FFFF'			
'6F58'	Comparison method information	'FFFF'			
'6F5B'	Initialisation value for Hyperframe number	'0000'			
'6F5C'	Maximum value of START	Operator dependant			
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'			
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFF0000'			
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFFF0000'			
'6F65'	RPLMN last used Access Technology	'0000'			
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)			
'6F78'	Access control class	Operator dependant			
'6F7B'	Forbidden PLMNs	'FFFF'			
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)			
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'			
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'			
'6F82'	Incoming call timer	'000000'			
'6F83'	Outgoing call timer	'000000'			
'6FAD'	Administrative data	Operator dependant			
'6FB5'	EMLPP	Operator dependant			
'6FB6'	AaeM	'00'			
'6FB7'	Emergency call codes	Operator dependant			
'6FC2'	Group identity	'FFFFFFF'			
'6FC3'	Key for hidden phone book entries	'FFFF'			
'6FC4'	Network Parameters	'FFFF'			
<u>'6FXX'</u>	Network's Indication of Alerting (NIA)	<u>'FFFF'</u>			

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

3GPP TSG-T3 Meeting #29 Dallas USA 18-21 November 2003

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Consequences if not approved:	ж	NIA	service	not avai	lable wh	en usi	ng a	USIN	Л.			
Clauses affected:	ж	4.2.8	3, 4.2.>	X (new s	ection),	4.7, 5.	3.XX	(nev	w section), Ann	ex A, Anne	хЕ
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4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifie	er: '6F38'	Stru	ucture: transparent	Mandatory			
	SFI: '04'						
File s	ize: X bytes, X >=	1	Update activity: low				
Access Condition	ons:						
READ		PIN					
UPDAT	E	ADM					
DEACT	IVATE	ADM					
ACTIVATE		ADM					
Bytes		Description	า	M/O	Length		
1	Services no1 to n	ı°8		M	1 byte		
2	Services n°9 to n	ı°16		0	1 byte		
3	Services nº17 to	n°24		0	1 byte		
4	Services n°25 to	n°32		0	1 byte		
etc.			·				
X	Services n° (8X-7) to n°(8X)	_	0	1 byte		

-Services		
Contents:	Service n°1:	Local Phone Book
	Service n°2:	Fixed Dialling Numbers (FDN)
	Service n°3:	Extension 2
	Service n°4:	Service Dialling Numbers (SDN)
	Service n°5:	Extension3
	Service n°6:	Barred Dialling Numbers (BDN)
	Service n°7:	Extension4
	Service n°8:	Outgoing Call Information (OCI and OCT)
	Service n°9:	Incoming Call Information (ICI and ICT)
	Service n°10:	Short Message Storage (SMS)
	Service n°11:	Short Message Status Reports (SMSR)
	Service n°12:	Short Message Service Parameters (SMSP)
	Service n°13: Service n°14:	Advice of Charge (AoC)
	Service n°15:	Capability Configuration Parameters (CCP) Cell Broadcast Message Identifier
	Service n°16:	Cell Broadcast Message Identifier Ranges
	Service n°17:	Group Identifier Level 1
	Service n°18:	Group Identifier Level 2
	Service n°19:	Service Provider Name
	Service n°20:	User controlled PLMN selector with Access Technology
	Service n°21:	MSISDN
	Service n°22:	Image (IMG)
	Service n°23:	Not used (reserved for SoLSA)
	Service n°24:	Enhanced Multi-Level Precedence and Pre-emption Service
	Service n°25:	Automatic Answer for eMLPP
	Service n°26:	RFU
	Service n°27:	GSM Access
	Service n°28:	Data download via SMS-PP
	Service n°29:	Data download via SMS-CB
	Service n°30:	Call Control by USIM
	Service n°31:	MO-SMS Control by USIM
	Service n°32:	RUN AT COMMAND command
	Service n°33:	shall be set to '1'
	Service n°34:	Enabled Services Table
	Service n°35:	APN Control List (ACL)
	Service n°36: Service n°37:	Depersonalisation Control Keys Co-operative Network List
	Service n°38:	GSM security context
	Service n°39:	CPBCCH Information
	Service n°40:	Investigation Scan
	Service n°41:	MexE
	Service n°42:	Operator controlled PLMN selector with Access Technology
	Service n°43:	HPLMN selector with Access Technology
	Service n°44:	Extension 5
	Service n°45:	PLMN Network Name
	Service n°46:	Operator PLMN List
	Service n°47:	Mailbox Dialling Numbers
	Service n°48:	Message Waiting Indication Status
	Service n°49:	Call Forwarding Indication Status
	Service n°50:	RPLMN Last used Access Technology
	Service n°51:	Service Provider Display Information
	Service n°52	Multimedia Messaging Service (MMS)
	Service n°53	Extension 8
	Service n°54	Call control on GPRS by USIM
	Service n°55	MMS User Connectivity Parameters

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

Network's indication of alerting in the MS (NIA)

Coding:

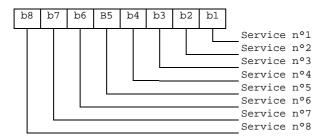
```
1 bit is used to code each service:
bit = 1: service available;
```

bit = 0: service not available.

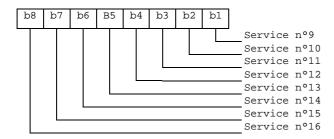
Service n°XX

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.XX EF_{NIA} (Network's Indication of Alerting)

This EF contains categories and associated text related to the Network's indication of alerting in the MS service defined in TS 22.101 [24].

<u>Identifie</u>	er: '6FXX'	<u>Str</u>	ucture: linear fixed		<u>Optional</u>
Reco	d length: X+1 byt	es	<u>Update</u>	activity	<u>r: low</u>
Access Condit	ions:				
READ		PIN			
UPDAT	ГЕ	ADM			
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
<u>Bytes</u>		Descriptio	<u>n</u>	M/O	<u>Length</u>
<u>1</u>	Alerting category	<u>/</u>		M	1 byte
2 to X+1	Informative text			<u>M</u>	X bytes

- Alerting category

Contents:

category of alerting for terminating traffic.

Coding:

according to TS 24.008 [9]. Value 'FF' means that no information on alerting category is available.

- Informative text

Contents:

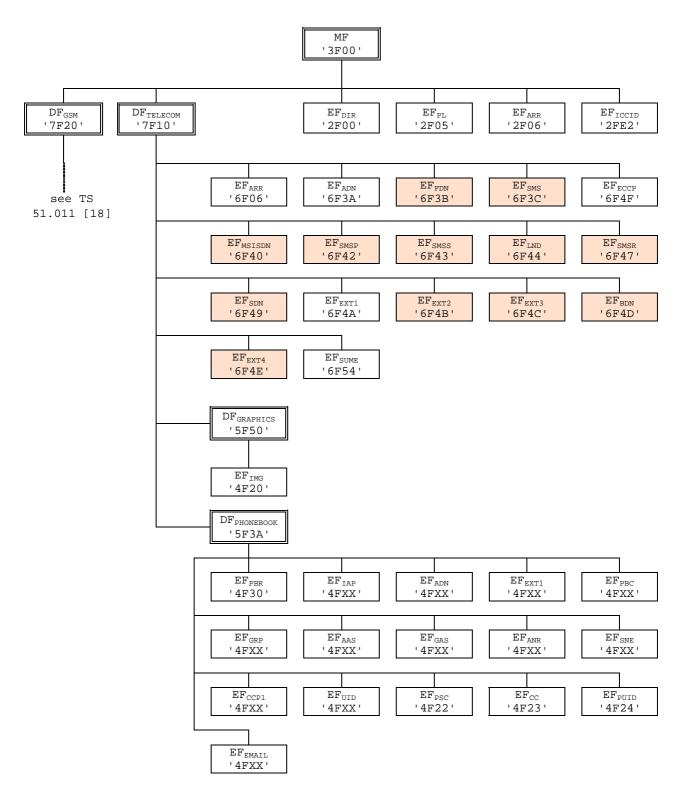
text describing the type of terminating traffic associated with the category.

Coding:

see the coding of the Alpha Identifier item of the EF_{ADN}. The maximum number of characters for this informative text is indicated in TS 22.101 [24].

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

EF_{ORPK}
' 4F41' EF_{TKCDF} ADF_{USIM} DF_{GSM-ACCESS}
'5F3B' $DF_{PHONEBOOK}$ DF_{MEXE} $\text{EF}_{\text{MExE-ST}}$ EF_{ARPK} $\mathtt{EF}_{\mathtt{TPRK}}$ '5F3A' '5F3C' '4F40' '4F43' '4F42' EF_{KCGPRS} EFinvSCAN EFK EF_{CPBCCH} '4F20' '4F52' '4F63' '4F64' EF $\overline{\mathrm{EF}}_{\mathrm{CC}}$ EF_{PBR} EF_{UID} EF_{PUID} '4F22 '4F30' '4FXX '4F23 '4F24' EF_{CCP1} EF_{IAP} EF_{EXT1} EF_{ADN} EF_{PBC} '4FXX '4FXX' '4FXX '4FXX' '4FXX' EF_{GRP} EF_{AAS} EF_{GAS} EF_{ANR} EF_{SNE} EF_{EMAIL} 4FXX' '4FXX 4FXX 4FXX '4FXX '4FXX $EF_{T,T}$ EF_{ARR} EF_{IMSI} EF_{Keys} EF_{KeysPS} $\mathrm{EF}_{\mathrm{DCK}}$ EF_{HPLMN} 6F05 '6F09' 6F2C '6F31' 6F06' '6F07 '6F08' EFCNL **EF**_{ACMmax} EF_{ACM} EF_{FDN} EF_{SMS} EF_{GID1} EFILST '6F32 '6F37' '6F38 '6F39' 6F3B '6F3C' '6F3E' EF_{PUCT} EF_{SMSP} EF_{CBMI} EF_{SPN} EF_{GID2} EF_{SMSS} EF_{MSISDN} '6F3F' '6F40' '6F41 '6F42' '6F43 '6F45' '6F46' EF_{SMSR} EF_{CBMID} EF_{SDN} EF_{EXT2} EF_{EXT3} $\mathrm{EF}_{\mathrm{BDN}}$ EF_{EXT5} '6F47 '6F48' 6F49 6F4B 6F4C 6F4D' '6F4E' EF_{CBMIR} EF_{EXT4} EFEST EF_{ACL} EF_{CMI} EF_{THRESHOLD} EF_{START-HFN} '6F50' '6F55' '6F56 '6F57' '6F58 '6F5B' '6F5C' EF_{PLMNwAcT} EF_{PSLOCI} EFACC EF_{FPLMN} EF_{OPLMNwAcT} EF_{HPLMNwAcT} EF_{RPLMNACT} '6F60' '6F61' '6F62' '6F65' '6F73' '6F78' '6F7B' EFICT EFOCT EF_{AD} EFICI $\mathrm{EF}_{\mathrm{LOCI}}$ $\mathrm{EF}_{\mathrm{OCI}}$ $\mathrm{EF}_{\mathrm{eMLPP}}$ '6F82' '6FB5' '6F7E 6F80 '6F81 6F83 6FAD' EF_{AAeM} EF_{ECC} **EF**_{Hiddenkey} EF_{NETPAR} EF_{PNN} EF_{OPL} EF_{MBDN} '6FC7' '6FB6' '6FB7' '6FC3' '6FC4' '6FC5' '6FC6' $\mathtt{EF}_{\mathtt{CFIS}}$ EF_{MMSN} $\mathrm{EF}_{\mathrm{EXT6}}$ EF_{MBI} EF_{MWIS} EF_{EXT7} $\mathtt{EF}_{\mathtt{SPDI}}$ 6FC8 6FC9' '6FCA '6FCB' '6FCC '6FCD' '6FCE' EF_{MMSICP} EF_{MMSUCP} EF_{MMSUCP}

Figure 4.1: File identifiers and directory structures of UICC

'6FCF' '6FD0' '6FD1' '6FD2' '6FXX'

Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.3.XX Network's indication of alerting

Requirement: Service n°XX "allocated and activated".

Request: The ME performs the reading procedure with EF_{NIA}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F75'	CPBCCH Information	No
'4F76	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F07'	IMSI	Caution (Note 1)
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F20'	Ciphering key Kc	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	HPLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F4F'	Extended Capability configuration parameters	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

File identification	Description	Change advised
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F44'	Last number dialled	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F52'	GPRS Ciphering key KcGPRS	No
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	
'6F57'	Access point name control list	
'6F58'	Comparison method information	
'6F5B'	Initialisation value for Hyperframe number	Caution
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access Technology	Caution
'6F62'	HPLMN selector with Access Technology	Caution
'6F63'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC2'	Group identity	No
'6FC3'	Key for hidden phone book entries	
'6FC4'	Network Parameters	No
<u>'6FXX'</u>	Network's indication of alerting (NIA)	<u>Caution</u>

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
	switched domain	
'6F20'	Ciphering key Kc	'FFFF07'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
'6F4B'	Extension 2	'00FFFF'
'6F4C'	Extension 3	'00FFFF'

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F52'	GPRS Ciphering key KcGPRS	'FFFF07'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'0000'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC2'	Group identity	'FFFFFFF'
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
<u>'6FXX'</u>	Network's Indication of Alerting (NIA)	<u>'FFFF'</u>

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

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				CHAN	IGE	RE	QU	EST	•					
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Title: Ж	Cor	rectio	ns on t	files for s	uppor	t of GS	M ser	vices	<mark>using l</mark>	JSIM /	NIA			
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Consequences if not approved:	¥	NIA	service	e not ava	ilable	when i	using	a USII	M.					
Clauses affected:	¥	4.2.8	3, 4.2.	KX (new s	section	n), 4.7,	5.3.X	X (nev	w secti	on), Ar	nnex	A, An	nex I	E
Other specs affected:	¥	Y N X X	Test	r core sp specifica Specific	tions		ж							
Other comments:	¥	2 oth	ner CR	s are rais	sed fo	r the S	IM file	s relat	ted to A	ASCI a	nd S	oLSA		

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifie	er: '6F38'	Stru	ucture: transparent		Mandatory
	SFI: '04'				
File s	ize: X bytes, X >=	1	Update	activity	: low
Access Condition	ons:				
READ		PIN			
UPDAT	E	ADM			
DEACT	IVATE	ADM			
ACTIVA	ACTIVATE				
Bytes		Description	า	M/O	Length
1	Services no1 to n	ı°8		M	1 byte
2	Services n°9 to n	ı°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services n°25 to n°32			0	1 byte
etc.			·		
X	Services n° (8X-7) to n°(8X)	_	0	1 byte

-Services		
Contents:	Service n°1:	Local Phone Book
	Service n°2:	Fixed Dialling Numbers (FDN)
	Service n°3:	Extension 2
	Service n°4:	Service Dialling Numbers (SDN)
	Service n°5:	Extension3
	Service n°6:	Barred Dialling Numbers (BDN)
	Service n°7:	Extension4
	Service n°8:	Outgoing Call Information (OCI and OCT)
	Service n°9:	Incoming Call Information (ICI and ICT)
	Service n°10:	Short Message Storage (SMS)
	Service n°11:	Short Message Status Reports (SMSR)
	Service n°12:	Short Message Service Parameters (SMSP)
	Service n°13: Service n°14:	Advice of Charge (AoC)
	Service n°15:	Capability Configuration Parameters (CCP) Cell Broadcast Message Identifier
	Service n°16:	Cell Broadcast Message Identifier Ranges
	Service n°17:	Group Identifier Level 1
	Service n°18:	Group Identifier Level 2
	Service n°19:	Service Provider Name
	Service n°20:	User controlled PLMN selector with Access Technology
	Service n°21:	MSISDN
	Service n°22:	Image (IMG)
	Service n°23:	Not used (reserved for SoLSA)
	Service n°24:	Enhanced Multi-Level Precedence and Pre-emption Service
	Service n°25:	Automatic Answer for eMLPP
	Service n°26:	RFU
	Service n°27:	GSM Access
	Service n°28:	Data download via SMS-PP
	Service n°29:	Data download via SMS-CB
	Service n°30:	Call Control by USIM
	Service n°31:	MO-SMS Control by USIM
	Service n°32:	RUN AT COMMAND command
	Service n°33:	shall be set to '1'
	Service n°34:	Enabled Services Table
	Service n°35:	APN Control List (ACL)
	Service n°36: Service n°37:	Depersonalisation Control Keys Co-operative Network List
	Service n°38:	GSM security context
	Service n°39:	CPBCCH Information
	Service n°40:	Investigation Scan
	Service n°41:	MexE
	Service n°42:	Operator controlled PLMN selector with Access Technology
	Service n°43:	HPLMN selector with Access Technology
	Service n°44:	Extension 5
	Service n°45:	PLMN Network Name
	Service n°46:	Operator PLMN List
	Service n°47:	Mailbox Dialling Numbers
	Service n°48:	Message Waiting Indication Status
	Service n°49:	Call Forwarding Indication Status
	Service n°50:	RPLMN Last used Access Technology
	Service n°51:	Service Provider Display Information
	Service n°52	Multimedia Messaging Service (MMS)
	Service n°53	Extension 8
	Service n°54	Call control on GPRS by USIM
	Service n°55	MMS User Connectivity Parameters

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

Network's indication of alerting in the MS (NIA)

Coding:

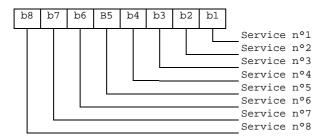
```
1 bit is used to code each service:
bit = 1: service available;
```

bit = 0: service not available.

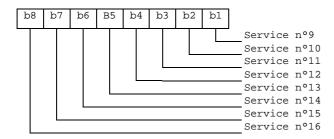
Service n°XX

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.XX EF_{NIA} (Network's Indication of Alerting)

This EF contains categories and associated text related to the Network's indication of alerting in the MS service defined in TS 22.101 [24].

<u>Identifie</u>	er: '6FXX'	Str	ucture: linear fixed		<u>Optional</u>
Reco	d length: X+1 byt	es	<u>Update</u>	activity	<u>r: low</u>
Access Condit	ions:				
READ		PIN			
UPDAT	ГЕ	ADM			
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
<u>Bytes</u>		Descriptio	<u>n</u>	M/O	<u>Length</u>
<u>1</u>	Alerting category	<u>/</u>		M	1 byte
2 to X+1	Informative text			<u>M</u>	X bytes

- Alerting category

Contents:

category of alerting for terminating traffic.

Coding:

according to TS 24.008 [9]. Value 'FF' means that no information on alerting category is available.

- Informative text

Contents:

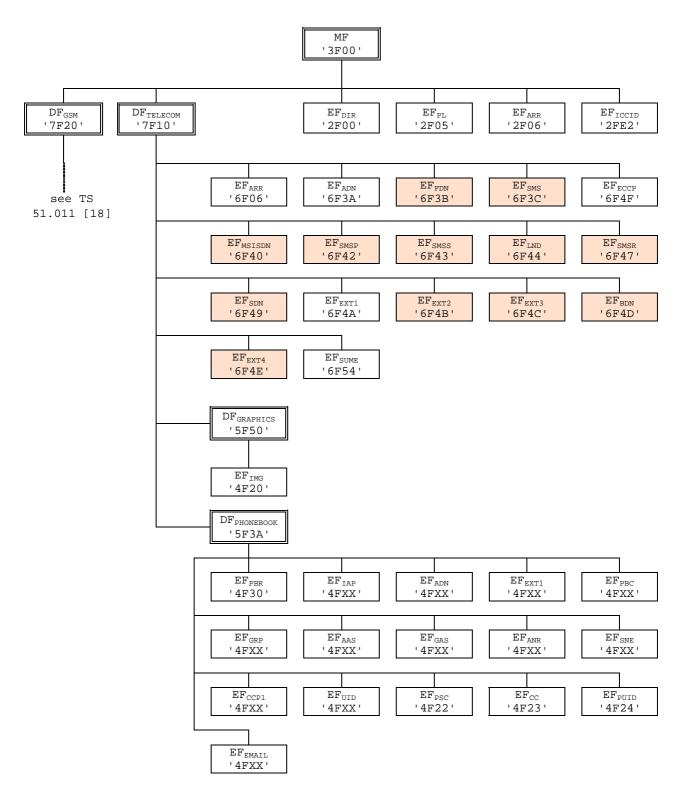
text describing the type of terminating traffic associated with the category.

Coding:

see the coding of the Alpha Identifier item of the EF_{ADN}. The maximum number of characters for this informative text is indicated in TS 22.101 [24].

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

EF_{ORPK}
' 4F41' EF_{TKCDF} ADF_{USIM} DF_{GSM-ACCESS}
'5F3B' $DF_{PHONEBOOK}$ DF_{MEXE} $\text{EF}_{\text{MExE-ST}}$ EF_{ARPK} $\mathtt{EF}_{\mathtt{TPRK}}$ '5F3A' '5F3C' '4F40' '4F43' '4F42' EF_{KCGPRS} EFinvSCAN EFK EF_{CPBCCH} '4F20' '4F52' '4F63' '4F64' EF $\overline{\mathrm{EF}}_{\mathrm{CC}}$ EF_{PBR} EF_{UID} EF_{PUID} '4F22 '4F30' '4FXX '4F23 '4F24' EF_{CCP1} EF_{IAP} EF_{EXT1} EF_{ADN} EF_{PBC} '4FXX '4FXX' '4FXX '4FXX' '4FXX' EF_{GRP} EF_{AAS} EF_{GAS} EF_{ANR} EF_{SNE} EF_{EMAIL} 4FXX' '4FXX 4FXX 4FXX '4FXX '4FXX $EF_{T,T}$ EF_{ARR} EF_{IMSI} EF_{Keys} EF_{KeysPS} $\mathrm{EF}_{\mathrm{DCK}}$ EF_{HPLMN} 6F05 '6F09' 6F2C '6F31' 6F06' '6F07 '6F08' EFCNL **EF**_{ACMmax} EF_{ACM} EF_{FDN} EF_{SMS} EF_{GID1} EFILST '6F32 '6F37' '6F38 '6F39' 6F3B '6F3C' '6F3E' EF_{PUCT} EF_{SMSP} EF_{CBMI} EF_{SPN} EF_{GID2} EF_{SMSS} EF_{MSISDN} '6F3F' '6F40' '6F41 '6F42' '6F43 '6F45' '6F46' EF_{SMSR} EF_{CBMID} EF_{SDN} EF_{EXT2} EF_{EXT3} $\mathrm{EF}_{\mathrm{BDN}}$ EF_{EXT5} '6F47 '6F48' 6F49 6F4B 6F4C 6F4D' '6F4E' EF_{CBMIR} EF_{EXT4} EFEST EF_{ACL} EF_{CMI} EF_{THRESHOLD} EF_{START-HFN} '6F50' '6F55' '6F56 '6F57' '6F58 '6F5B' '6F5C' EF_{PLMNwAcT} EF_{PSLOCI} EFACC EF_{FPLMN} EF_{OPLMNwAcT} EF_{HPLMNwAcT} EF_{RPLMNACT} '6F60' '6F61' '6F62' '6F65' '6F73' '6F78' '6F7B' EFICT EFOCT EF_{AD} EFICI $\mathrm{EF}_{\mathrm{LOCI}}$ $\mathrm{EF}_{\mathrm{OCI}}$ $\mathrm{EF}_{\mathrm{eMLPP}}$ '6F82' '6FB5' '6F7E 6F80 '6F81 6F83 6FAD' EF_{AAeM} EF_{ECC} **EF**_{Hiddenkey} EF_{NETPAR} EF_{PNN} EF_{OPL} EF_{MBDN} '6FC7' '6FB6' '6FB7' '6FC3' '6FC4' '6FC5' '6FC6' $\mathtt{EF}_{\mathtt{CFIS}}$ EF_{MMSN} $\mathrm{EF}_{\mathrm{EXT6}}$ EF_{MBI} EF_{MWIS} EF_{EXT7} $\mathtt{EF}_{\mathtt{SPDI}}$ 6FC8 6FC9' '6FCA '6FCB' '6FCC '6FCD' '6FCE' EF_{MMSICP} EF_{MMSUCP} EF_{MMSUCP}

Figure 4.1: File identifiers and directory structures of UICC

'6FCF' '6FD0' '6FD1' '6FD2' '6FXX'

Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.3.XX Network's indication of alerting

Requirement: Service n°XX "allocated and activated".

Request: The ME performs the reading procedure with EF_{NIA}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F75'	CPBCCH Information	No
'4F76	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F07'	IMSI	Caution (Note 1)
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F20'	Ciphering key Kc	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	HPLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F4F'	Extended Capability configuration parameters	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

File identification	Description	Change advised
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F44'	Last number dialled	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F52'	GPRS Ciphering key KcGPRS	No
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	
'6F57'	Access point name control list	
'6F58'	Comparison method information	
'6F5B'	Initialisation value for Hyperframe number	Caution
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access Technology	Caution
'6F62'	HPLMN selector with Access Technology	Caution
'6F63'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC2'	Group identity	No
'6FC3'	Key for hidden phone book entries	
'6FC4'	Network Parameters	No
<u>'6FXX'</u>	Network's indication of alerting (NIA)	<u>Caution</u>

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
01 03	switched domain	0/111
'6F20'	Ciphering key Kc	'FFFF07'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	
'6F3F'	Group identifier level 2	Operator dependant Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
6F46 '6F47'		'00FFFF'
'6F48'	Short message status reports	'FFFF'
	CBMID	
'6F49'	Service Dialling Numbers Extension 2	'FFFF'
'6F4B' '6F4C'	Extension 2 Extension 3	'00FFFF' '00FFFF'

File Identification	Description	Value		
'6F4D'	Barred Dialling Numbers	'FFFF'		
'6F4E'	Extension 5	'00FFFF'		
'6F4F'	Capability configuration parameters 2	'FFFF'		
'6F50'	CBMIR	'FFFF'		
'6F52'	GPRS Ciphering key KcGPRS	'FFFF07'		
'6F54'	SetUp Menu Elements	Operator dependant		
'6F55'	Extension 4	'FFFF'		
'6F56'	Enabled services table	Operator dependant		
'6F57'	Access point name control list	'00FFFF'		
'6F58'	Comparison method information	'FFFF'		
'6F5B'	Initialisation value for Hyperframe number	'0000'		
'6F5C'	Maximum value of START	Operator dependant		
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'		
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFF0000'		
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFFF0000'		
'6F65'	RPLMN last used Access Technology	'0000'		
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)		
'6F78'	Access control class	Operator dependant		
'6F7B'	Forbidden PLMNs	'FFFF'		
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)		
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'		
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'		
'6F82'	Incoming call timer	'000000'		
'6F83'	Outgoing call timer	'000000'		
'6FAD'	Administrative data	Operator dependant		
'6FB5'	EMLPP	Operator dependant		
'6FB6'	AaeM	'00'		
'6FB7'	Emergency call codes	Operator dependant		
'6FC2'	Group identity	'FFFFFFF'		
'6FC3'	Key for hidden phone book entries	'FFFF'		
'6FC4'	Network Parameters	'FFFF'		
<u>'6FXX'</u>	Network's Indication of Alerting (NIA)	<u>'FFFF'</u>		

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

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Proposed change aff	Proposed change affects: UICC apps# X ME Radio Access Network Core Network								
Title: 第(Correctio	ns on files for	support of GSM	services u	sing USIM -	SoLSA Files			
Source:	Г3								
Work item code:	ΓΕΙ				Date: ♯	20/11/2003			
De	se one of F (cor A (cor B (add C (fun D (edi etailed ex e found in # It ha shall Ther spec	dition of feature, ctional modificational modificational modification of the 3GPP TR 21.90 s been clarifie support the Unific services unlised Service	orrection in an ea), tion of feature) on) e above categorie 00.	s can Timeeting Inded to all This applie	2) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6 g that R5 and ow for files pos, in particular	ertaining to GSI ar, to the Suppo	N ME's M rt of		
Summary of change:	Add DFg Add Dele Add Add Add Add	DFsolsa under sm specified in the DF SoLSA te note reserved Proceedure for suggested OT suggested con Annex F - code orial changes: EFccp2 which	to USIM Services of ADFusim to had and files to the ing File reference of Local Services A abilities in Anotents at person ling of LSA Descriptions of LSA Description	graphical graphical ses for SoL s Area (LSA nex A. alisation in criptor files	representation SA files A) Annex D.				

Clauses affected: # 2, 4.2.8, 4.3, 4.4.x, 4.7, 5.2.x, Annex A, Annex D, Annex F

Consequences if not approved:

GSM SoLSA services not available when using a USIM.

		Υ	
Other specs	\mathfrak{R}		C Other core specifications 第
affected:			Test specifications O&M Specifications
	_		
Other comments:	\mathbb{H}	As	eparate CR is raised for the SIM files related to ASCI

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

[1]	3GPP TS 21.111: "USIM and IC card requirements".
[2]	3GPP TS 22.011: "Service accessibility".
[3]	3GPP TS 22.024: "Description of Charge Advice Information (CAI)".
[4]	3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".
[5]	3GPP TS 23.038: "Alphabets and language-specific information".
[6]	3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
[7]	3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
[8]	3GPP TS 22.067: "enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1".
[9]	3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".
[10]	3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".
[11]	3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics".
[12]	3GPP TS 31.111: "USIM Application Toolkit (USAT)".
[13]	3GPP TS 33.102: "3G Security; Security architecture".
[14]	3GPP TS 33.103: "3G Security; Integration guidelines".
[15]	3GPP TS 22.086: "Advice of Charge (AoC) supplementary services; Stage 1".
[16]	3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".
[17]	GSM 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features".
[18]	3GPP TS 51.011: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
[19]	ISO 639 (1988): "Codes for the representation of names of languages".
[20]	ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".
[21]	ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts - Part 5: Numbering system and registration procedure for application identifiers".
[22]	ITU-T Recommendation E.164: "The international public telecommunication numbering plan".
[23]	Void. 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".

[24]	3GPP TS 22.101: "Service aspects; Service principles".
[25]	3GPP TS 23.003: "Numbering, addressing and identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts - Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile radio interface Layer 3 specification; Radio Resource Control Protocol".
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".
[31]	3GPP TS 23.122: "Non-Access-Stratum functions related to Mobile Station (MS) in idle mode".
[32]	ISO/IEC 7816-6 (1996): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio transmission and reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception".
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP) Phase 1; Stage 2".
[37]	ETSI TS 102 221: "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)".
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; Stage 2".

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	er: '6F38'	Str	ucture: transparent	Mandatory	
	SFI: '04'				
File s	size: X bytes, X >=	1	Update a	activity	: low
Access Condit READ UPDA DEAC ACTIV	TE TIVATE	PIN ADM ADM ADM			
Bytes		Descriptio	n	M/O	Length
1	Services n°1 to	n°8		М	1 byte
2	Services n°9 to	n°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services n°25 to	n°32		0	1 byte
etc.					
X	Services n°(8X-	7) to n°(8X)		0	1 byte

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Service n°12: Short Message Service Parameters (SMSP) Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology Service n°21: **MSISDN** Service n°22: Image (IMG) erved for Support of Localised Service Areas (SoLSA) Service n°23: Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Data download via SMS-PP Service n°28: Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: RUN AT COMMAND command Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: **GSM** security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

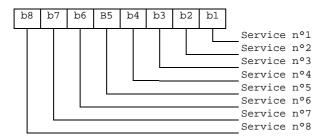
Coding:

1 bit is used to code each service: bit = 1: service available; bit = 0: service not available.

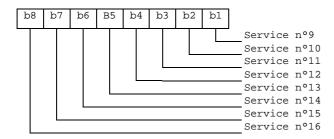
Service n°55

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.3 DFs at the USIM ADF (Application DF) Level

DFs may be present as child directories of USIM ADF. The following DFs are defined:

- DF_{PHONEBOOK} '5F3A'.

- $DF_{GSM-ACCESS}$ ——'5F3B'.

- DF_{MExE} '5F3C'.

- DF_{SoLSA} '5F70'.

(DF for application specific phonebook. This DF has the same structure as the $DF_{PHONEBOOK}$ under $DF_{TELECOM}$).

'5F70' is reserved for DF_{SoLSA}.

4.4 Contents of DFs at the USIM ADF (Application DF) level

4.4.x Contents of files at the DF SoLSA level

Void This only applies if the Support of Localised Service Areas is supported, as indicated by Service Number 23 in the USIM Service Table and specified in 3GPP TS 23.073 [23].

The EFs contain information about the users subscribed local service areas.

4.4.x.1 EF_{SAI} (SoLSA Access Indicator)

This EF contains the 'LSA only access indicator'. This EF shall always be allocated if DF_{SoLSA} is present.

If the indicator is set, the network will prevent terminated and/or originated calls when the MS is camped in cells that are not included in the list of allowed LSAs in EF_{SLL}. Emergency calls are, however, always allowed.

The EF also contains a text string which may be displayed when the MS is out of the served area(s).

<u>Identifi</u>	er: '4F30'	<u>Str</u>	ucture: transparent		<u>Optional</u>		
<u>File</u>	e size: X + 1 bytes		Update activity: low				
Access Condit	ions:						
READ		PIN					
UPDAT	ΓΕ	ADM					
INVALI	DATE	ADM					
REHAE	BILITATE	ADM					
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>		
<u>1</u>	LSA only access	indicator		M	1 byte		
2 to X+1	LSA only access	indication te	<u>ext</u>	M	X bytes		

- LSA only access indicator

Contents: indicates whether the MS is restricted to use LSA cells only or not.

Coding:

]	<u>8c</u>	<u>b7</u>	b6	5	<u>b5</u>	b4	1	<u>b3</u>	b2	-	<u>b1</u>							
												•	b1=0:	LSA	only	access	not	activated
													b1=1:	LSA	only	access	act:	ivated
													RFU					

- LSA only access indication text

Contents: text to be displayed by the ME when it's out of LSA area.

Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 coded options as defined in annex B.

4.4.x.2 EF_{SLL} (SoLSA LSA List)

This EF contains information describing the LSAs that the user is subscribed to. This EF shall always be allocated if DF_{SoLSA} is present.

Each LSA is described by one record that is linked to a LSA Descriptor file. Each record contains information of the PLMN, priority of the LSA, information about the subscription and may also contain a text string and/or an icon that identifies the LSA to the user. The text string can be edited by the user.

<u>Identifi</u>	er: '4F31 <u>'</u>	Sti	ucture: linear fixed	<u>Optional</u>						
Record	d length: X + 10 by	<u>Update</u>	activity	<u>r: low</u>						
Access Condit	Access Conditions:									
READ	<u>10110.</u>	PIN								
UPDAT	ГЕ	PIN								
INVALI	DATE	ADM								
REHAE	BILITATE	ADM								
	T			ı						
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>					
<u>1 to X</u>	LSA name			<u>O</u>	X bytes					
<u>X+1</u>	Configuration pa	rameters		M	1 byte					
<u>X+2</u>	<u>RFU</u>			M	1 byte					
<u>X+3</u>	Icon Identifier			M	1 byte					
<u>X+4</u>	<u>Priority</u>			M	1 byte					
X+5 to X+7	PLMN code			M	3 bytes					
X+8 to X+9	LSA Descriptor	File Identifier		M	2 byte					
<u>X+10</u>	LSA Descriptor	Record Ident	<u>ifier</u>	<u>M</u>	1 byte					

LSA name

Contents: LSA name string to be displayed when the ME is camped in the corresponding area, dependant on the contents of the LSA indication for idle mode field.

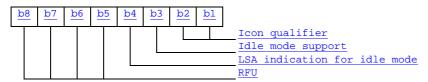
Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 code options defined in the annex of TS 31.101 [11].

- Configuration parameters

Contents: Icon qualifier, control of idle mode support and control of LSA indication for idle mode.

Coding:



Icon qualifier:

Contents: The icon qualifier indicates to the ME how the icon is to be used.

b2, b1: 00: icon is not to be used and may not be present
01: icon is self-explanatory, i.e. if displayed, it replaces the LSA name

10: icon is not self-explanatory, i.e. if displayed, it shall be displayed together with the LSA name 11: RFU

Idle mode support:

Contents: The idle mode support is used to indicate whether the ME shall favour camping on the LSA cells in idle mode.

<u>b3</u> = 0:Idle mode support disabled <u>b3</u> = 1:Idle mode support enabled

LSA indication for idle mode:

Contents: The LSA indication for idle mode is used to indicate whether or not the ME shall display the LSA name when the ME is camped on a cell within the LSA.

 $\underline{b4} = 0$:LSA indication for idle mode disabled $\underline{b4} = 1$:LSA indication for idle mode enabled

Bits b5 to b8 are RFU (see subclause 9.3).

- Icon Identifier

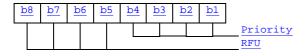
Contents: The icon identifier addresses a record in EF_{IMG}.

Coding: binary.

- Priority

Contents: Priority of the LSA which gives the ME the preference of this LSA relative to the other LSAs.

Coding:



'0' is lowest priority, 'F' is highest.

- PLMN code

Contents: MCC + MNC for the LSA.

Coding: according to GSM 24.008 [9] and EF_{LOCI}.

- LSA Descriptor File Identifier:

Contents: these bytes identify the EF which contains the LSA Descriptors forming the LSA.

<u>Coding:</u> byte X+8: high byte of the LSA Descriptor file; byte X+9: low byte of the LSA Descriptor file.

- LSA Descriptor Record Identifier:

Contents: this byte identifies the number of the first record in the LSA Descriptor file forming the LSA.

Coding: binary.

4.4.x.3 LSA Descriptor files

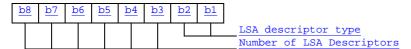
Residing under DF_{SoLSA} , there may be several LSA Descriptor files. These EFs contains one or more records again containing LSA Descriptors forming the LSAs. LSAs can be described in four different ways. As a list of LSA IDs, as a list of LAC + CIs, as a list of CIs or as a list of LACs. As the basic elements (LSA ID, LAC + CI, CI and LAC) of the four types of lists are of different length, they can not be mixed within one record. Different records may contain different kinds of lists within the EFs. Examples of codings of LSA Descriptor files can be found in annex F.

<u>Identifie</u>	er: '4FXX'	Sti	ructure: linear fixed	<u>Optional</u>						
Record	d length: n*X+2 by	<u>rtes</u>	<u>Update</u>	activity	<u>/: low</u>					
Access Condit	Access Conditions:									
READ		PIN								
UPDAT	ГЕ	ADM								
INVALI		ADM								
REHAE	BILITATE	ADM								
	T									
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>					
<u>1</u>	LSA descriptor t	ype and num	<u>iber</u>	M	1 byte					
2 to X+1	1 st LSA Descript	or		M	X bytes					
X+2 to 2X+1	2 nd LSA Descrip	<u>tor</u>		M	X bytes					
(n-1)*X+2 to	nth LSA Descript	or		M	X bytes					
<u>n*X+1</u>										
<u>n*X+2</u>	Record Identifier	<u>r</u>		<u>M</u>	1 byte					

- LSA descriptor type and number:

Contents: The LSA descriptor type gives the format of the LSA descriptor and the number of valid LSA Descriptors within the record.

Coding:



LSA descriptor type:

Contents: Gives the format of the LSA Descriptors.

Number of LSA Descriptors:

Contents: Gives the number of valid LSA Descriptors in the record.

Coding: binary, with b8 as MSB and b3 as LSB leaving room for 64 LSA Descriptors per record.

LSA Descriptor

Contents: Dependant of the coding indicated in the LSA descriptor type:

- in case of LSA ID the field length 'X' is 3 bytes;
- in case of LAC + CI the field length 'X' is 4 bytes;
- in case of CI the field length 'X' is 2 bytes;
- in case of LAC the field length 'X' is 2 bytes.

Coding: according to TS 24.008 [9].

- Record Identifier:

Contents: This byte identifies the number of the next record containing the LSA Descriptors forming the LSA.

Coding: record number of next record. 'FF' identifies the end of the chain.

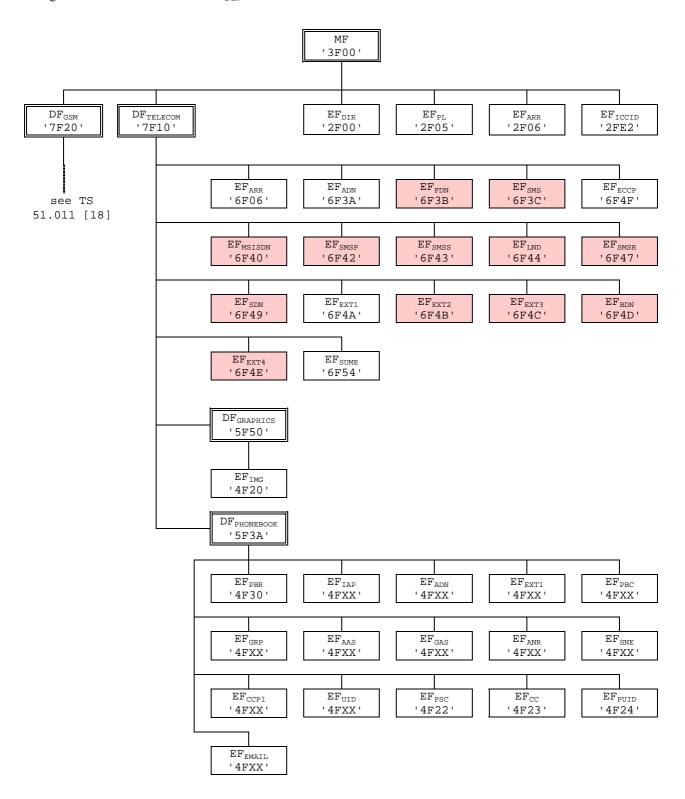
This file utilises the concept of chaining as for EF_{EXT1}.

The identifier '4FXX' shall be different from one LSA Descriptor file to the other and different from the identifiers of EF_{SAL} and EF_{SLL} . For the range of 'XX', see subclause x.x.

[...]

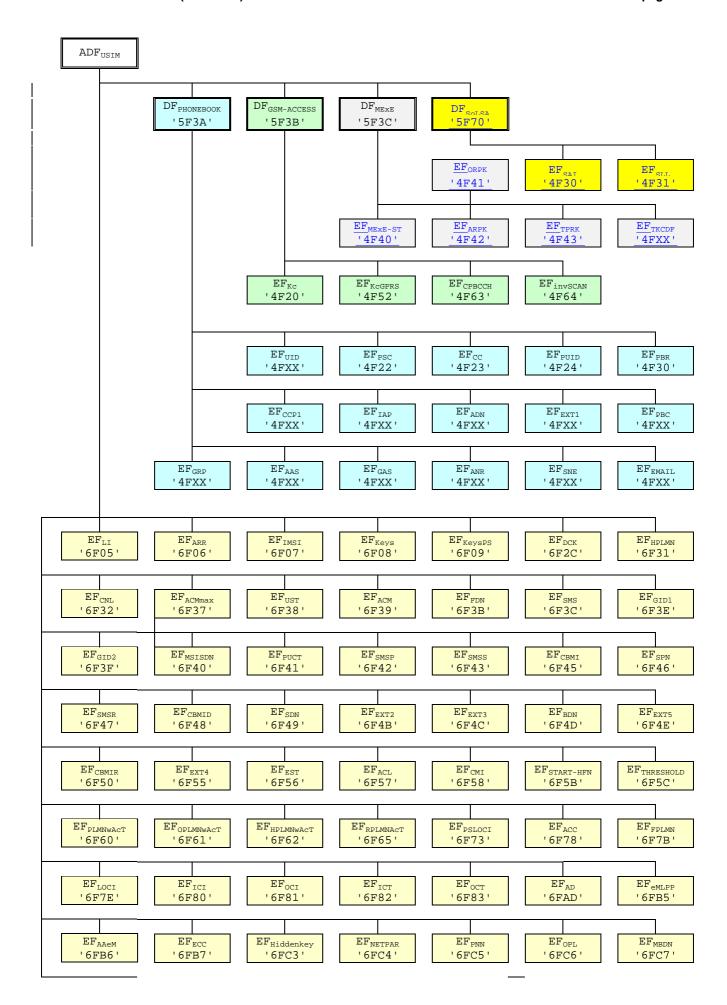
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



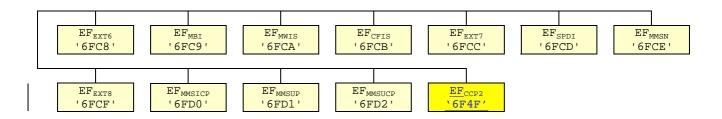


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.2.x LSA information

- Requirement: Service n°23 "available".
- $\underline{\quad \text{Request:}\quad \text{The ME performs the reading procedure with } EF_{\underline{SLL}}, \underline{EF_{\underline{SLL}}} \text{ and its associated LSA Descriptor files.}}$
- Update: The ME performs the updating procedure with EF_{SLL} .

[...]

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

	Change advised
	Caution
	Yes
	Caution
	No
	Yes
	No
	Yes
	Caution
	Caution
	Caution
	No
	No
	Caution
	Yes
d DF _{TELECOM})	Caution
122200,	Caution (Note 1)
	No
witched domain	
	Caution
	Caution
	Caution
	Yes
	Caution
	Yes

CR page 17

'6F41' '6F42' '6F43' '6F45' '6F46' '6F47'	MSISDN storage PUCT SMS parameters SMS status	Yes Yes Yes
'6F42' '6F43' '6F45' '6F46' '6F47'	SMS parameters	
'6F43' '6F45' '6F46' '6F47'		Yes
'6F45' '6F46' '6F47'	CMC status	
'6F46' '6F47'	Sivis status	Yes
'6F47'	СВМІ	Caution
'6F47'	Service provider name	Yes
	Short message status reports	Yes
'6F48'	CBMID	Yes
	Service Dialling Numbers	Yes
	Extension 2	Yes
	Extension 3	Yes
	Barred dialling numbers	Yes
	Extension 5	Yes
	Capability configuration parameters 2	Yes
	CBMIR	Yes
	-	
	SetUp Menu Elements	Yes
	Extension 4	Yes
	Enabled services table	Caution
	Access point name control list	Yes
	Comparison method information	Yes
	Initialisation value for Hyperframe number	Caution
	Maximum value of START	Yes
	User controlled PLMN selector with Access Technology	No
	Operator controlled PLMN selector with Access	Caution
	Technology	
	HPLMN selector with Access Technology	Caution
	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
	Outgoing call information	Yes
	Incoming call timer	Yes
	Outgoing call timer	Yes
	Administrative data	Caution
	Enhanced Multi Level Pre-emption and Priority	Yes
	Automatic Answer for eMLPP Service	Yes
	Emergency Call Codes	Caution
	Key for hidden phone book entries	No
	Network Parameters	No
	PLMN Network Name	Yes
	Operator Network List	Yes
	Mailbox Dialling Numbers	Yes
	Extension 6	Yes
	Mailbox Identifier	Caution
	Message Waiting Indication Status	Caution
	Call Forwarding Indication Status	Caution
	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
	MMS Notification	Yes
	Extension 8	Yes
'6FCF'	MMS Issuer Connectivity Parameters	Yes
'6FD0'	MMS User Preferences	Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value				
'2F00'	Application directory	Card issuer/operator dependant				
'2F05'	Preferred languages	'FFFF'				
'2F06'	Access rule reference	Card issuer/operator dependant				
'2FE2'	ICC identification	operator dependant				
'4F20'	Image data	'00FFFF'				
'4F20'	GSM Ciphering key Kc	'FFFF07'				
'4FXX'	Image instance data files	'FFFF'				
'4FXX'	Unique identifier	'0000'				
'4F22'	Phone book synchronisation counter	'0000000'				
'4F23'	Change counter	'0000'				
'4F24'	Previous unique identifier	'0000'				
'4F30'	Phone book reference file	Operator dependant				
'4F30'	SoLSA Access Indicator	'00FFFF'				
'4F31'	SoLSA LSA List	'FFFF'				
'4FXX'	LSA Descriptor files	<u>'FFFF'</u>				
'4FXX'	Capability configuration parameters 1	'FFFF'				
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'				
'4F63'	CPBCCH Information	'FFFF'				
'4F64'	Investigation PLMN scan	'00'				
'4FXX'	E-mail addresses	'FFFF'				
'4FXX'	Additional number alpha string	'FFFF'				
'4FXX'	· •	'FFFF'				
	Second name entry	'FFFF'				
'4FXX'	Abbreviated dialling numbers					
'4FXX'	Grouping file	'0000'				
'4FXX'	Grouping information alpha string	'FFFF'				
'4FXX'	Phone book control	'0000'				
'4FXX'	Index administration phone book	'FFFF'				
'4FXX'	Additional number	'FFFF'				
'4FXX'	Extension 1	'00FFFF'				
'6F05'	Language indication	'FFFF'				
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant				
	DF _{TELECOM})					
'6F07'	IMSI	Operator dependant				
'6F08'	Ciphering and integrity keys	'07FFFF'				
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'				
'6F2C'	De-personalization control keys	'FFFF'				
'6F31'	HPLMN search period	'FF'				
'6F32'	Co-operative network list	'FFFF'				
'6F37'	ACM maximum value	'000000' (see note 1)				
'6F38'	USIM service table	Operator dependant				
'6F39'	Accumulated call meter	'000000'				
'6F3B'	Fixed dialling numbers	'FFFF'				
'6F3C'	Short messages	'00FFFF'				
'6F3E'	Group identifier level 1	Operator dependant				
'6F3F'	Group identifier level 2	Operator dependant				
'6F40'	MSISDN storage	'FFFF'				
'6F41'	PUCT	'FFFFF0000'				
'6F42'	SMS parameters	'FFFF'				
'6F43'	SMS status	'FFFF'				
'6F45'	CBMI	'FFFF'				
'6F46'	Service provider name	Operator dependant				
'6F47'	Short message status reports	'00FFFF'				
'6F48'	CBMID	'FFFF'				
'6F49'	Service Dialling Numbers	'FFFF'				
6F4B'	Extension 2	'00FFFF'				
	Extension 3	'00FFFF'				
'6F4C'						

CR page 20

File Identification	Description	Value				
'6F4D'	Barred Dialling Numbers	'FFFF'				
'6F4E'	Extension 5	'00FFFF'				
'6F4F'	Capability configuration parameters 2	'FFFF'				
'6F50'	CBMIR	'FFFF'				
'6F54'	SetUp Menu Elements	Operator dependant				
'6F55'	Extension 4	'FFFF'				
'6F56'	Enabled services table	Operator dependant				
'6F57'	Access point name control list	'00FFFF'				
'6F58'	Comparison method information	'FFFF'				
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'				
'6F5C'	Maximum value of START	Operator dependant				
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'				
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'				
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'				
'6F65'	RPLMN last used Access Technology	'0000'				
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01'				
		(see note 2)				
'6F78'	Access control class	Operator dependant				
'6F7B'	Forbidden PLMNs	'FFFF'				
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)				
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'				
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'				
'6F82'	Incoming call timer	'000000'				
'6F83'	Outgoing call timer	'000000'				
'6FAD'	Administrative data	Operator dependant				
'6FB5'	EMLPP	Operator dependant				
'6FB6'	AaeM	'00'				
'6FB7'	Emergency call codes	Operator dependant				
'6FC3'	Key for hidden phone book entries	'FFFF'				
'6FC4'	Network Parameters	'FFFF'				
'6FC5'	PLMN Network Name	Operator dependant				
'6FC6'	Operator Network List	Operator dependant				
'6FC7'	Mailbox Dialling Numbers	Operator dependant				
'6FC8'	Extension 6	'00 FFFF'				
'6FC9'	Mailbox Identifier	Operator dependant				
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'				
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'				
'6FCC'	Extension 7	'00 FFFF'				
'6FCD'	Service Provider Display Information					
'6FCE'	MMS Notification	'00 00 00 FFFF'				
'6FCF'	Extension 8	'FFFF'				
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'				
'6FD1'	MMS User Preferences	'FFFF'				
'6FD2'	MMS User Connectivity Parameters	'FFFF'				

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Annex F (informative): Examples of coding of LSA Descriptor files for SoLSA

Void.

The length of all the records is determined by the LSA descriptor containing the largest number of bytes. Combinations containing different numbers of LSA IDs, LAC+ CI and CI or LAC can therefore be done. Various examples are show. Due to the OTA management of the records it is recommended that the record length is maximum 100 bytes in order to leave room for command descriptor and signature information in the SMS.

This first example contains two LSAs, one described by two LSA IDs and another described by three Cell IDs, giving a record length of 8 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 2 (1 byte)	LSA ID (3 bytes)	LSA ID (3 bytes)	Identifier (1 byte)	
2 nd record:	LSA descriptor type = Cl and number = 3 (1 byte)	CI (2 bytes)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

The second example contains two LSAs, one described by one LSA ID and one described by two Cell Ids, giving a record length of 6 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 1 (1 byte)	LSA ID (3 bytes)	<u>'FF'</u>	Identifier (1 byte)		
2 nd record:	LSA descriptor type = Cl and number = 2 (1 byte)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)		

[...]

3GPP TSG-T3 Meeting #29 Dallas USA 18-21 November 2003

Dallas USA 18-21 November 2003 CR-Form-v7													
	CHANGE REQUEST												
ж <mark>. 3</mark>	1.102	CR	175	≋rev	H	Current vers	ion: <mark>4.10.0</mark> [#]						
For <u>HELP</u> on usin	g this fo	rm, see	e bottom of	this page or	look at th	e pop-up text	over the 光 symbols.						
Proposed change affe	ects:	UICC a	apps₩ <mark>X</mark>	ME	Radio A	ccess Networ	k Core Network						
Title: 第 C	orrectio	ns on f	iles for sup	port of GSM	services	using USIM –	SoLSA Files						
Source: # T	3												
Work item code: Ж Т	El					Date: ₩	20/11/2003						
						Release: #	Rel-4						
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Summary of change:	Add DFg Add Dele Add Add Add Add	DFsols sm spe the DF ete note Procee sugges sugges Annex orial ch EFccp	sa under A ecified in Tage F SoLSA are e reserving edure for L sted OTA a sted conte F - coding anges: 2 which wa	S 51.011	graphica es for So s Area (LS nex A. alisation i	lar content as I representation LSA files SA) n Annex D.	DF SoLSA under on of the file system.						
Consequences if not approved:	₩ GSN	/I SoLS	A services	not available	e when us	ing a USIM.							

Clauses affected: # 2, 4.2.8, 4.3, 4.4.x, 4.7, 5.2.x, Annex A, Annex D, Annex F

		Υ	N		
Other specs	\mathfrak{R}		X	Other core specifications #	
affected:			X	Test specifications O&M Specifications	
	_				
Other comments:	\mathfrak{H}	Α	se	parate CR is raised for the SIM file	es related to ASCI

2 References

[23]

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 nonspecific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.
- [1] 3GPP TS 21.111: "USIM and IC card requirements". [2] 3GPP TS 22.011: "Service accessibility". [3] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)". [4] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)". 3GPP TS 23.038: "Alphabets and language-specific information". [5] [6] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)". 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2". [7] [8] 3GPP TS 22.067: "enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1". [9] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3". [10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface". 3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics". [11] [12] 3GPP TS 31.111: "USIM Application Toolkit (USAT)". [13] 3GPP TS 33.102: "3G Security; Security architecture". [14] 3GPP TS 33.103: "3G Security; Integration guidelines". 3GPP TS 22.086: "Advice of Charge (AoC) supplementary services; Stage 1". [15] [16] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)". [17] GSM 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features". 3GPP TS 51.011: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM -[18] ME) interface". [19] ISO 639 (1988): "Codes for the representation of names of languages". [20] ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange". ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts -[21] Part 5: Numbering system and registration procedure for application identifiers". [22] ITU-T Recommendation E.164: "The international public telecommunication numbering plan". Void. 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".

[24]	3GPP TS 22.101: "Service aspects; Service principles".
[25]	3GPP TS 23.003: "Numbering, addressing and identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts - Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile radio interface Layer 3 specification; Radio Resource Control Protocol".
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".
[31]	3GPP TS 23.122: "Non-Access-Stratum functions related to Mobile Station (MS) in idle mode".
[32]	ISO/IEC 7816-6 (1996): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio transmission and reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception".
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP) Phase 1; Stage 2".
[37]	ETSI TS 102 221: "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)".
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; Stage 2".

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	er: '6F38'	Str	Structure: transparent Ma							
	SFI: '04'									
File s	size: X bytes, X >=	1	Update	activity	: low					
Access Condit READ UPDA DEAC ACTIV	TE TIVATE	PIN ADM ADM ADM								
Bytes		Descriptio	n	M/O	Length					
1	Services n°1 to	n°8		M	1 byte					
2	Services n°9 to	n°16		0	1 byte					
3	Services nº17 to	n°24		0	1 byte					
4	Services nº25 to	n°32		0	1 byte					
etc.										
X	Services n°(8X-	7) to n°(8X)		0	1 byte					

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Service n°12: Short Message Service Parameters (SMSP) Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology Service n°21: **MSISDN** Service n°22: Image (IMG) erved for Support of Localised Service Areas (SoLSA) Service n°23: Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Data download via SMS-PP Service n°28: Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: RUN AT COMMAND command Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: **GSM** security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

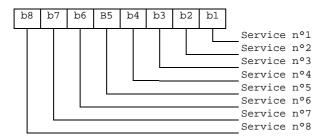
Coding:

1 bit is used to code each service: bit = 1: service available; bit = 0: service not available.

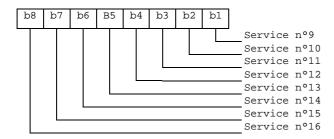
Service n°55

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.3 DFs at the USIM ADF (Application DF) Level

DFs may be present as child directories of USIM ADF. The following DFs are defined:

- DF_{PHONEBOOK} '5F3A'.

- $DF_{GSM-ACCESS}$ ——'5F3B'.

- DF_{MExE} '5F3C'.

- DF_{SoLSA} '5F70'.

(DF for application specific phonebook. This DF has the same structure as the $DF_{PHONEBOOK}$ under $DF_{TELECOM}$).

'5F70' is reserved for DF_{SoLSA}.

4.4 Contents of DFs at the USIM ADF (Application DF) level

4.4.x Contents of files at the DF SoLSA level

Void This only applies if the Support of Localised Service Areas is supported, as indicated by Service Number 23 in the USIM Service Table and specified in 3GPP TS 23.073 [23].

The EFs contain information about the users subscribed local service areas.

4.4.x.1 EF_{SAI} (SoLSA Access Indicator)

This EF contains the 'LSA only access indicator'. This EF shall always be allocated if DF_{SoLSA} is present.

If the indicator is set, the network will prevent terminated and/or originated calls when the MS is camped in cells that are not included in the list of allowed LSAs in EF_{SLL}. Emergency calls are, however, always allowed.

The EF also contains a text string which may be displayed when the MS is out of the served area(s).

<u>Identifi</u>	er: '4F30'	<u>Str</u>	ucture: transparent		<u>Optional</u>						
<u>File</u>	e size: X + 1 bytes		<u>Update</u>	activity	<u>r: low</u>						
Access Conditions:											
READ		PIN									
UPDAT	ΓΕ	ADM									
INVALI	DATE	ADM_									
REHAE	BILITATE	ADM									
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>						
<u>1</u>	LSA only access	indicator		M	1 byte						
2 to X+1	LSA only access	indication te	<u>ext</u>	M	X bytes						

- LSA only access indicator

Contents: indicates whether the MS is restricted to use LSA cells only or not.

Coding:

]	<u>8c</u>	<u>b7</u>	<u>b6</u>]	<u>b5</u>	<u>b4</u>	<u>b3</u>	<u>b</u> :	2	<u>b1</u>						
											b1=0:	LSA	only	access	not	activated
											b1=1:	LSA	only	access	act:	ivated
											RFU					

- LSA only access indication text

Contents: text to be displayed by the ME when it's out of LSA area.

Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 coded options as defined in annex B.

4.4.x.2 EF_{SLL} (SoLSA LSA List)

This EF contains information describing the LSAs that the user is subscribed to. This EF shall always be allocated if DF_{SoLSA} is present.

Each LSA is described by one record that is linked to a LSA Descriptor file. Each record contains information of the PLMN, priority of the LSA, information about the subscription and may also contain a text string and/or an icon that identifies the LSA to the user. The text string can be edited by the user.

<u>Identifi</u>	er: '4F31 <u>'</u>	Sti	ructure: linear fixed		<u>Optional</u>
Record length: X + 10 bytes Update			activity	<u>r: low</u>	
Access Condit	ions:				
READ	<u>10110.</u>	PIN			
UPDAT	ГЕ	PIN			
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
<u>Bytes</u>	<u>Description</u>			M/O	<u>Length</u>
<u>1 to X</u>	LSA name			<u>O</u>	X bytes
<u>X+1</u>	Configuration parameters			M	1 byte
<u>X+2</u>	<u>RFU</u>				1 byte
<u>X+3</u>	Icon Identifier				1 byte
<u>X+4</u>	Priority				1 byte
X+5 to X+7	PLMN code			M	3 bytes
X+8 to X+9	LSA Descriptor File Identifier			M	2 byte
<u>X+10</u>	LSA Descriptor	Record Ident	<u>ifier</u>	<u>M</u>	1 byte

LSA name

Contents: LSA name string to be displayed when the ME is camped in the corresponding area, dependant on the contents of the LSA indication for idle mode field.

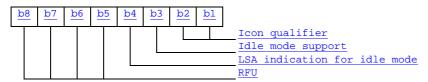
Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 code options defined in the annex of TS 31.101 [11].

- Configuration parameters

Contents: Icon qualifier, control of idle mode support and control of LSA indication for idle mode.

Coding:



Icon qualifier:

Contents: The icon qualifier indicates to the ME how the icon is to be used.

b2, b1: 00: icon is not to be used and may not be present
01: icon is self-explanatory, i.e. if displayed, it replaces the LSA name

10: icon is not self-explanatory, i.e. if displayed, it shall be displayed together with the LSA name 11: RFU

Idle mode support:

Contents: The idle mode support is used to indicate whether the ME shall favour camping on the LSA cells in idle mode.

<u>b3</u> = 0:Idle mode support disabled <u>b3</u> = 1:Idle mode support enabled

LSA indication for idle mode:

Contents: The LSA indication for idle mode is used to indicate whether or not the ME shall display the LSA name when the ME is camped on a cell within the LSA.

 $\underline{b4} = 0$:LSA indication for idle mode disabled $\underline{b4} = 1$:LSA indication for idle mode enabled

Bits b5 to b8 are RFU (see subclause 9.3).

- Icon Identifier

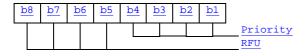
Contents: The icon identifier addresses a record in EF_{IMG}.

Coding: binary.

- Priority

Contents: Priority of the LSA which gives the ME the preference of this LSA relative to the other LSAs.

Coding:



'0' is lowest priority, 'F' is highest.

- PLMN code

Contents: MCC + MNC for the LSA.

Coding: according to GSM 24.008 [9] and EF_{LOCI}.

- LSA Descriptor File Identifier:

Contents: these bytes identify the EF which contains the LSA Descriptors forming the LSA.

<u>Coding:</u> byte X+8: high byte of the LSA Descriptor file; byte X+9: low byte of the LSA Descriptor file.

- LSA Descriptor Record Identifier:

Contents: this byte identifies the number of the first record in the LSA Descriptor file forming the LSA.

Coding: binary.

4.4.x.3 LSA Descriptor files

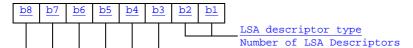
Residing under DF_{SoLSA} , there may be several LSA Descriptor files. These EFs contains one or more records again containing LSA Descriptors forming the LSAs. LSAs can be described in four different ways. As a list of LSA IDs, as a list of LAC + CIs, as a list of CIs or as a list of LACs. As the basic elements (LSA ID, LAC + CI, CI and LAC) of the four types of lists are of different length, they can not be mixed within one record. Different records may contain different kinds of lists within the EFs. Examples of codings of LSA Descriptor files can be found in annex F.

<u>Identifie</u>	er: '4FXX'	ructure: linear fixed		<u>Optional</u>		
Record length: n*X+2 bytes			<u>Update</u>	activity	<u>/: low</u>	
Access Condit	ions:					
READ		PIN				
UPDAT	ГЕ	ADM				
INVALI	DATE	ADM				
REHABILITATE ADM						
<u>Bytes</u>		Description	<u>in</u>	M/O	<u>Length</u>	
<u>1</u>	LSA descriptor t	ype and num	<u>nber</u>	M	1 byte	
2 to X+1	1 st LSA Descript	1 st LSA Descriptor			X bytes	
X+2 to 2X+1	2 nd LSA Descriptor			M	X bytes	
(n-1)*X+2 to	n th LSA Descriptor				X bytes	
<u>n*X+1</u>						
<u>n*X+2</u>	Record Identifier	<u>r</u>		<u>M</u>	1 byte	

- LSA descriptor type and number:

Contents: The LSA descriptor type gives the format of the LSA descriptor and the number of valid LSA Descriptors within the record.

Coding:



LSA descriptor type:

Contents: Gives the format of the LSA Descriptors.

Number of LSA Descriptors:

Contents: Gives the number of valid LSA Descriptors in the record.

Coding: binary, with b8 as MSB and b3 as LSB leaving room for 64 LSA Descriptors per record.

LSA Descriptor

Contents: Dependant of the coding indicated in the LSA descriptor type:

- in case of LSA ID the field length 'X' is 3 bytes;
- in case of LAC + CI the field length 'X' is 4 bytes;
- in case of CI the field length 'X' is 2 bytes;
- in case of LAC the field length 'X' is 2 bytes.

Coding: according to TS 24.008 [9].

- Record Identifier:

Contents: This byte identifies the number of the next record containing the LSA Descriptors forming the LSA.

Coding: record number of next record. 'FF' identifies the end of the chain.

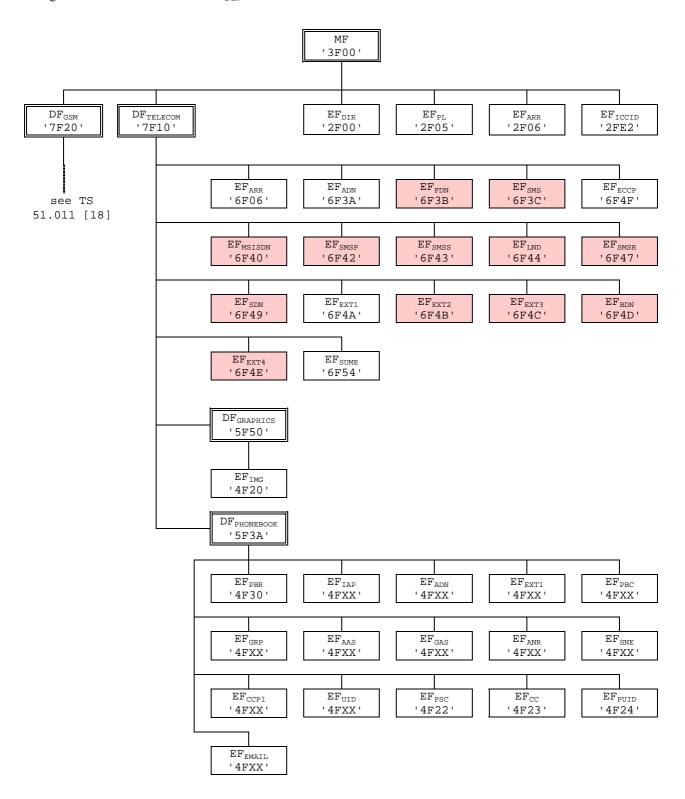
This file utilises the concept of chaining as for EF_{EXT1}.

The identifier '4FXX' shall be different from one LSA Descriptor file to the other and different from the identifiers of EF_{SAL} and EF_{SLL} . For the range of 'XX', see subclause x.x.

[...]

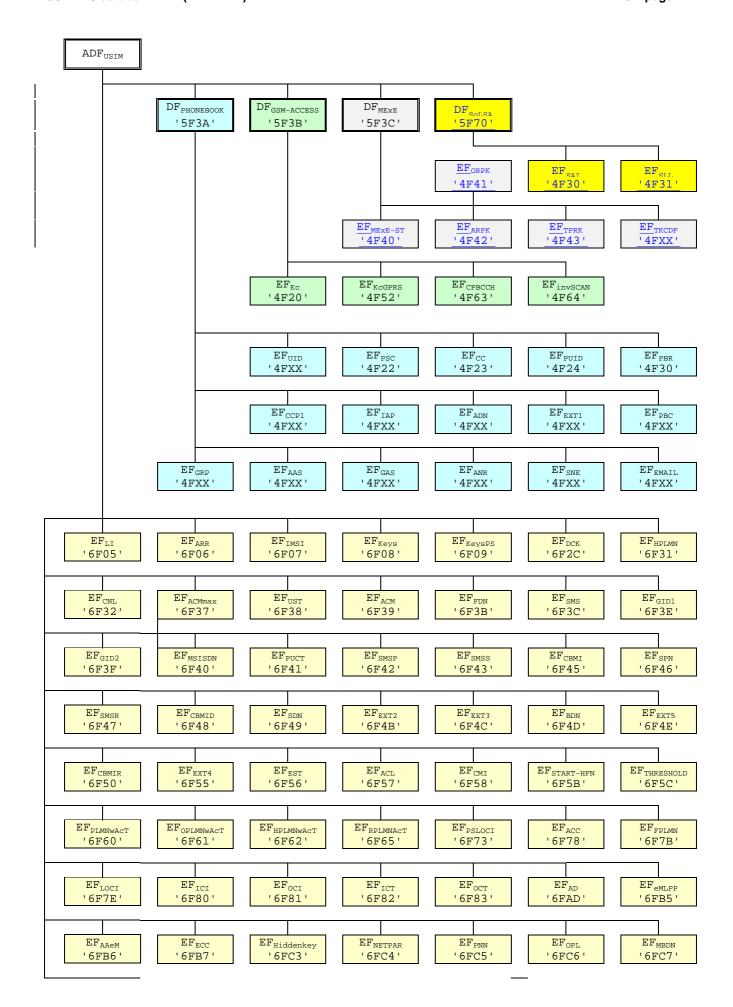
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



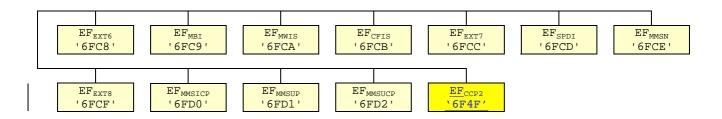


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.2.x LSA information

- Requirement: Service n°23 "available".
- $\underline{\quad \text{Request:}\quad \text{The ME performs the reading procedure with } EF_{\underline{SLL}}, \underline{EF_{\underline{SLL}}} \text{ and its associated LSA Descriptor files.}}$
- Update: The ME performs the updating procedure with EF_{SLL} .

[...]

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

	Change advised
	Caution
	Yes
	Caution
	No
	Yes
	No
	Yes
	Caution
	Caution
	Caution
	No
	No
	Caution
	Yes
d DF _{TELECOM})	Caution
122200,	Caution (Note 1)
	No
witched domain	
	Caution
	Caution
	Caution
	Yes
	Caution
	Yes

CR page 17

'6F41' '6F42' '6F43' '6F45' '6F46' '6F47'	MSISDN storage PUCT SMS parameters SMS status	Yes Yes Yes
'6F42' '6F43' '6F45' '6F46' '6F47'	SMS parameters	
'6F43' '6F45' '6F46' '6F47'		Yes
'6F45' '6F46' '6F47'	CMC status	
'6F46' '6F47'	Sivis status	Yes
'6F47'	СВМІ	Caution
'6F47'	Service provider name	Yes
	Short message status reports	Yes
'6F48'	CBMID	Yes
	Service Dialling Numbers	Yes
	Extension 2	Yes
	Extension 3	Yes
	Barred dialling numbers	Yes
	Extension 5	Yes
	Capability configuration parameters 2	Yes
	CBMIR	Yes
	-	
	SetUp Menu Elements	Yes
	Extension 4	Yes
	Enabled services table	Caution
	Access point name control list	Yes
	Comparison method information	Yes
	Initialisation value for Hyperframe number	Caution
	Maximum value of START	Yes
	User controlled PLMN selector with Access Technology	No
	Operator controlled PLMN selector with Access	Caution
	Technology	
	HPLMN selector with Access Technology	Caution
	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
	Outgoing call information	Yes
	Incoming call timer	Yes
	Outgoing call timer	Yes
	Administrative data	Caution
	Enhanced Multi Level Pre-emption and Priority	Yes
	Automatic Answer for eMLPP Service	Yes
	Emergency Call Codes	Caution
	Key for hidden phone book entries	No
	Network Parameters	No
	PLMN Network Name	Yes
	Operator Network List	Yes
	Mailbox Dialling Numbers	Yes
	Extension 6	Yes
	Mailbox Identifier	Caution
	Message Waiting Indication Status	Caution
	Call Forwarding Indication Status	Caution
	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
	MMS Notification	Yes
	Extension 8	Yes
'6FCF'	MMS Issuer Connectivity Parameters	Yes
'6FD0'	MMS User Preferences	Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4F30'	SoLSA Access Indicator	'00FFFF'
'4F31'	SoLSA LSA List	'FFFF'
'4FXX'	LSA Descriptor files	<u>'FFFF'</u>
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	· •	'FFFF'
	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant
	DF _{TELECOM})	
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
6F4B'	Extension 2	'00FFFF'
	Extension 3	'00FFFF'
'6F4C'		

CR page 20

File Identification	Description	Value		
'6F4D'	Barred Dialling Numbers	'FFFF'		
'6F4E'	Extension 5	'00FFFF'		
'6F4F'	Capability configuration parameters 2	'FFFF'		
'6F50'	CBMIR	'FFFF'		
'6F54'	SetUp Menu Elements	Operator dependant		
'6F55'	Extension 4	'FFFF'		
'6F56'	Enabled services table	Operator dependant		
'6F57'	Access point name control list	'00FFFF'		
'6F58'	Comparison method information	'FFFF'		
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'		
'6F5C'	Maximum value of START	Operator dependant		
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'		
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'		
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'		
'6F65'	RPLMN last used Access Technology	'0000'		
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01'		
		(see note 2)		
'6F78'	Access control class	Operator dependant		
'6F7B'	Forbidden PLMNs	'FFFF'		
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)		
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'		
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'		
'6F82'	Incoming call timer	'000000'		
'6F83'	Outgoing call timer	'000000'		
'6FAD'	Administrative data	Operator dependant		
'6FB5'	EMLPP	Operator dependant		
'6FB6'	AaeM	'00'		
'6FB7'	Emergency call codes	Operator dependant		
'6FC3'	Key for hidden phone book entries	'FFFF'		
'6FC4'	Network Parameters	'FFFF'		
'6FC5'	PLMN Network Name	Operator dependant		
'6FC6'	Operator Network List	Operator dependant		
'6FC7'	Mailbox Dialling Numbers	Operator dependant		
'6FC8'	Extension 6	'00 FFFF'		
'6FC9'	Mailbox Identifier	Operator dependant		
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'		
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'		
'6FCC'	Extension 7	'00 FFFF'		
'6FCD'	Service Provider Display Information			
'6FCE'	MMS Notification	'00 00 00 FFFF'		
'6FCF'	Extension 8	'FFFF'		
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'		
'6FD1'	MMS User Preferences	'FFFF'		
'6FD2'	MMS User Connectivity Parameters	'FFFF'		

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Annex F (informative): Examples of coding of LSA Descriptor files for SoLSA

Void.

The length of all the records is determined by the LSA descriptor containing the largest number of bytes. Combinations containing different numbers of LSA IDs, LAC+ CI and CI or LAC can therefore be done. Various examples are show. Due to the OTA management of the records it is recommended that the record length is maximum 100 bytes in order to leave room for command descriptor and signature information in the SMS.

This first example contains two LSAs, one described by two LSA IDs and another described by three Cell IDs, giving a record length of 8 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 2 (1 byte)	LSA ID (3 bytes)	LSA ID (3 bytes)	Identifier (1 byte)	
2 nd record:	LSA descriptor type = Cl and number = 3 (1 byte)	CI (2 bytes)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

The second example contains two LSAs, one described by one LSA ID and one described by two Cell Ids, giving a record length of 6 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 1 (1 byte)	LSA ID (3 bytes)	<u>'FF'</u>	Identifier (1 byte)
2 nd record:	LSA descriptor type = Cl and number = 2 (1 byte)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

[...]

ME Radio Access Network Core Network

3GPP TSG-T3 Meeting #29 Dallas USA 18-21 November 2003

Title:	Ж	Corrections on files for support of GSM	services using USIM -	SoLSA Files
Source:	\mathfrak{H}	T3		
14/	00	TEI	D - (- 00	00/44/0000
Work item code:	: ж	IEI	Date: #	20/11/2003
Category:	ж	A	Release: ₩	Rel-5
		Use one of the following categories:		the following releases:
		F (correction)	2	(GSM Phase 2)
		A (corresponds to a correction in an ea	rlier release) R96	(Release 1996)
		B (addition of feature),	R97	(Release 1997)
		C (functional modification of feature)	R98	(Release 1998)
		D (editorial modification)	R99	(Release 1999)
		Detailed explanations of the above categorie	s can Rel-4	(Release 4)
		be found in 3GPP TR 21.900.	Rel-5	(Release 5)
			Rel-6	(Release 6)

Reason for change: #	It has been clarified at the last TSG T meeting that R5 and beyond GERAN ME's shall support the USIM. Therefore TS 31.102 must be amended to allow for files pertaining to GSM specific services under ADFusim. This applies, in particular, to the Support of Localised Service Areas, which had its specific directory under DFgsm in TS 51.011.
Summary of change: #	Add Solsa support to USIM Service Table (UST) Add DFsolsa under ADFusim to have a similar content as DF SoLSA under DFgsm specified in TS 51.011 Add the DF SoLSA and files to the graphical representation of the file system. Delete note reserving File references for SoLSA files Add Proceedure for Local Services Area (LSA) Add suggested OTA abilities in Annex A. Add suggested contents at personalisation in Annex D. Add Annex F - coding of LSA Descriptor files for SoLSA Editorial changes: Add EFccp2 which was forgotten in figure Change DFgsm to DFgsmaccess
Consequences if # not approved:	GSM SoLSA services not available when using a USIM.

Clauses affected: # 2, 4.2.8, 4.3, 4.4.x, 4.7, 5.2.x, Annex A, Annex D, Annex F

		Υ	N		
Other specs	\mathfrak{R}		X	Other core specifications #	
affected:			X	Test specifications O&M Specifications	
	_				
Other comments:	\mathfrak{H}	Α	se	parate CR is raised for the SIM file	es related to ASCI

2 References

[23]

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 nonspecific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.
- [1] 3GPP TS 21.111: "USIM and IC card requirements". [2] 3GPP TS 22.011: "Service accessibility". [3] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)". [4] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)". 3GPP TS 23.038: "Alphabets and language-specific information". [5] [6] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)". 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2". [7] [8] 3GPP TS 22.067: "enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1". [9] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3". [10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface". 3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics". [11] [12] 3GPP TS 31.111: "USIM Application Toolkit (USAT)". [13] 3GPP TS 33.102: "3G Security; Security architecture". [14] 3GPP TS 33.103: "3G Security; Integration guidelines". 3GPP TS 22.086: "Advice of Charge (AoC) supplementary services; Stage 1". [15] [16] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)". [17] GSM 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features". 3GPP TS 51.011: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM -[18] ME) interface". [19] ISO 639 (1988): "Codes for the representation of names of languages". [20] ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange". ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts -[21] Part 5: Numbering system and registration procedure for application identifiers". [22] ITU-T Recommendation E.164: "The international public telecommunication numbering plan". Void. 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".

[24]	3GPP TS 22.101: "Service aspects; Service principles".
[25]	3GPP TS 23.003: "Numbering, addressing and identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts - Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile radio interface Layer 3 specification; Radio Resource Control Protocol".
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".
[31]	3GPP TS 23.122: "Non-Access-Stratum functions related to Mobile Station (MS) in idle mode".
[32]	ISO/IEC 7816-6 (1996): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio transmission and reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception".
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP) Phase 1; Stage 2".
[37]	ETSI TS 102 221: "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)".
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; Stage 2".

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	er: '6F38'	Str	ucture: transparent		Mandatory
	SFI: '04'				
File s	size: X bytes, X >=	1	Update	activity	: low
Access Condit READ UPDA DEAC ACTIV	TE TIVATE	PIN ADM ADM ADM			
	1		1		
Bytes		Descriptio	n	M/O	Length
1	Services n°1 to	n°8		M	1 byte
2	Services n°9 to	n°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services nº25 to	n°32		0	1 byte
etc.					
X	Services n°(8X-	7) to n°(8X)		0	1 byte

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Service n°12: Short Message Service Parameters (SMSP) Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology Service n°21: **MSISDN** Service n°22: Image (IMG) erved for Support of Localised Service Areas (SoLSA) Service n°23: Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Data download via SMS-PP Service n°28: Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: RUN AT COMMAND command Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: GSM security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

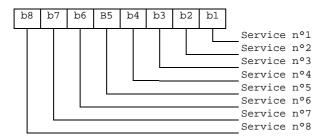
Coding:

1 bit is used to code each service: bit = 1: service available; bit = 0: service not available.

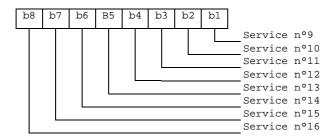
Service n°55

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.3 DFs at the USIM ADF (Application DF) Level

DFs may be present as child directories of USIM ADF. The following DFs are defined:

- DF_{PHONEBOOK} '5F3A'.

- $DF_{GSM-ACCESS}$ ——'5F3B'.

- DF_{MExE} '5F3C'.

- DF_{SoLSA} '5F70'.

(DF for application specific phonebook. This DF has the same structure as the $DF_{PHONEBOOK}$ under $DF_{TELECOM}$).

'5F70' is reserved for DF_{SoLSA}.

4.4 Contents of DFs at the USIM ADF (Application DF) level

4.4.x Contents of files at the DF SoLSA level

Void This only applies if the Support of Localised Service Areas is supported, as indicated by Service Number 23 in the USIM Service Table and specified in 3GPP TS 23.073 [23].

The EFs contain information about the users subscribed local service areas.

4.4.x.1 EF_{SAI} (SoLSA Access Indicator)

This EF contains the 'LSA only access indicator'. This EF shall always be allocated if DF_{SoLSA} is present.

If the indicator is set, the network will prevent terminated and/or originated calls when the MS is camped in cells that are not included in the list of allowed LSAs in EF_{SLL}. Emergency calls are, however, always allowed.

The EF also contains a text string which may be displayed when the MS is out of the served area(s).

<u>Identifi</u>	er: '4F30'	<u>Str</u>	ucture: transparent		<u>Optional</u>			
<u>File</u>	e size: X + 1 bytes		<u>Update</u>	activity	<u>r: low</u>			
	Access Conditions:							
READ		PIN						
UPDAT	ΓΕ	ADM						
INVALI	DATE	ADM						
REHAE	BILITATE	ADM						
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>			
<u>1</u>	LSA only access		M	1 byte				
2 to X+1	LSA only access	indication te	<u>ext</u>	M	X bytes			

- LSA only access indicator

Contents: indicates whether the MS is restricted to use LSA cells only or not.

Coding:

]	<u>8c</u>	<u>b7</u>	<u>b6</u>]	<u>b5</u>	<u>b4</u>	<u>b3</u>	<u>b</u> :	2	<u>b1</u>						
											b1=0:	LSA	only	access	not	activated
											b1=1:	LSA	only	access	act:	ivated
											RFU					

- LSA only access indication text

Contents: text to be displayed by the ME when it's out of LSA area.

Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 coded options as defined in annex B.

4.4.x.2 EF_{SLL} (SoLSA LSA List)

This EF contains information describing the LSAs that the user is subscribed to. This EF shall always be allocated if DF_{SoLSA} is present.

Each LSA is described by one record that is linked to a LSA Descriptor file. Each record contains information of the PLMN, priority of the LSA, information about the subscription and may also contain a text string and/or an icon that identifies the LSA to the user. The text string can be edited by the user.

<u>Identifi</u>	er: '4F31 <u>'</u>	Sti	ucture: linear fixed	<u>Optional</u>	
Record	d length: X + 10 by	<u>Update</u>	activity	<u>r: low</u>	
Access Condit	ions:				
READ	<u>10110.</u>	PIN			
UPDAT	ГЕ	PIN			
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>
<u>1 to X</u>	LSA name			<u>O</u>	X bytes
<u>X+1</u>	Configuration pa	<u>rameters</u>		M	1 byte
<u>X+2</u>	<u>RFU</u>			M	1 byte
<u>X+3</u>	Icon Identifier			M	1 byte
<u>X+4</u>	<u>Priority</u>			M	1 byte
X+5 to X+7	PLMN code			M	3 bytes
X+8 to X+9	LSA Descriptor	File Identifier		M	2 byte
<u>X+10</u>	LSA Descriptor	Record Ident	<u>ifier</u>	<u>M</u>	1 byte

LSA name

Contents: LSA name string to be displayed when the ME is camped in the corresponding area, dependant on the contents of the LSA indication for idle mode field.

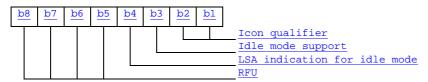
Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 code options defined in the annex of TS 31.101 [11].

- Configuration parameters

Contents: Icon qualifier, control of idle mode support and control of LSA indication for idle mode.

Coding:



Icon qualifier:

Contents: The icon qualifier indicates to the ME how the icon is to be used.

b2, b1: 00: icon is not to be used and may not be present
01: icon is self-explanatory, i.e. if displayed, it replaces the LSA name

10: icon is not self-explanatory, i.e. if displayed, it shall be displayed together with the LSA name 11: RFU

Idle mode support:

Contents: The idle mode support is used to indicate whether the ME shall favour camping on the LSA cells in idle mode.

<u>b3</u> = 0:Idle mode support disabled <u>b3</u> = 1:Idle mode support enabled

LSA indication for idle mode:

Contents: The LSA indication for idle mode is used to indicate whether or not the ME shall display the LSA name when the ME is camped on a cell within the LSA.

 $\underline{b4} = 0$:LSA indication for idle mode disabled $\underline{b4} = 1$:LSA indication for idle mode enabled

Bits b5 to b8 are RFU (see subclause 9.3).

- Icon Identifier

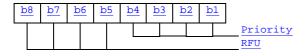
Contents: The icon identifier addresses a record in EF_{IMG}.

Coding: binary.

- Priority

Contents: Priority of the LSA which gives the ME the preference of this LSA relative to the other LSAs.

Coding:



'0' is lowest priority, 'F' is highest.

- PLMN code

Contents: MCC + MNC for the LSA.

Coding: according to GSM 24.008 [9] and EF_{LOCI}.

- LSA Descriptor File Identifier:

Contents: these bytes identify the EF which contains the LSA Descriptors forming the LSA.

<u>Coding:</u> byte X+8: high byte of the LSA Descriptor file; byte X+9: low byte of the LSA Descriptor file.

- LSA Descriptor Record Identifier:

Contents: this byte identifies the number of the first record in the LSA Descriptor file forming the LSA.

Coding: binary.

4.4.x.3 LSA Descriptor files

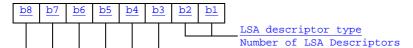
Residing under DF_{SoLSA} , there may be several LSA Descriptor files. These EFs contains one or more records again containing LSA Descriptors forming the LSAs. LSAs can be described in four different ways. As a list of LSA IDs, as a list of LAC + CIs, as a list of CIs or as a list of LACs. As the basic elements (LSA ID, LAC + CI, CI and LAC) of the four types of lists are of different length, they can not be mixed within one record. Different records may contain different kinds of lists within the EFs. Examples of codings of LSA Descriptor files can be found in annex F.

<u>Identifie</u>	er: '4FXX'	St	ructure: linear fixed		<u>Optional</u>
Record	d length: n*X+2 by	<u>/tes</u>	<u>Update</u>	activity	<u>/: low</u>
Access Condit	ions:				
READ		PIN			
UPDAT	ГЕ	ADM			
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
<u>Bytes</u>		Description	<u>in</u>	M/O	<u>Length</u>
<u>1</u>	LSA descriptor t	ype and num	<u>nber</u>	M	1 byte
2 to X+1	1 st LSA Descript	tor		M	X bytes
X+2 to 2X+1	2 nd LSA Descrip	<u>tor</u>		M	X bytes
(n-1)*X+2 to	n th LSA Descript	<u>tor</u>		<u>M</u>	X bytes
<u>n*X+1</u>					
<u>n*X+2</u>	Record Identifier	<u>r</u>		<u>M</u>	1 byte

- LSA descriptor type and number:

Contents: The LSA descriptor type gives the format of the LSA descriptor and the number of valid LSA Descriptors within the record.

Coding:



LSA descriptor type:

Contents: Gives the format of the LSA Descriptors.

Number of LSA Descriptors:

Contents: Gives the number of valid LSA Descriptors in the record.

Coding: binary, with b8 as MSB and b3 as LSB leaving room for 64 LSA Descriptors per record.

LSA Descriptor

Contents: Dependant of the coding indicated in the LSA descriptor type:

- in case of LSA ID the field length 'X' is 3 bytes;
- in case of LAC + CI the field length 'X' is 4 bytes;
- in case of CI the field length 'X' is 2 bytes;
- in case of LAC the field length 'X' is 2 bytes.

Coding: according to TS 24.008 [9].

- Record Identifier:

Contents: This byte identifies the number of the next record containing the LSA Descriptors forming the LSA.

Coding: record number of next record. 'FF' identifies the end of the chain.

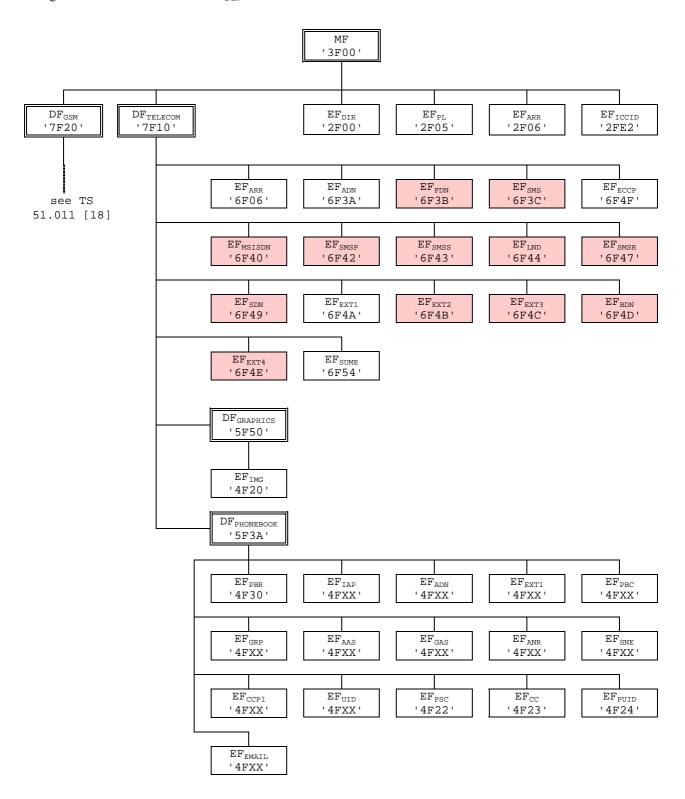
This file utilises the concept of chaining as for EF_{EXT1}.

The identifier '4FXX' shall be different from one LSA Descriptor file to the other and different from the identifiers of EF_{SAL} and EF_{SLL} . For the range of 'XX', see subclause x.x.

[...]

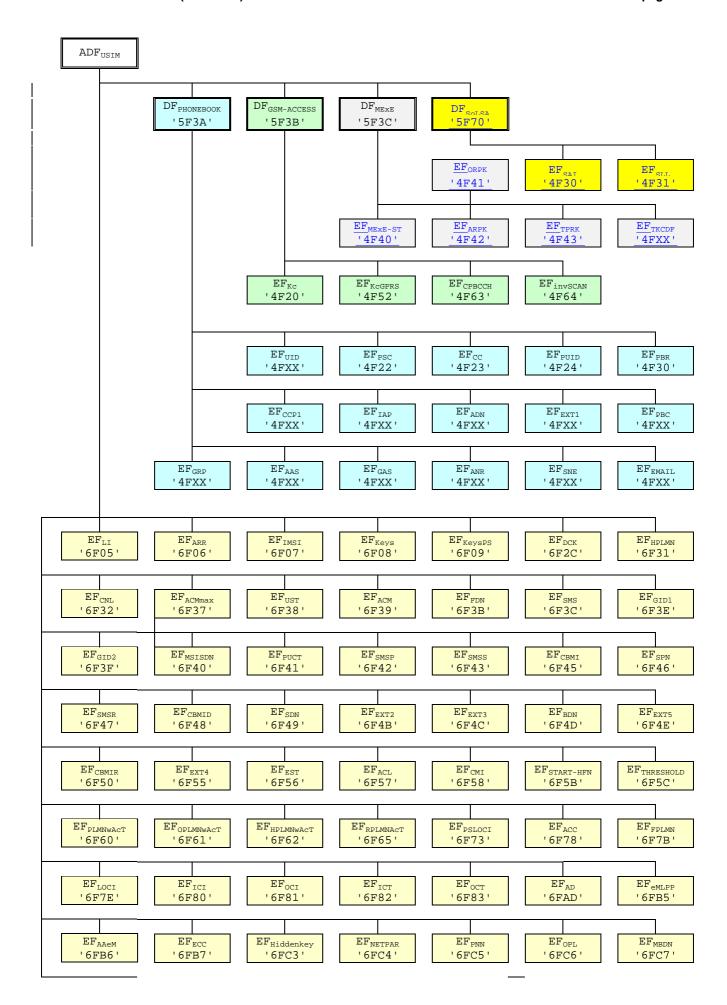
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



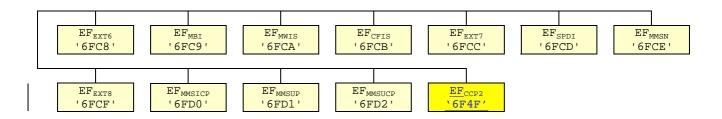


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.2.x LSA information

- Requirement: Service n°23 "available".
- $\underline{\quad \text{Request:}\quad \text{The ME performs the reading procedure with } EF_{\underline{SAI}}, \underline{EF_{\underline{SLL}}} \text{ and its associated LSA Descriptor files.}}$
- Update: The ME performs the updating procedure with EF_{SLL} .

[...]

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

	Change advised
	Caution
	Yes
	Caution
	No
	Yes
	No
	Yes
	Caution
	Caution
	Caution
	No
	No
	Caution
	Yes
d DF _{TELECOM})	Caution
122200,	Caution (Note 1)
	No
witched domain	
	Caution
	Caution
	Caution
	Yes
	Caution
	Yes

CR page 17

'6F41' '6F42' '6F43' '6F45' '6F46' '6F47'	MSISDN storage PUCT SMS parameters SMS status	Yes Yes Yes
'6F42' '6F43' '6F45' '6F46' '6F47'	SMS parameters	
'6F43' '6F45' '6F46' '6F47'		Yes
'6F45' '6F46' '6F47'	CMC status	
'6F46' '6F47'	Sivis status	Yes
'6F47'	СВМІ	Caution
'6F47'	Service provider name	Yes
	Short message status reports	Yes
'6F48'	CBMID	Yes
	Service Dialling Numbers	Yes
	Extension 2	Yes
	Extension 3	Yes
	Barred dialling numbers	Yes
	Extension 5	Yes
	Capability configuration parameters 2	Yes
	CBMIR	Yes
	-	
	SetUp Menu Elements	Yes
	Extension 4	Yes
	Enabled services table	Caution
	Access point name control list	Yes
	Comparison method information	Yes
	Initialisation value for Hyperframe number	Caution
	Maximum value of START	Yes
	User controlled PLMN selector with Access Technology	No
	Operator controlled PLMN selector with Access	Caution
	Technology	
	HPLMN selector with Access Technology	Caution
	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
	Outgoing call information	Yes
	Incoming call timer	Yes
	Outgoing call timer	Yes
	Administrative data	Caution
	Enhanced Multi Level Pre-emption and Priority	Yes
	Automatic Answer for eMLPP Service	Yes
	Emergency Call Codes	Caution
	Key for hidden phone book entries	No
	Network Parameters	No
	PLMN Network Name	Yes
	Operator Network List	Yes
	Mailbox Dialling Numbers	Yes
	Extension 6	Yes
	Mailbox Identifier	Caution
	Message Waiting Indication Status	Caution
	Call Forwarding Indication Status	Caution
	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
	MMS Notification	Yes
	Extension 8	Yes
'6FCF'	MMS Issuer Connectivity Parameters	Yes
'6FD0'	MMS User Preferences	Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4F30'	SoLSA Access Indicator	'00FFFF'
'4F31'	SoLSA LSA List	'FFFF'
'4FXX'	LSA Descriptor files	<u>'FFFF'</u>
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	· •	'FFFF'
	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant
	DF _{TELECOM})	
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
6F4B'	Extension 2	'00FFFF'
	Extension 3	'00FFFF'
'6F4C'		

CR page 20

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01'
		(see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FFFF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'
'6FCC'	Extension 7	'00 FFFF'
'6FCD'	Service Provider Display Information	
'6FCE'	MMS Notification	'00 00 00 FFFF'
'6FCF'	Extension 8	'FFFF'
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'
'6FD1'	MMS User Preferences	'FFFF'
'6FD2'	MMS User Connectivity Parameters	'FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Annex F (informative): Examples of coding of LSA Descriptor files for SoLSA

Void.

The length of all the records is determined by the LSA descriptor containing the largest number of bytes. Combinations containing different numbers of LSA IDs, LAC+ CI and CI or LAC can therefore be done. Various examples are show. Due to the OTA management of the records it is recommended that the record length is maximum 100 bytes in order to leave room for command descriptor and signature information in the SMS.

This first example contains two LSAs, one described by two LSA IDs and another described by three Cell IDs, giving a record length of 8 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 2 (1 byte)	LSA ID (3 bytes)	LSA ID (3 bytes)	Identifier (1 byte)	
2 nd record:	LSA descriptor type = Cl and number = 3 (1 byte)	CI (2 bytes)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

The second example contains two LSAs, one described by one LSA ID and one described by two Cell Ids, giving a record length of 6 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 1 (1 byte)	LSA ID (3 bytes)	<u>'FF'</u>	Identifier (1 byte)
2 nd record:	LSA descriptor type = Cl and number = 2 (1 byte)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

[...]

3GPP TSG-T3 Meeting #29 Dallas USA 18-21 November 2003

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Clauses affected: # 2, 4.2.8, 4.3, 4.4.x, 4.7, 5.2.x, Annex A, Annex D, Annex F

Consequences if not approved:

₩ GSM SoLSA services not available when using a USIM.

		Υ	
Other specs	\mathfrak{R}		C Other core specifications
affected:			Test specifications O&M Specifications
Other comments:	\mathbb{H}	As	eparate CR is raised for the SIM files related to ASCI

2 References

[23]

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 nonspecific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.
- [1] 3GPP TS 21.111: "USIM and IC card requirements". [2] 3GPP TS 22.011: "Service accessibility". [3] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)". [4] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)". 3GPP TS 23.038: "Alphabets and language-specific information". [5] [6] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)". 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2". [7] [8] 3GPP TS 22.067: "enhanced Multi-Level Precedence and Pre-emption service (eMLPP); Stage 1". [9] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3". [10] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface". 3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics". [11] [12] 3GPP TS 31.111: "USIM Application Toolkit (USAT)". [13] 3GPP TS 33.102: "3G Security; Security architecture". [14] 3GPP TS 33.103: "3G Security; Integration guidelines". 3GPP TS 22.086: "Advice of Charge (AoC) supplementary services; Stage 1". [15] [16] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)". [17] GSM 02.07: "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features". 3GPP TS 51.011: "Specification of the Subscriber Identity Module - Mobile Equipment (SIM -[18] ME) interface". [19] ISO 639 (1988): "Codes for the representation of names of languages". [20] ISO/IEC 7816-4 (1995): "Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange". ISO/IEC 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts -[21] Part 5: Numbering system and registration procedure for application identifiers". [22] ITU-T Recommendation E.164: "The international public telecommunication numbering plan". Void. 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".

[24]	3GPP TS 22.101: "Service aspects; Service principles".
[25]	3GPP TS 23.003: "Numbering, addressing and identification".
[26]	ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts - Part 9: Additional Interindustry commands and security attributes".
[27]	3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".
[28]	3GPP TS 44.018 "Mobile radio interface Layer 3 specification; Radio Resource Control Protocol".
[29]	3GPP TS 23.022: "Functions related to Mobile Station (MS) in idle mode and group receive mode".
[30]	3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".
[31]	3GPP TS 23.122: "Non-Access-Stratum functions related to Mobile Station (MS) in idle mode".
[32]	ISO/IEC 7816-6 (1996): "Identification cards - Integrated circuit(s) cards with contacts - Part 6: Interindustry data elements".
[33]	3GPP TS 25.101: "UE Radio transmission and reception (FDD)"
[34]	3GPP TS 45.005: "Radio Transmission and Reception".
[35]	ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"
[36]	3GPP TS 23.097: "Multiple Subscriber Profile (MSP) Phase 1; Stage 2".
[37]	ETSI TS 102 221: "Smart cards; UICC-Terminal interface; Physical and logical characteristics (Release 4)".
[38]	3GPP TS 23.140: "Multimedia Messaging Service (MMS); Functional description; Stage 2".

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	er: '6F38'	Structure: transparent			Mandatory	
	SFI: '04'					
File s	size: X bytes, X >=	1	Update a	activity	: low	
Access Condit READ UPDA DEAC ACTIV	TE TIVATE	PIN ADM ADM ADM				
Bytes		Descriptio	n	M/O	Length	
1	Services n°1 to	n°8		М	1 byte	
2	Services n°9 to	n°16		0	1 byte	
3	Services nº17 to	n°24		0	1 byte	
4	Services n°25 to	n°32		0	1 byte	
etc.						
X	Services n°(8X-	7) to n°(8X)		0	1 byte	

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Service n°12: Short Message Service Parameters (SMSP) Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology Service n°21: **MSISDN** Service n°22: Image (IMG) erved for Support of Localised Service Areas (SoLSA) Service n°23: Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Data download via SMS-PP Service n°28: Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: RUN AT COMMAND command Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: GSM security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

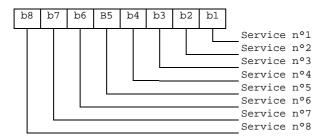
Coding:

1 bit is used to code each service: bit = 1: service available; bit = 0: service not available.

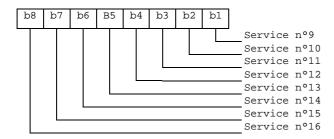
Service n°55

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.3 DFs at the USIM ADF (Application DF) Level

DFs may be present as child directories of USIM ADF. The following DFs are defined:

- DF_{PHONEBOOK} '5F3A'.

- $DF_{GSM-ACCESS}$ ——'5F3B'.

- DF_{MExE} '5F3C'.

- DF_{SoLSA} '5F70'.

(DF for application specific phonebook. This DF has the same structure as the $DF_{PHONEBOOK}$ under $DF_{TELECOM}$).

'5F70' is reserved for DF_{SoLSA}.

4.4 Contents of DFs at the USIM ADF (Application DF) level

4.4.x Contents of files at the DF SoLSA level

Void This only applies if the Support of Localised Service Areas is supported, as indicated by Service Number 23 in the USIM Service Table and specified in 3GPP TS 23.073 [23].

The EFs contain information about the users subscribed local service areas.

4.4.x.1 EF_{SAI} (SoLSA Access Indicator)

This EF contains the 'LSA only access indicator'. This EF shall always be allocated if DF_{SoLSA} is present.

If the indicator is set, the network will prevent terminated and/or originated calls when the MS is camped in cells that are not included in the list of allowed LSAs in EF_{SLL}. Emergency calls are, however, always allowed.

The EF also contains a text string which may be displayed when the MS is out of the served area(s).

<u>Identifi</u>	er: '4F30'	<u>Str</u>	ucture: transparent		<u>Optional</u>		
<u>File</u>	e size: X + 1 bytes		Update activity: low				
Access Condit	ions:						
READ		PIN					
UPDAT	ΓΕ	ADM					
INVALI	DATE	ADM					
REHAE	REHABILITATE						
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>		
<u>1</u>	LSA only access	indicator		M	1 byte		
2 to X+1	LSA only access	indication te	<u>ext</u>	M	X bytes		

- LSA only access indicator

Contents: indicates whether the MS is restricted to use LSA cells only or not.

Coding:

]	<u>8c</u>	<u>b7</u>	b6	5	<u>b5</u>	b4	1	<u>b3</u>	b2	-	<u>b1</u>							
												•	b1=0:	LSA	only	access	not	activated
													b1=1:	LSA	only	access	act:	ivated
													RFU					

- LSA only access indication text

Contents: text to be displayed by the ME when it's out of LSA area.

Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 coded options as defined in annex B.

4.4.x.2 EF_{SLL} (SoLSA LSA List)

This EF contains information describing the LSAs that the user is subscribed to. This EF shall always be allocated if DF_{SoLSA} is present.

Each LSA is described by one record that is linked to a LSA Descriptor file. Each record contains information of the PLMN, priority of the LSA, information about the subscription and may also contain a text string and/or an icon that identifies the LSA to the user. The text string can be edited by the user.

<u>Identifi</u>	er: '4F31 <u>'</u>	Sti	<u>Optional</u>		
Record	d length: X + 10 by	<u>rtes</u>	<u>Update</u>	activity	<u>r: low</u>
Access Condit	ions:				
READ	<u>10110.</u>	PIN			
UPDAT	ГЕ				
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
	T			ı	
<u>Bytes</u>		<u>Descriptio</u>	<u>n</u>	M/O	<u>Length</u>
<u>1 to X</u>	LSA name			<u>O</u>	X bytes
<u>X+1</u>	Configuration pa	rameters		M	1 byte
<u>X+2</u>	<u>RFU</u>			M	1 byte
<u>X+3</u>	Icon Identifier			M	1 byte
<u>X+4</u>	<u>Priority</u>			M	1 byte
X+5 to X+7	PLMN code			M	3 bytes
X+8 to X+9	LSA Descriptor	File Identifier		M	2 byte
<u>X+10</u>	LSA Descriptor	Record Ident	<u>ifier</u>	<u>M</u>	1 byte

LSA name

Contents: LSA name string to be displayed when the ME is camped in the corresponding area, dependant on the contents of the LSA indication for idle mode field.

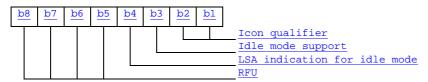
Coding: the string shall use either

- the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or
- one of the UCS2 code options defined in the annex of TS 31.101 [11].

- Configuration parameters

Contents: Icon qualifier, control of idle mode support and control of LSA indication for idle mode.

Coding:



Icon qualifier:

Contents: The icon qualifier indicates to the ME how the icon is to be used.

b2, b1: 00: icon is not to be used and may not be present
01: icon is self-explanatory, i.e. if displayed, it replaces the LSA name

10: icon is not self-explanatory, i.e. if displayed, it shall be displayed together with the LSA name 11: RFU

Idle mode support:

Contents: The idle mode support is used to indicate whether the ME shall favour camping on the LSA cells in idle mode.

<u>b3</u> = 0:Idle mode support disabled <u>b3</u> = 1:Idle mode support enabled

LSA indication for idle mode:

Contents: The LSA indication for idle mode is used to indicate whether or not the ME shall display the LSA name when the ME is camped on a cell within the LSA.

 $\underline{b4} = 0$:LSA indication for idle mode disabled $\underline{b4} = 1$:LSA indication for idle mode enabled

Bits b5 to b8 are RFU (see subclause 9.3).

- Icon Identifier

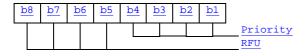
Contents: The icon identifier addresses a record in EF_{IMG}.

Coding: binary.

- Priority

Contents: Priority of the LSA which gives the ME the preference of this LSA relative to the other LSAs.

Coding:



'0' is lowest priority, 'F' is highest.

- PLMN code

Contents: MCC + MNC for the LSA.

Coding: according to GSM 24.008 [9] and EF_{LOCI}.

- LSA Descriptor File Identifier:

Contents: these bytes identify the EF which contains the LSA Descriptors forming the LSA.

<u>Coding:</u> byte X+8: high byte of the LSA Descriptor file; byte X+9: low byte of the LSA Descriptor file.

- LSA Descriptor Record Identifier:

Contents: this byte identifies the number of the first record in the LSA Descriptor file forming the LSA.

Coding: binary.

4.4.x.3 LSA Descriptor files

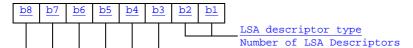
Residing under DF_{SoLSA} , there may be several LSA Descriptor files. These EFs contains one or more records again containing LSA Descriptors forming the LSAs. LSAs can be described in four different ways. As a list of LSA IDs, as a list of LAC + CIs, as a list of CIs or as a list of LACs. As the basic elements (LSA ID, LAC + CI, CI and LAC) of the four types of lists are of different length, they can not be mixed within one record. Different records may contain different kinds of lists within the EFs. Examples of codings of LSA Descriptor files can be found in annex F.

<u>Identifie</u>	er: '4FXX'	St	ructure: linear fixed	<u>Optional</u>	
Record	d length: n*X+2 by	<u>/tes</u>	<u>Update</u>	activity	<u>/: low</u>
Access Condit	ions:				
READ		PIN			
UPDAT	ГЕ	ADM			
INVALI	DATE	ADM			
REHAE	BILITATE	ADM			
<u>Bytes</u>		Description	<u>in</u>	M/O	<u>Length</u>
<u>1</u>	LSA descriptor t	ype and num	<u>nber</u>	M	1 byte
2 to X+1	1 st LSA Descript	tor		M	X bytes
X+2 to 2X+1	2 nd LSA Descrip	<u>tor</u>		M	X bytes
(n-1)*X+2 to	n th LSA Descript	<u>tor</u>		<u>M</u>	X bytes
<u>n*X+1</u>					
<u>n*X+2</u>	Record Identifier	<u>r</u>		<u>M</u>	1 byte

- LSA descriptor type and number:

Contents: The LSA descriptor type gives the format of the LSA descriptor and the number of valid LSA Descriptors within the record.

Coding:



LSA descriptor type:

Contents: Gives the format of the LSA Descriptors.

Number of LSA Descriptors:

Contents: Gives the number of valid LSA Descriptors in the record.

Coding: binary, with b8 as MSB and b3 as LSB leaving room for 64 LSA Descriptors per record.

LSA Descriptor

Contents: Dependant of the coding indicated in the LSA descriptor type:

- in case of LSA ID the field length 'X' is 3 bytes;
- in case of LAC + CI the field length 'X' is 4 bytes;
- in case of CI the field length 'X' is 2 bytes;
- in case of LAC the field length 'X' is 2 bytes.

Coding: according to TS 24.008 [9].

- Record Identifier:

Contents: This byte identifies the number of the next record containing the LSA Descriptors forming the LSA.

Coding: record number of next record. 'FF' identifies the end of the chain.

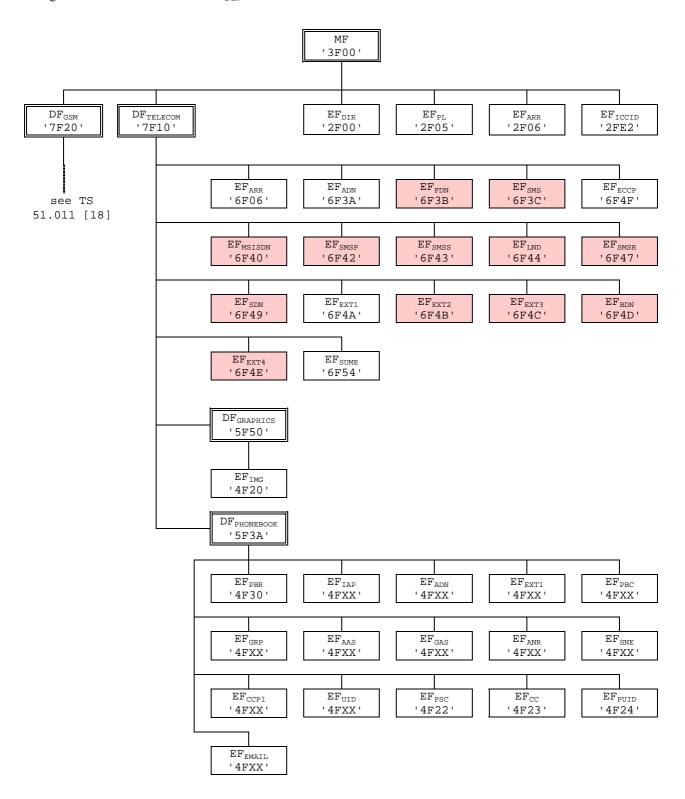
This file utilises the concept of chaining as for EF_{EXT1}.

The identifier '4FXX' shall be different from one LSA Descriptor file to the other and different from the identifiers of EF_{SAL} and EF_{SLL} . For the range of 'XX', see subclause x.x.

[...]

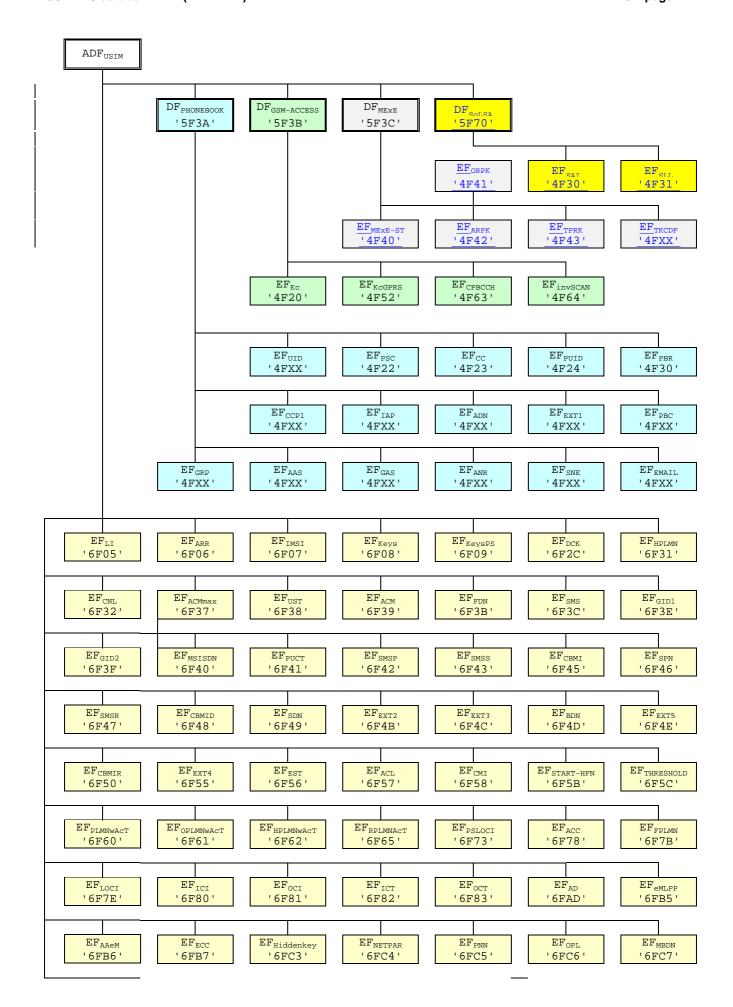
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



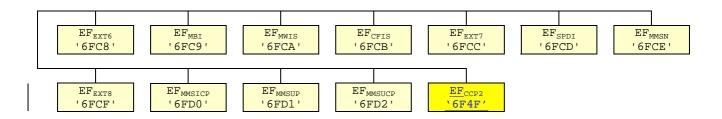


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.2.x LSA information

- Requirement: Service n°23 "available".
- $\underline{\quad \text{Request:}\quad \text{The ME performs the reading procedure with } EF_{\underline{SAI}}, \underline{EF_{\underline{SLL}}} \text{ and its associated LSA Descriptor files.}}$
- Update: The ME performs the updating procedure with EF_{SLL} .

[...]

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

Change advised
Caution
Yes
Caution
No
Yes
No
Yes
Caution
Caution
Caution
No
No
Caution
Yes
DF _{TELECOM}) Caution
Caution (Note 1)
No
ched domain No
Caution
Caution
Caution
Yes
Caution
Yes
_

CR page 17

'6F41' '6F42' '6F43' '6F45' '6F46' '6F47'	MSISDN storage PUCT SMS parameters SMS status	Yes Yes Yes
'6F42' '6F43' '6F45' '6F46' '6F47'	SMS parameters	
'6F43' '6F45' '6F46' '6F47'		Yes
'6F45' '6F46' '6F47'	CMC status	
'6F46' '6F47'	Sivis status	Yes
'6F47'	СВМІ	Caution
'6F47'	Service provider name	Yes
	Short message status reports	Yes
'6F48'	CBMID	Yes
	Service Dialling Numbers	Yes
	Extension 2	Yes
	Extension 3	Yes
	Barred dialling numbers	Yes
	Extension 5	Yes
	Capability configuration parameters 2	Yes
	CBMIR	Yes
	-	
	SetUp Menu Elements	Yes
	Extension 4	Yes
	Enabled services table	Caution
	Access point name control list	Yes
	Comparison method information	Yes
	Initialisation value for Hyperframe number	Caution
	Maximum value of START	Yes
	User controlled PLMN selector with Access Technology	No
	Operator controlled PLMN selector with Access	Caution
	Technology	
	HPLMN selector with Access Technology	Caution
	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
	Outgoing call information	Yes
	Incoming call timer	Yes
	Outgoing call timer	Yes
	Administrative data	Caution
	Enhanced Multi Level Pre-emption and Priority	Yes
	Automatic Answer for eMLPP Service	Yes
	Emergency Call Codes	Caution
	Key for hidden phone book entries	No
	Network Parameters	No
	PLMN Network Name	Yes
	Operator Network List	Yes
	Mailbox Dialling Numbers	Yes
	Extension 6	Yes
	Mailbox Identifier	Caution
	Message Waiting Indication Status	Caution
	Call Forwarding Indication Status	Caution
	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
	MMS Notification	Yes
	Extension 8	Yes
'6FCF'	MMS Issuer Connectivity Parameters	Yes
'6FD0'	MMS User Preferences	Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4F30'	SoLSA Access Indicator	'00FFFF'
'4F31'	SoLSA LSA List	'FFFF'
'4FXX'	LSA Descriptor files	<u>'FFFF'</u>
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	· •	'FFFF'
	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant
	DF _{TELECOM})	
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
6F4B'	Extension 2	'00FFFF'
	Extension 3	'00FFFF'
'6F4C'		

CR page 20

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01'
		(see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FFFF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'
'6FCC'	Extension 7	'00 FFFF'
'6FCD'	Service Provider Display Information	
'6FCE'	MMS Notification	'00 00 00 FFFF'
'6FCF'	Extension 8	'FFFF'
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'
'6FD1'	MMS User Preferences	'FFFF'
'6FD2'	MMS User Connectivity Parameters	'FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Annex F (informative): Examples of coding of LSA Descriptor files for SoLSA

Void.

The length of all the records is determined by the LSA descriptor containing the largest number of bytes. Combinations containing different numbers of LSA IDs, LAC+ CI and CI or LAC can therefore be done. Various examples are show. Due to the OTA management of the records it is recommended that the record length is maximum 100 bytes in order to leave room for command descriptor and signature information in the SMS.

This first example contains two LSAs, one described by two LSA IDs and another described by three Cell IDs, giving a record length of 8 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 2 (1 byte)	LSA ID (3 bytes)	LSA ID (3 bytes)	Identifier (1 byte)	
2 nd record:	LSA descriptor type = Cl and number = 3 (1 byte)	CI (2 bytes)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

The second example contains two LSAs, one described by one LSA ID and one described by two Cell Ids, giving a record length of 6 bytes.

1 st record:	LSA descriptor type = LSA ID and number = 1 (1 byte)	LSA ID (3 bytes)	<u>'FF'</u>	Identifier (1 byte)
2 nd record:	LSA descriptor type = Cl and number = 2 (1 byte)	CI (2 bytes)	CI (2 bytes)	Identifier (1 byte)

Dallas USA 10-2	i November 2005	
	CHANGE REQUEST	orm-v7
*	31.102 CR 178	
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the 策 symbol	ls.
Proposed change	### ME Radio Access Network Core Netwo	rk
Title: ∺	Corrections on files for support of GSM services using USIM – ASCI Files	
Source: #	Т3	
Work item code: ₩	TEI Date: 20/11/2003	
Category: 第	F Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. Release: R99 Use one of the following releases. R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)	S:
Reason for change	· · · · · · · · · · · · · · · · · · ·	ME's
	shall support the USIM. Therefore TS 31.102 must be amended to allow for files pertaining to GSM specific services under ADFusim. This applies, files related to ASCI service.	
Summary of chang	Add VGCS Group Identifier support to USIM Service Table (UST) Add VBS Group Identifier support to USIM Service Table (UST) Add EF VGCS, EF VGCSS, EF VBS and EF VBSS under ADFusim to have similar content as under DFgsm specified in TS 51.011 Add EF VGCS, EF VGCSS, EF VBS and EF VBSS to the graphical representation of the file system. Add Proceedure for Voice Group Call Services Add Proceedure for Voice Broadcast Services Add suggested OTA abilities in Annex A. Add suggested contents at personalisation in Annex D.	a
Consequences if not approved:	第 GSM ASCI services not available when using a USIM.	
Clauses affected:	# 4.2.8, 4.3, 4.2.x, 4.7, 5.2.x, Annex A, Annex D	
Other specs affected:	Y N X Other core specifications X Test specifications O&M Specifications	

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	er: '6F38'	Str	ucture: transparent		Mandatory
	SFI: '04'				
File s	size: X bytes, X >=	1	Update	activity	: low
Access Condit READ UPDA ⁻ DEAC ⁻ ACTIV	ΓΕ ΓΙVATE	PIN ADM ADM ADM			
ACTIV	AIE	ADIVI			
Bytes		Descriptio	n	M/O	Length
1	Services no1 to	n°8		M	1 byte
2	Services n°9 to	n°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services n°25 to	n°32		0	1 byte
etc.					
X	Services n°(8X-	7) to n°(8X)		0	1 byte

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Short Message Service Parameters (SMSP) Service n°12: Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology **MSISDN** Service n°21: Service n°22: Image (IMG) Service n°23: Not used (reserved for SoLSA) Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Service n°28: Data download via SMS-PP Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: **RUN AT COMMAND command** Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: GSM security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

VGCS Group Identifier List (EF_{VGCS} and EF_{VGCSS})

VBS Group Identifier List (EF_{VBS} and EF_{VBSS})

Coding:

Service n°55

Service n°xx

Service n°yy

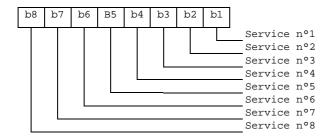
1 bit is used to code each service:

bit = 1: service available;

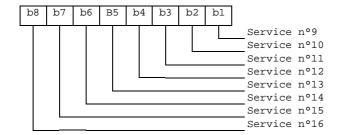
bit = 0: service not available.

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.x EF_{vecs} (Voice Group Call Service)

This EF contains a list of those VGCS group identifiers the user has subscribed to. The elementary file is used by the ME for group call establishment and group call reception.

<u>Identifier</u>	: '6FB1'	<u>Str</u>	ucture: transparent		<u>Optional</u>
<u>File size</u>	: 4n bytes (n <=	50)	<u>Update</u>	activity	<u>r: low</u>
Access Conditio	ne:				
READ	110.	PIN			
UPDATE		ADM			
INVALID	ATE	ADM			
REHABI	LITATE	ADM			
	T			T	
<u>Bytes</u>		<u>Description</u>	<u>on</u>	M/O	<u>Length</u>
<u>1 to 4</u>	Group ID 1			M	4 bytes
<u>5 to 8</u>	Group ID 2			<u>O</u>	4 bytes
<u>:</u>	<u>:</u>			<u>:</u>	<u>:</u>
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes

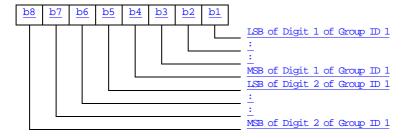
- Group ID

Contents: VGCS Group ID, according to TS 23.003 [25]

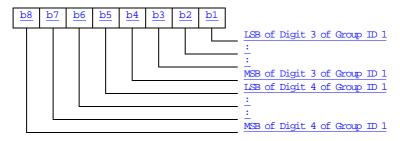
Coding:

The VGCS Group ID is of a variable length with a maximum length of 8 digits. Each VGCS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VGCS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VGCS Group ID Digit 1 is the most significant digit of the Group ID.

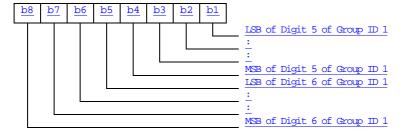
Byte 1:



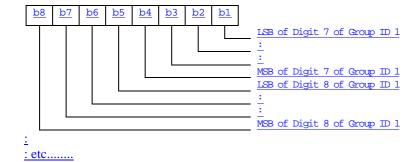
Byte 2:



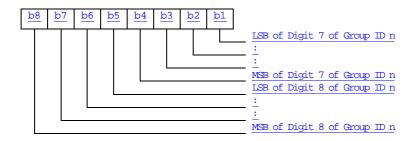
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VGCS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vecss} (Voice Group Call Service Status)

This EF contains the status of activation for the VGCS group identifiers. The elementary file is directly related to the EF_{VGCS} . This EF shall always be allocated if EF_{VGCS} is allocated.

<u>Identifier</u>	: '6FB2'	<u>Str</u>	ucture: transparent		<u>Optional</u>
<u>File</u>	e size: 7 bytes		<u>Updat</u>	e activity	<u>r: low</u>
Access Conditio READ UPDATE INVALID REHABII	ATE	PIN ADM ADM ADM			
Bytes		Description	<u>on</u>	M/O	<u>Length</u>
<u>1 to 7</u>	Activation/Dea	ctivation Flag	<u>gs</u>	<u>M</u>	7 bytes

- Activation/Deactivation Flags

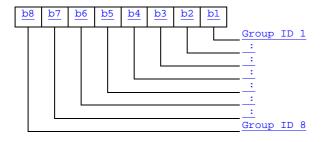
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

bit = 0 means - Group ID deactivated

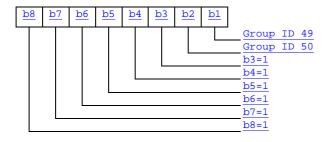
bit = 1 means - Group ID activated

Byte 1:



etc : : : : : :

Byte 7:



4.2.x EF_{VBS} (Voice Broadcast Service)

This EF contains a list of those VBS group identifiers the user has subscribed to. The elementary file is used by the ME for broadcast call establishment and broadcast call reception.

<u>Identifier</u>	<u>Structure: transparent</u> <u>Optional</u>		<u>Optional</u>		
File size	: 4n bytes (n <=	<u>50)</u>	<u>Update</u>	activity	: low
Access Conditio READ UPDATE INVALID REHABI	ATE	PIN ADM ADM ADM			
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>
<u>1 to 4</u>	Group ID 1			<u>M</u>	4 bytes
<u>5 to 2</u>	Group ID 2			<u>O</u>	4 bytes
<u>:</u>	<u> </u>			Ξ.	<u>:</u>
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes

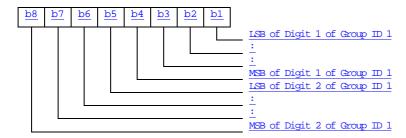
- Group ID

Contents: VBS Group ID, according to TS 23.003 [25]

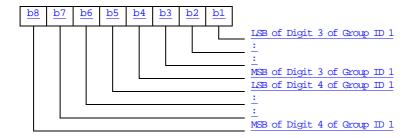
Coding:

The VBS Group ID is of a variable length with a maximum length of 8 digits. Each VBS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VBS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VBS Group ID Digit 1 is the most significant digit of the Group ID.

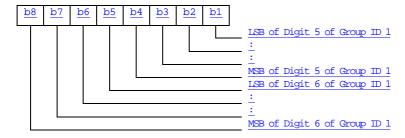
Byte 1:



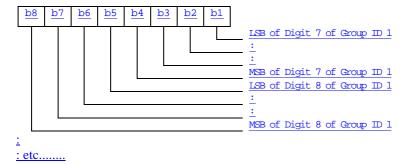
Byte 2:



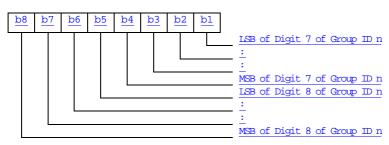
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VBS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vBSS} (Voice Broadcast Service Status)

This EF contains the status of activation for the VBS group identifiers. The elementary file is directly related to the EF_{VBS} . This EF shall always be allocated if EF_{VBS} is allocated.

<u>Identifier</u>	: '6FB4'	<u>Str</u>	ucture: transparent		<u>Optional</u>
File	e size: 7 bytes		<u>Update</u>	activity	<u>r: low</u>
Access Condition READ UPDATE INVALID REHABI	ATE	CHV' ADM ADM ADM	1		
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>
1 to 7	Activation/Dea	ctivation Flag	<u>gs</u>	M	7 bytes

- Activation/Deactivation Flags

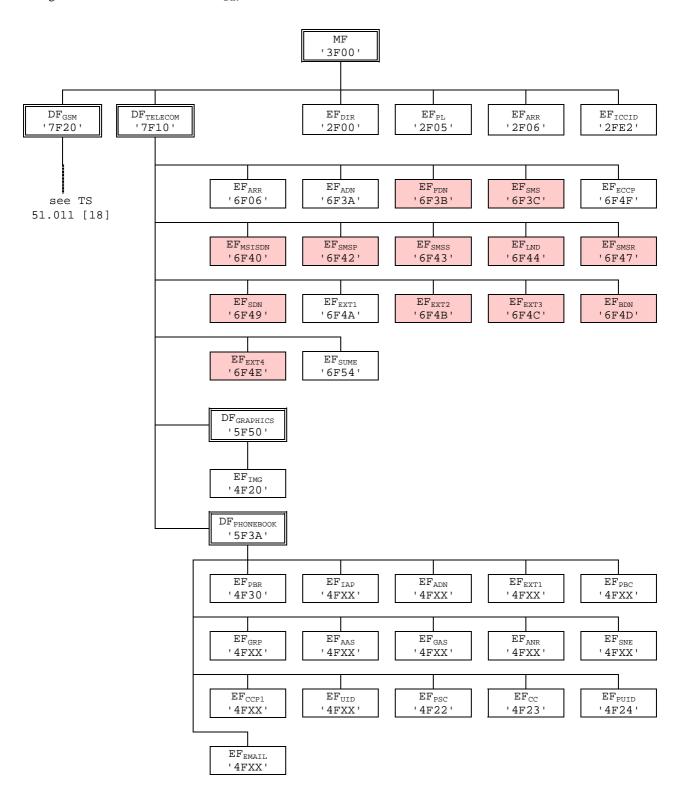
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

see coding of EF_{VGCS}

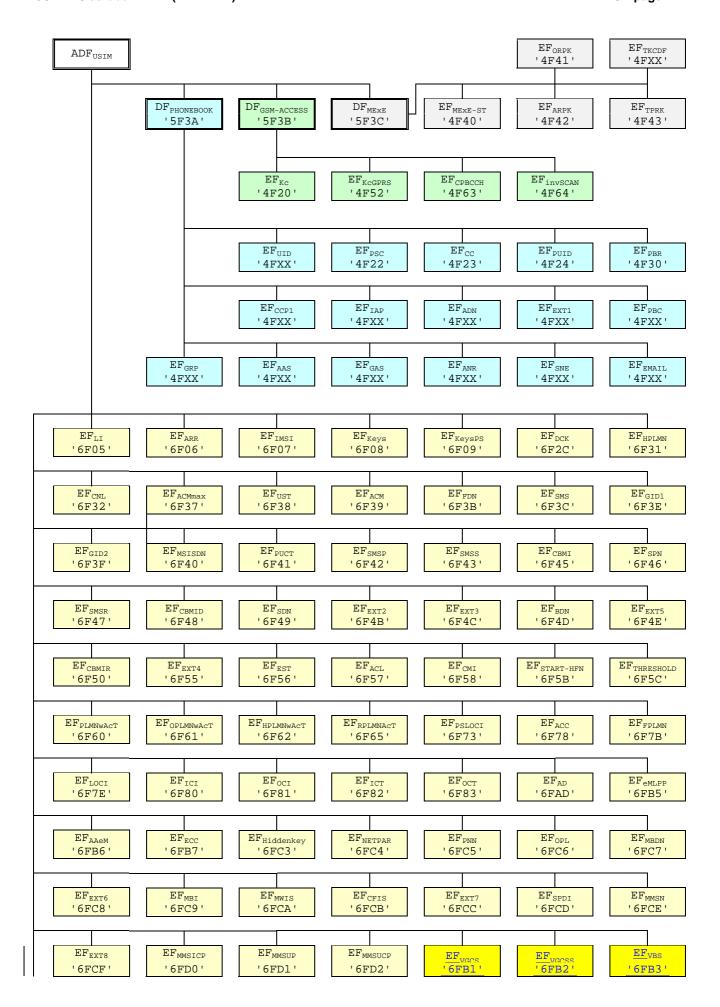
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



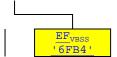


Figure 4.2: File identifiers and directory structures of USIM

5.2.x Voice Group Call Services

Requirement: Service n°xx "allocated and activated".

Voice Group Call Service

Request: The ME performs the reading procedure with EF_{VGCS}.

Voice Group Call Service Status

Request: The ME performs the reading procedure with EF_{VGCSS}.

Update: The ME performs the updating procedure with EF_{VGCSS}.

5.2.X Voice Broadcast Services

Requirement: Service n°yy "allocated and activated".

Voice Broadcast Service

Request: The ME performs the reading procedure with EF_{VBS}.

Voice Broadcast Service Status

Request: The ME performs the reading procedure with EF_{VBSS}.

<u>Update:</u> The ME performs the updating procedure with EF_{VBSS}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphring key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	HPLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

identification	Description	Change advis
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	Caution
'6F57'	Access point name control list	Yes
'6F58'	Comparison method information	Yes
'6F5B'	Initialisation value for Hyperframe number	Caution
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access	Caution
01 01	Technology	Caution
'6F62'	HPLMN selector with Access Technology	Caution
'6F65'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'		Yes
'6FAD'	Outgoing call timer Administrative data	Caution
'6FB1'	Voice Group Call Service	
	Voice Group Call Service Status	<u>Yes</u>
<u>'6FB2'</u>	Voice Broadcast Service Voice Broadcast Service	<u>Yes</u>
<u>'6FB3'</u>		Yes
<u>'6FB4'</u>	Voice Broadcast Service Status	<u>Yes</u>
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC3'	Key for hidden phone book entries	No
'6FC4'	Network Parameters	No
'6FC5'	PLMN Network Name	Yes
'6FC6'	Operator Network List	Yes
'6FC7'	Mailbox Dialling Numbers	Yes
'6FC8'	Extension 6	Yes
'6FC9'	Mailbox Identifier	Caution
	Message Waiting Indication Status	Caution
'6FCA'	Call Forwarding Indication Status	Caution
'6FCA' '6FCB'	Can r Critaranig marcaner Ctatae	Vac
	Extension 7	Yes
'6FCB'	-	Yes
'6FCB' '6FCC'	Extension 7 Service Provider Display Information	
'6FCB' '6FCC' '6FCD' '6FCE'	Extension 7 Service Provider Display Information MMS Notification	Yes Yes
'6FCB' '6FCC' '6FCD' '6FCE' '6FCF'	Extension 7 Service Provider Display Information MMS Notification Extension 8	Yes Yes Yes
'6FCB' '6FCC' '6FCD' '6FCE'	Extension 7 Service Provider Display Information MMS Notification	Yes Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'		'00'
	Investigation PLMN scan	
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'		'07FFFF'
'6F09'	Ciphering and integrity keys Ciphering and integrity keys for packet	'07FFFF'
	switched domain	
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
6F45 '6F46'		
	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
10-1-7	Levtongion 2	'00FFFF'
'6F4B' '6F4C'	Extension 2 Extension 3	'00FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Dalias USA 16-21 Novelliber 2003						
CHANGE REQUEST						
*	31.102 CR 179	¥				
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the 策 symb	ools.				
Proposed change	nffects: UICC apps第 X ME Radio Access Network Core Network	work				
Title: ∺	Corrections on files for support of GSM services using USIM – ASCI Files					
Source: #	ТЗ					
Work item code: ₩	TEI Date: 20/11/2003					
	Release: Release: Rel-4 Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. Release: Use one of the following release of the following	ses:				
Reason for change	It has been clarified at the last TSG T meeting that R5 and beyond GERAI shall support the USIM. Therefore TS 31.102 must be amended to allow for files pertaining to GSN specific services under ADFusim. This applies, files related to ASCI services.	Л				
Summary of chang	Add VGCS Group Identifier support to USIM Service Table (UST) Add VBS Group Identifier support to USIM Service Table (UST) Add EF VGCS, EF VGCSS, EF VBS and EF VBSS under ADFusim to have similar content as under DFgsm specified in TS 51.011 Add EF VGCS, EF VGCSS, EF VBS and EF VBSS to the graphical representation of the file system. Add Proceedure for Voice Group Call Services Add Proceedure for Voice Broadcast Services Add suggested OTA abilities in Annex A. Add suggested contents at personalisation in Annex D.	/e a				
Consequences if not approved:	# GSM ASCI services not available when using a USIM.					
Clauses affected:	# 4.2.8, 4.3, 4.2.x, 4.7, 5.2.x, Annex A, Annex D					
Other specs affected:	Y N X Other core specifications X Test specifications O&M Specifications					

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	Identifier: '6F38' Stru		ucture: transparent		Mandatory
SFI: '04'					
File s	size: X bytes, X >=	1	Update activity: low		
	ΓΕ ΓΙVATE	PIN ADM ADM ADM			
ACTIVATE ADM					
Bytes	Descriptio		n	M/O	Length
1	Services n°1 to n°8			M	1 byte
2	Services n°9 to n°16			0	1 byte
3	Services n°17 to n°24			0	1 byte
4	Services n°25 to n°32			0	1 byte
etc.					
X	Services no (8X-	7) to n°(8X)		0	1 byte

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Short Message Service Parameters (SMSP) Service n°12: Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology **MSISDN** Service n°21: Service n°22: Image (IMG) Service n°23: Not used (reserved for SoLSA) Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Service n°28: Data download via SMS-PP Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: **RUN AT COMMAND command** Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: GSM security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

VGCS Group Identifier List (EF_{VGCS} and EF_{VGCSS})

VBS Group Identifier List (EF_{VBS} and EF_{VBSS})

Coding:

Service n°55

Service n°xx

Service n°yy

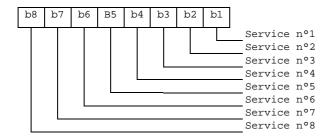
1 bit is used to code each service:

bit = 1: service available;

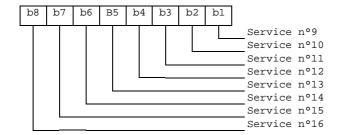
bit = 0: service not available.

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.x EF_{vecs} (Voice Group Call Service)

This EF contains a list of those VGCS group identifiers the user has subscribed to. The elementary file is used by the ME for group call establishment and group call reception.

Identifier	ntifier: '6FB1' Stru		icture: transparent		<u>Optional</u>		
File size: 4n bytes (n <= 50)			Update activity: low				
Access Conditio	Access Conditions:						
READ		PIN					
UPDATE		ADM					
INVALID	ATE	ADM					
REHABILITATE ADM							
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>		
1 to 4	Group ID 1			M	4 bytes		
<u>5 to 8</u>	Group ID 2			<u>O</u>	4 bytes		
1	<u>:</u>			<u>:</u>	<u>:</u>		
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes		

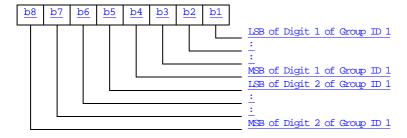
- Group ID

Contents: VGCS Group ID, according to TS 23.003 [25]

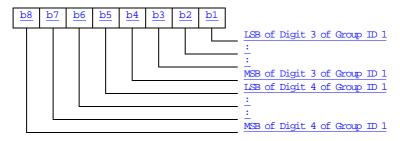
Coding:

The VGCS Group ID is of a variable length with a maximum length of 8 digits. Each VGCS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VGCS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VGCS Group ID Digit 1 is the most significant digit of the Group ID.

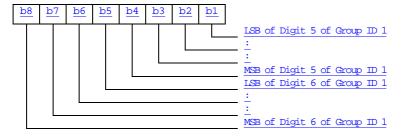
Byte 1:



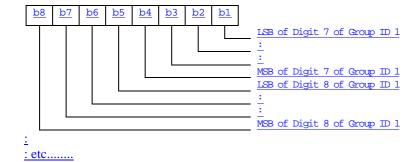
Byte 2:



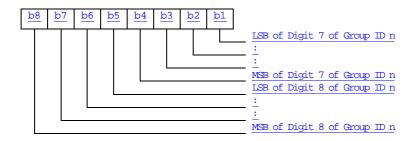
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VGCS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vecss} (Voice Group Call Service Status)

This EF contains the status of activation for the VGCS group identifiers. The elementary file is directly related to the EF_{VGCS} . This EF shall always be allocated if EF_{VGCS} is allocated.

Identifier: '6FB2'		Structure: transparent			<u>Optional</u>
File size: 7 bytes		Update activity: low			
Access Conditio READ UPDATE INVALID REHABII	ATE	PIN ADM ADM ADM			
Bytes		Description	<u>on</u>	M/O	<u>Length</u>
<u>1 to 7</u>	Activation/Deactivation Flags		<u>gs</u>	<u>M</u>	7 bytes

- Activation/Deactivation Flags

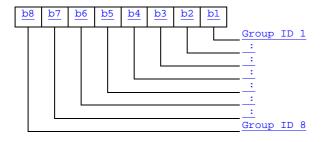
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

bit = 0 means - Group ID deactivated

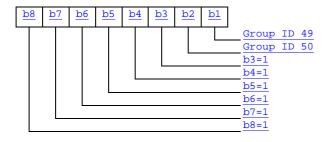
bit = 1 means - Group ID activated

Byte 1:



etc : : : : : :

Byte 7:



4.2.x EF_{VBS} (Voice Broadcast Service)

This EF contains a list of those VBS group identifiers the user has subscribed to. The elementary file is used by the ME for broadcast call establishment and broadcast call reception.

<u>Identifier</u>	: '6FB3'	Structure: transparent			<u>Optional</u>	
File size: 4n bytes (n <= 50) Update			activity	: low		
Access Conditions: READ PIN UPDATE ADM INVALIDATE ADM REHABILITATE ADM						
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>	
<u>1 to 4</u>	Group ID 1			<u>M</u>	4 bytes	
<u>5 to 2</u>	Group ID 2			<u>O</u>	4 bytes	
<u>:</u>	<u> </u>			Ξ.	<u>:</u>	
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes	

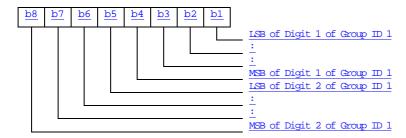
- Group ID

Contents: VBS Group ID, according to TS 23.003 [25]

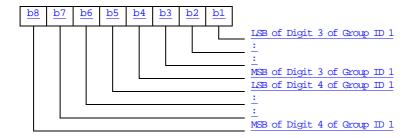
Coding:

The VBS Group ID is of a variable length with a maximum length of 8 digits. Each VBS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VBS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VBS Group ID Digit 1 is the most significant digit of the Group ID.

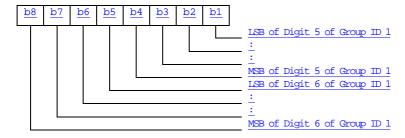
Byte 1:



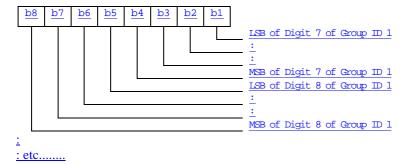
Byte 2:



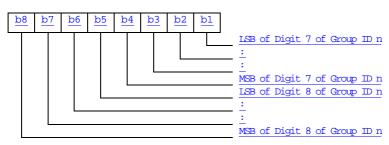
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VBS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vBSS} (Voice Broadcast Service Status)

This EF contains the status of activation for the VBS group identifiers. The elementary file is directly related to the EF_{VBS} . This EF shall always be allocated if EF_{VBS} is allocated.

Identifier: '6FB4'		Structure: transparent			<u>Optional</u>
File size: 7 bytes		<u>Update</u>	Update activity: low		
Access Condition READ UPDATE INVALID REHABI	ATE	CHV [/] ADM ADM ADM	1		
<u>Bytes</u>	Description		<u>on</u>	M/O	<u>Length</u>
1 to 7	Activation/Deactivation Flag		<u>gs</u>	M	7 bytes

- Activation/Deactivation Flags

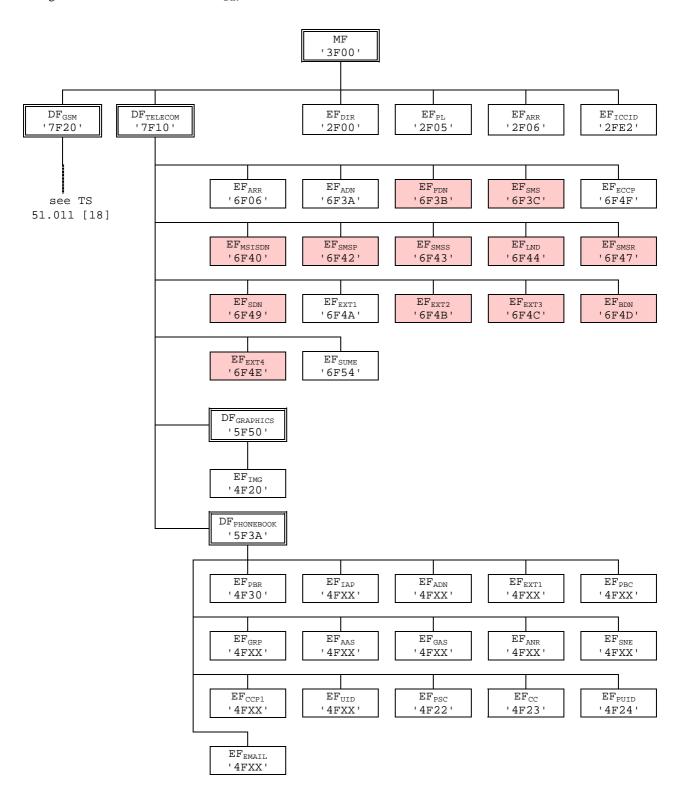
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

see coding of EF_{VGCS}

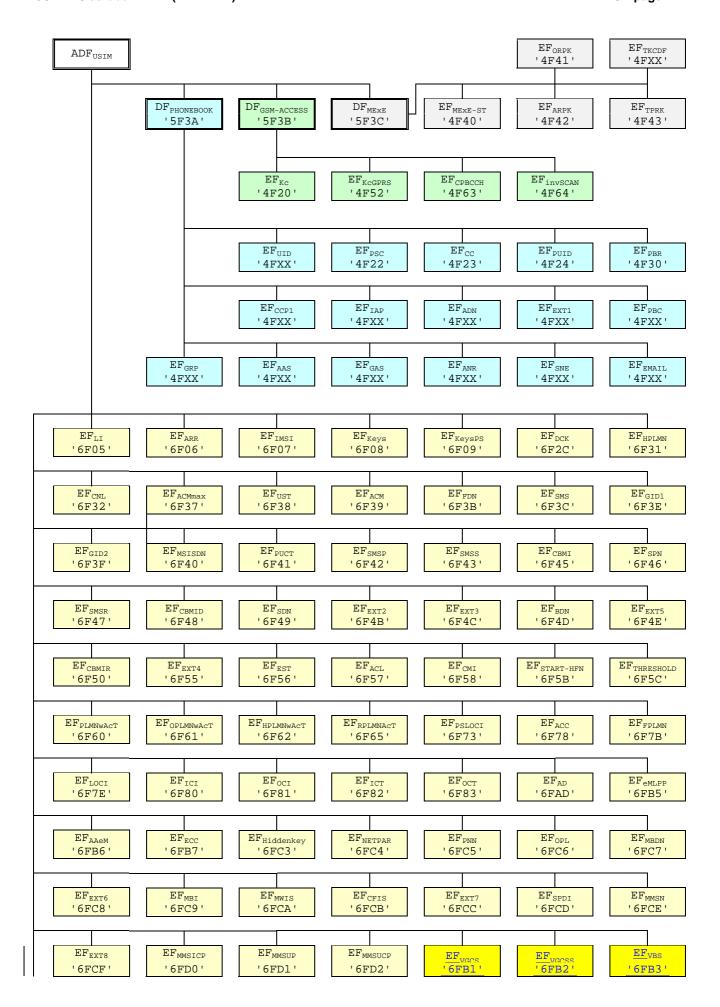
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



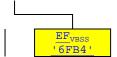


Figure 4.2: File identifiers and directory structures of USIM

5.2.x Voice Group Call Services

Requirement: Service n°xx "allocated and activated".

Voice Group Call Service

Request: The ME performs the reading procedure with EF_{VGCS}.

Voice Group Call Service Status

Request: The ME performs the reading procedure with EF_{VGCSS}.

Update: The ME performs the updating procedure with EF_{VGCSS}.

5.2.X Voice Broadcast Services

Requirement: Service n°yy "allocated and activated".

Voice Broadcast Service

Request: The ME performs the reading procedure with EF_{VBS}.

Voice Broadcast Service Status

Request: The ME performs the reading procedure with EF_{VBSS}.

<u>Update:</u> The ME performs the updating procedure with EF_{VBSS}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphring key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	HPLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

le identification	Description	Change advise
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	Caution
'6F57'	Access point name control list	Yes
'6F58'		Yes
'6F5B'	Comparison method information	Caution
	Initialisation value for Hyperframe number	
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access	Caution
IOFOOI	Technology	0 ::
'6F62'	HPLMN selector with Access Technology	Caution
'6F65'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
<u>'6FB1'</u>	Voice Group Call Service	<u>Yes</u>
'6FB2'	Voice Group Call Service Status	Yes
'6FB3'	Voice Broadcast Service	Yes
'6FB4'	Voice Broadcast Service Status	Yes
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC3'	Key for hidden phone book entries	No
'6FC4'	Network Parameters	No
'6FC5'	PLMN Network Name	Yes
'6FC6'	Operator Network List	Yes
'6FC7'	Mailbox Dialling Numbers	Yes
'6FC8'	Extension 6	Yes
'6FC9'	Mailbox Identifier	
		Caution
'6FCA'	Message Waiting Indication Status	Caution
'6FCB'	Call Forwarding Indication Status	Caution
'6FCC'	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
'6FCE'	MMS Notification	Yes
'6FCF'	Extension 8	Yes
'6FD0'	MMS Issuer Connectivity Parameters	Yes
	1444011 5 (\/
'6FD1' '6FD2'	MMS User Preferences MMS User Connectivity Parameters	Yes Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
	switched domain	
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
6F49'	Service Dialling Numbers	FFFF'
0F49	Extension 2	'00FFFF'
		, , , , , , , , , , , , , , , , , , ,
'6F4B' '6F4C'	Extension 3	'00FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

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Clauses affected:	Ж	4.2.8	3, 4.3,	4.2.x, 4.7,	5.2.x, A	Annex A	, An	nex [)			
Other specs affected:	ж	Y N X X X	Test	r core spec specification Specificat	ons	ons	¥					

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifi	er: '6F38'	Str	ucture: transparent		Mandatory
	SFI: '04'				
File s	size: X bytes, X >=	1	Update	activity	: low
Access Condit READ UPDA ⁻ DEAC ⁻ ACTIV	ΓΕ ΓΙVATE	PIN ADM ADM ADM			
ACTIV	AIE	ADIVI			
Bytes		Descriptio	n	M/O	Length
1	Services no1 to	n°8		M	1 byte
2	Services n°9 to	n°16		0	1 byte
3	Services nº17 to	n°24		0	1 byte
4	Services n°25 to	n°32		0	1 byte
etc.					
X	Services n°(8X-	7) to n°(8X)		0	1 byte

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Short Message Service Parameters (SMSP) Service n°12: Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology **MSISDN** Service n°21: Service n°22: Image (IMG) Service n°23: Not used (reserved for SoLSA) Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Service n°28: Data download via SMS-PP Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: **RUN AT COMMAND command** Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: GSM security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

VGCS Group Identifier List (EF_{VGCS} and EF_{VGCSS})

VBS Group Identifier List (EF_{VBS} and EF_{VBSS})

Coding:

Service n°55

Service n°xx

Service n°yy

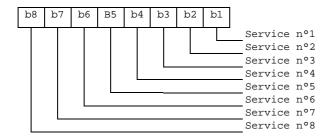
1 bit is used to code each service:

bit = 1: service available;

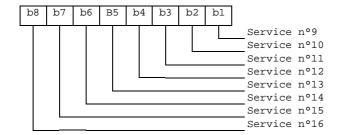
bit = 0: service not available.

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.x EF_{vecs} (Voice Group Call Service)

This EF contains a list of those VGCS group identifiers the user has subscribed to. The elementary file is used by the ME for group call establishment and group call reception.

Identifier	r: '6FB1' Stru		ucture: transparent		<u>Optional</u>
<u>File size</u>	: 4n bytes (n <=	<u>50)</u>	Update activity: low		
Access Conditio	ns:				
READ		PIN			
UPDATE		ADM			
INVALID	ATE	ADM			
REHABI	LITATE	ADM			
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>
1 to 4	Group ID 1			M	4 bytes
<u>5 to 8</u>	Group ID 2			<u>O</u>	4 bytes
<u>:</u>	<u>:</u>			<u>:</u>	<u>:</u>
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes

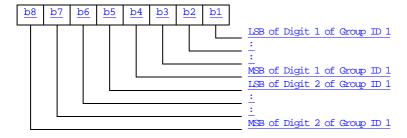
- Group ID

Contents: VGCS Group ID, according to TS 23.003 [25]

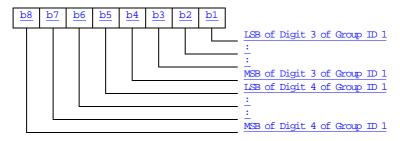
Coding:

The VGCS Group ID is of a variable length with a maximum length of 8 digits. Each VGCS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VGCS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VGCS Group ID Digit 1 is the most significant digit of the Group ID.

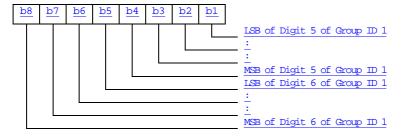
Byte 1:



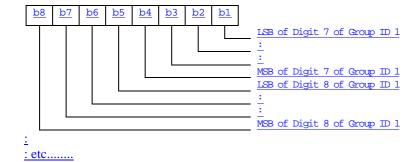
Byte 2:



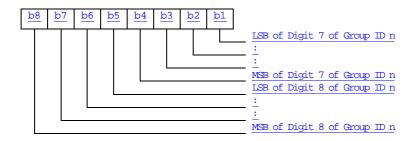
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VGCS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vecss} (Voice Group Call Service Status)

This EF contains the status of activation for the VGCS group identifiers. The elementary file is directly related to the EF_{VGCS} . This EF shall always be allocated if EF_{VGCS} is allocated.

<u>Identifier</u>	Identifier: '6FB2'		Structure: transparent		<u>Optional</u>
File size: 7 bytes			<u>Updat</u>	e activity	<u>r: low</u>
Access Conditio READ UPDATE INVALID REHABII	ATE	PIN ADM ADM ADM			
Bytes		Description	<u>on</u>	M/O	<u>Length</u>
<u>1 to 7</u>	Activation/Dea	ctivation Flag	<u>gs</u>	<u>M</u>	7 bytes

- Activation/Deactivation Flags

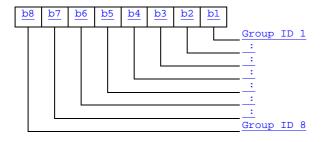
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

bit = 0 means - Group ID deactivated

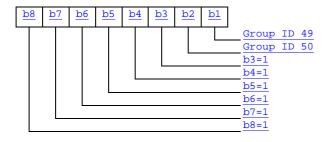
bit = 1 means - Group ID activated

Byte 1:



etc : : : : : :

Byte 7:



4.2.x EF_{VBS} (Voice Broadcast Service)

This EF contains a list of those VBS group identifiers the user has subscribed to. The elementary file is used by the ME for broadcast call establishment and broadcast call reception.

<u>Identifier</u>	: '6FB3' Structure: transparent			<u>Optional</u>	
File size	: 4n bytes (n <=	<u>50)</u>	<u>Update</u>	activity	: low
Access Conditio READ UPDATE INVALID REHABI	ATE	PIN ADM ADM ADM			
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>
<u>1 to 4</u>	Group ID 1			<u>M</u>	4 bytes
<u>5 to 2</u>	Group ID 2			<u>O</u>	4 bytes
<u>:</u>	<u> </u>			Ξ.	<u>:</u>
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes

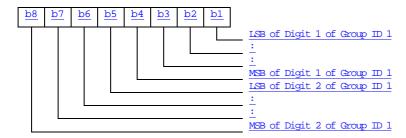
- Group ID

Contents: VBS Group ID, according to TS 23.003 [25]

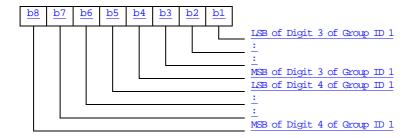
Coding:

The VBS Group ID is of a variable length with a maximum length of 8 digits. Each VBS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VBS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VBS Group ID Digit 1 is the most significant digit of the Group ID.

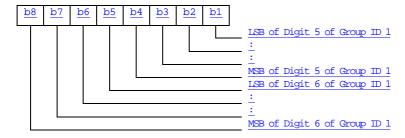
Byte 1:



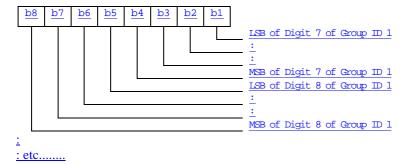
Byte 2:



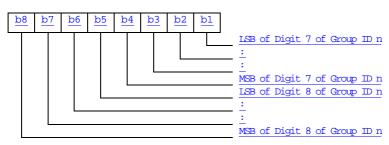
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VBS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vBSS} (Voice Broadcast Service Status)

This EF contains the status of activation for the VBS group identifiers. The elementary file is directly related to the EF_{VBS} . This EF shall always be allocated if EF_{VBS} is allocated.

<u>Identifier</u>	: '6FB4'	<u>Str</u>	ucture: transparent		<u>Optional</u>
File	e size: 7 bytes		<u>Update</u>	activity	<u>r: low</u>
Access Condition READ UPDATE INVALID REHABI	ATE	CHV' ADM ADM ADM	1		
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>
1 to 7	Activation/Dea	ctivation Flag	<u>gs</u>	M	7 bytes

- Activation/Deactivation Flags

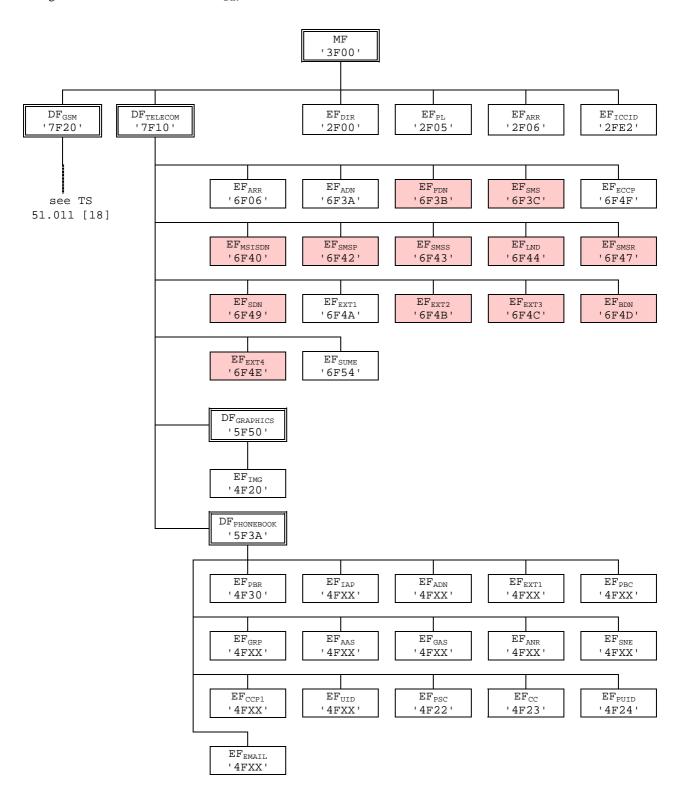
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

see coding of EF_{VGCS}

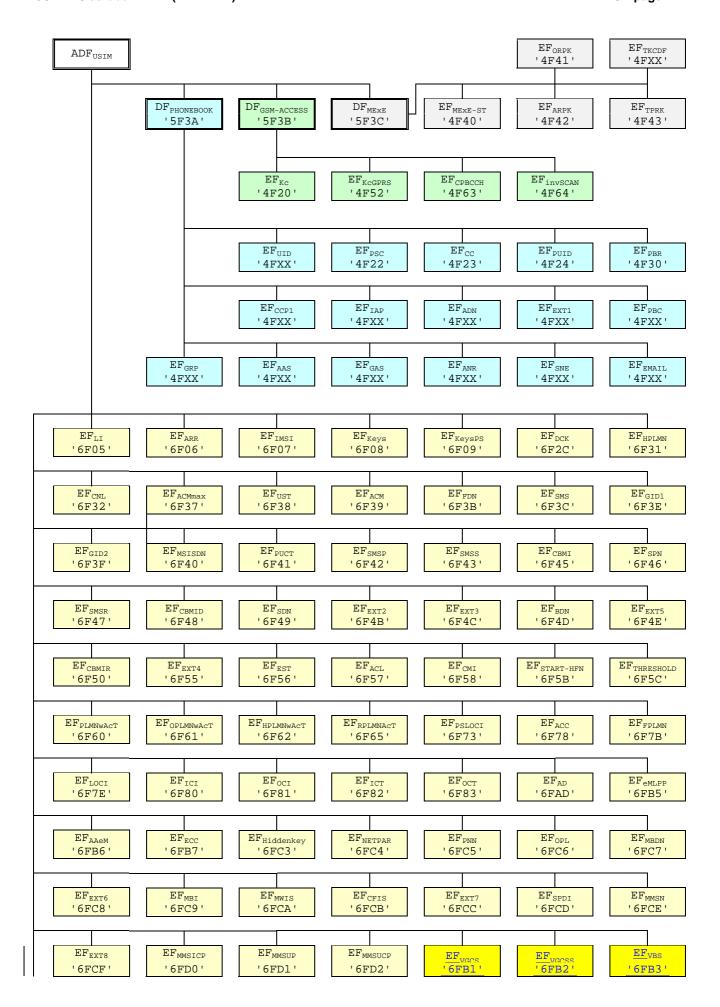
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



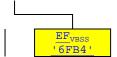


Figure 4.2: File identifiers and directory structures of USIM

5.2.x Voice Group Call Services

Requirement: Service n°xx "allocated and activated".

Voice Group Call Service

Request: The ME performs the reading procedure with EF_{VGCS}.

Voice Group Call Service Status

Request: The ME performs the reading procedure with EF_{VGCSS}.

Update: The ME performs the updating procedure with EF_{VGCSS}.

5.2.X Voice Broadcast Services

Requirement: Service n°yy "allocated and activated".

Voice Broadcast Service

Request: The ME performs the reading procedure with EF_{VBS}.

Voice Broadcast Service Status

Request: The ME performs the reading procedure with EF_{VBSS}.

<u>Update:</u> The ME performs the updating procedure with EF_{VBSS}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphring key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	HPLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

identification	Description	Change advis
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	Caution
'6F57'	Access point name control list	Yes
'6F58'	Comparison method information	Yes
'6F5B'	Initialisation value for Hyperframe number	Caution
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access	Caution
	Technology	
'6F62'	HPLMN selector with Access Technology	Caution
'6F65'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
<u>'6FB1'</u>	Voice Group Call Service	<u>Yes</u>
<u>'6FB2'</u>	Voice Group Call Service Status	<u>Yes</u>
<u>'6FB3'</u>	Voice Broadcast Service	<u>Yes</u>
<u>'6FB4'</u>	Voice Broadcast Service Status	<u>Yes</u>
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC3'	Key for hidden phone book entries	No
'6FC4'	Network Parameters	No
'6FC5'	PLMN Network Name	Yes
'6FC6'	Operator Network List	Yes
'6FC7'	Mailbox Dialling Numbers	Yes
'6FC8'	Extension 6	Yes
'6FC9'	Mailbox Identifier	Caution
'6FCA'	Message Waiting Indication Status	Caution
'6FCB'	Call Forwarding Indication Status	Caution
'6FCC'	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
'6FCE'	MMS Notification	Yes
'6FCF'	Extension 8	Yes
	MMS Issuer Connectivity Parameters	Yes
'6FD0'	INING ISSUEL CONTINUITY FAIRINGLEIS	. 00
'6FD0' '6FD1'	MMS User Preferences	Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
	switched domain	
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
6F49'	Service Dialling Numbers	FFFF'
0F49	Extension 2	'00FFFF'
		, , , , , , , , , , , , , , , , , , ,
'6F4B' '6F4C'	Extension 3	'00FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Dallas USA 18-21 November 2003											
CHANGE REQUEST											
*	31.	102	CR	181	≭rev		Ħ	Current vers	ion:	6.3.0	*
For <mark>HELP</mark> on u	-				_						
Proposed change	affec:	ts: (JICC a	apps# X	ME	Rad	dio Ac	cess Networ	·k [Core Ne	etwork
Title: 第	Cor	rection	ns on t	files for sup	port of GSM	1 servi	ices u	sing USIM –	ASC	I Files	
Source: ∺	T3										
Work item code: ₩	TEI							Date: ₩	20/	11/2003	
Category: ∺	Deta	F (corr A (corr B (add C (fundation D (editation	rection, respon dition o ctional torial m olanatio	ds to a corre f feature), modification nodification)	ction in an ea			R97 R98 R99 Rel-4	(GSN (Rele (Rele (Rele (Rele (Rele (Rele	-	eases:
Reason for change): H	shall Ther	suppo efore	ort the USII TS 31.102 r	M. nust be ame	ended	l to all	g that R5 and ow for files p s, files relate	ertai	ning to GS	SM
Summary of chang	ie: ૠ	Add simil Add repre Add Add Add	VBS (EF VC ar con EF VC esenta Proce Proce sugge	Group Identi GCS, EF VG tent as und GCS, EF VG tion of the f edure for VG edure for VG sted OTA a	fier support GCSS, EF V er DFgsm s GCSS, EF V	to US BS ar pecific BS ar Call S ast Se anex A	SIM Send EF ed in Tand EF ervices ervices	VBSS to the es s	(UST ADF	usim to ha	ave a
	0.0	001	4.400		. (h		- 110111			
Consequences if not approved:	Ж	GSN	I ASC	services n	ot available	when	using	ja USIM.			
Clauses affected:	#		3, 4.3,	4.2.x, 4.7, 5	5.2.x, Annex	A, Ar	nex [)			
Other specs affected:	₩	Y N X X	Test	r core spec specificatio	ns	Ħ					

4.2.8 EF_{UST} (USIM Service Table)

This EF indicates which services are available. If a service is not indicated as available in the USIM, the ME shall not select this service.

Identifier: '6F38'		Str	tructure: transparent		Mandatory	
SFI: '04'						
File s	size: X bytes, X >=	1	Update activity: low			
	ΓΕ ΓΙVATE	PIN ADM ADM ADM				
ACTIVATE ADM						
Bytes		Descriptio	n	M/O	Length	
1	Services no1 to	n°8		M	1 byte	
2	Services n°9 to	n°16		0	1 byte	
3	Services nº17 to	n°24		0	1 byte	
4	Services n°25 to	n°32		0	1 byte	
etc.						
X	Services n°(8X-	7) to n°(8X)		0	1 byte	

-Services Contents: Service n°1: Local Phone Book Service n°2: Fixed Dialling Numbers (FDN) Service n°3: Extension 2 Service n°4: Service Dialling Numbers (SDN) Service n°5: Extension3 Service n°6: Barred Dialling Numbers (BDN) Service n°7: Extension4 Outgoing Call Information (OCI and OCT) Service n°8: Service n°9: Incoming Call Information (ICI and ICT) Service n°10: Short Message Storage (SMS) Short Message Status Reports (SMSR) Service n°11: Short Message Service Parameters (SMSP) Service n°12: Service n°13: Advice of Charge (AoC) Capability Configuration Parameters (CCP) Service n°14: Service n°15: Cell Broadcast Message Identifier Cell Broadcast Message Identifier Ranges Service n°16: Service n°17: Group Identifier Level 1 Service n°18: Group Identifier Level 2 Service n°19: Service Provider Name Service n°20: User controlled PLMN selector with Access Technology **MSISDN** Service n°21: Service n°22: Image (IMG) Service n°23: Not used (reserved for SoLSA) Service n°24: Enhanced Multi-Level Precedence and Pre-emption Service Service n°25: Automatic Answer for eMLPP Service n°26: **RFU** Service n°27: **GSM Access** Service n°28: Data download via SMS-PP Service n°29: Data download via SMS-CB Service n°30: Call Control by USIM Service n°31: MO-SMS Control by USIM Service n°32: **RUN AT COMMAND command** Service n°33: shall be set to '1' Service n°34: **Enabled Services Table** Service n°35: APN Control List (ACL) Service n°36: **Depersonalisation Control Keys** Service n°37: Co-operative Network List Service n°38: GSM security context Service n°39: **CPBCCH Information** Service n°40: Investigation Scan Service n°41: **MExE** Service n°42: Operator controlled PLMN selector with Access Technology Service n°43: HPLMN selector with Access Technology Service n°44: Extension 5 Service n°45: PLMN Network Name Service n°46: Operator PLMN List Service n°47: Mailbox Dialling Numbers Service n°48: Message Waiting Indication Status Service n°49: Call Forwarding Indication Status Service n°50: RPLMN Last used Access Technology Service n°51: Service Provider Display Information Service n°52 Multimedia Messaging Service (MMS) Service n°53 Extension 8 Service n°54 Call control on GPRS by USIM

The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the responsibility of the 3GPP.

MMS User Connectivity Parameters

VGCS Group Identifier List (EF_{VGCS} and EF_{VGCSS})

VBS Group Identifier List (EF_{VBS} and EF_{VBSS})

Coding:

Service n°55

Service n°xx

Service n°yy

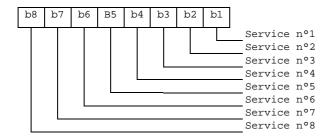
1 bit is used to code each service:

bit = 1: service available;

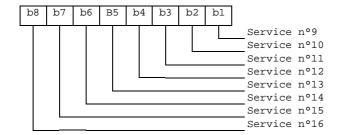
bit = 0: service not available.

Service available means that the USIM has the capability to support the service and that the service is available
for the user of the USIM unless the service is identified as "disabled" in EF_{EST}.
 Service not available means that the service shall not be used by the USIM user, even if the USIM has the
capability to support the service.

First byte:



Second byte:



etc.

4.2.x EF_{vecs} (Voice Group Call Service)

This EF contains a list of those VGCS group identifiers the user has subscribed to. The elementary file is used by the ME for group call establishment and group call reception.

Identifier	: '6FB1 <u>'</u>	Structure: transparent			<u>Optional</u>		
File size: 4n bytes (n <= 50)			<u>Update</u>	Update activity: low			
Access Conditions:							
READ		PIN					
UPDATE		ADM					
INVALIDATE ADM							
REHABILITATE ADM							
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>		
1 to 4	Group ID 1			M	4 bytes		
<u>5 to 8</u>	Group ID 2			<u>O</u>	4 bytes		
1	<u>:</u>			<u>:</u>	<u>:</u>		
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes		

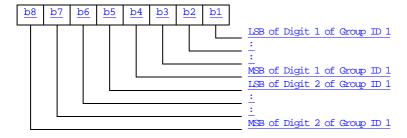
- Group ID

Contents: VGCS Group ID, according to TS 23.003 [25]

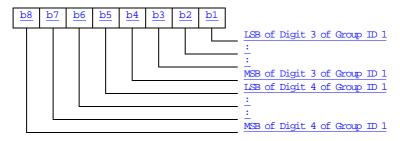
Coding:

The VGCS Group ID is of a variable length with a maximum length of 8 digits. Each VGCS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VGCS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VGCS Group ID Digit 1 is the most significant digit of the Group ID.

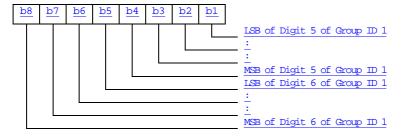
Byte 1:



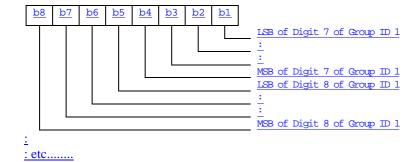
Byte 2:



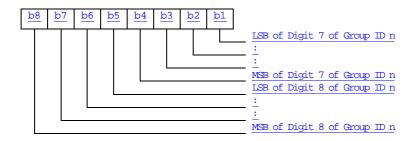
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VGCS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vecss} (Voice Group Call Service Status)

This EF contains the status of activation for the VGCS group identifiers. The elementary file is directly related to the EF_{VGCS} . This EF shall always be allocated if EF_{VGCS} is allocated.

Identifier: '6FB2'		Structure: transparent			<u>Optional</u>	
File size: 7 bytes			Update activity: low			
Access Conditio READ UPDATE INVALID REHABII	ATE	PIN ADM ADM ADM				
Bytes		Description	<u>on</u>	M/O	<u>Length</u>	
<u>1 to 7</u>	Activation/Dea	ctivation Flag	<u>gs</u>	<u>M</u>	7 bytes	

- Activation/Deactivation Flags

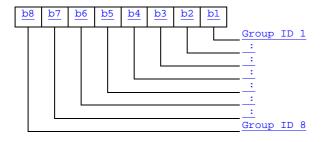
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

bit = 0 means - Group ID deactivated

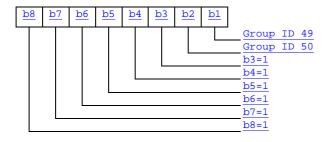
bit = 1 means - Group ID activated

Byte 1:



etc : : : : : :

Byte 7:



4.2.x EF_{VBS} (Voice Broadcast Service)

This EF contains a list of those VBS group identifiers the user has subscribed to. The elementary file is used by the ME for broadcast call establishment and broadcast call reception.

<u>Identifier</u>	: '6FB3'	Str	ucture: transparent	<u>Optional</u>		
File size: 4n bytes (n <= 50) Update				e activity: low		
Access Conditions: READ PIN UPDATE ADM INVALIDATE ADM REHABILITATE ADM						
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>	
<u>1 to 4</u>	Group ID 1			<u>M</u>	4 bytes	
<u>5 to 2</u>	Group ID 2		<u>O</u>	4 bytes		
<u>:</u>	<u> </u>			Ξ.	<u>:</u>	
(4n-3) to 4n	Group ID n			<u>O</u>	4 bytes	

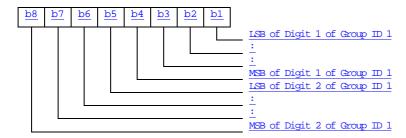
- Group ID

Contents: VBS Group ID, according to TS 23.003 [25]

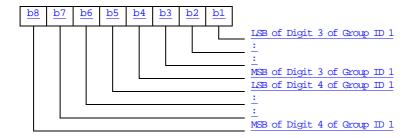
Coding:

The VBS Group ID is of a variable length with a maximum length of 8 digits. Each VBS Group ID is coded on four bytes, with each digit within the code being coded on four bits corresponding to BCD code. If a VBS Group ID of less than 8 digits is chosen, then the unused nibbles shall be set to 'F'. VBS Group ID Digit 1 is the most significant digit of the Group ID.

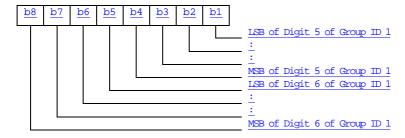
Byte 1:



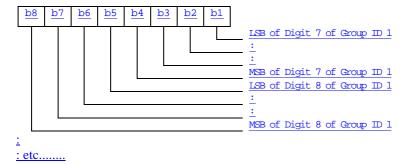
Byte 2:



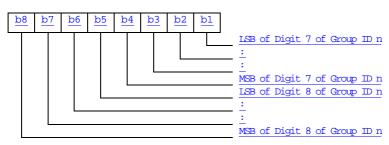
Byte 3:



Byte 4:



Byte (4n-3) to 4n:



If storage for fewer than the maximum possible number *n* of VBS Group IDs, is required, the excess bytes shall be set to 'FF'.

4.2.x EF_{vBSS} (Voice Broadcast Service Status)

This EF contains the status of activation for the VBS group identifiers. The elementary file is directly related to the EF_{VBS} . This EF shall always be allocated if EF_{VBS} is allocated.

Identifier: '6FB4'		Structure: transparent			<u>Optional</u>
File	e size: 7 bytes		<u>Update</u>	<u>r: low</u>	
Access Condition READ UPDATE INVALID REHABI	ATE	CHV [/] ADM ADM ADM	1		
<u>Bytes</u>		Description	<u>on</u>	M/O	<u>Length</u>
1 to 7	Activation/Deactivation Flag		<u>gs</u>	M	7 bytes

- Activation/Deactivation Flags

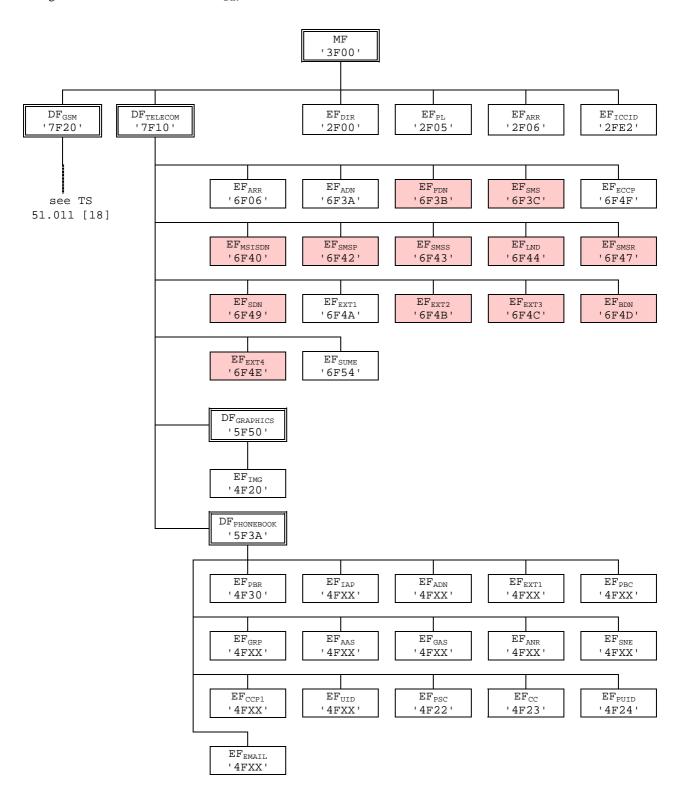
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

see coding of EF_{VGCS}

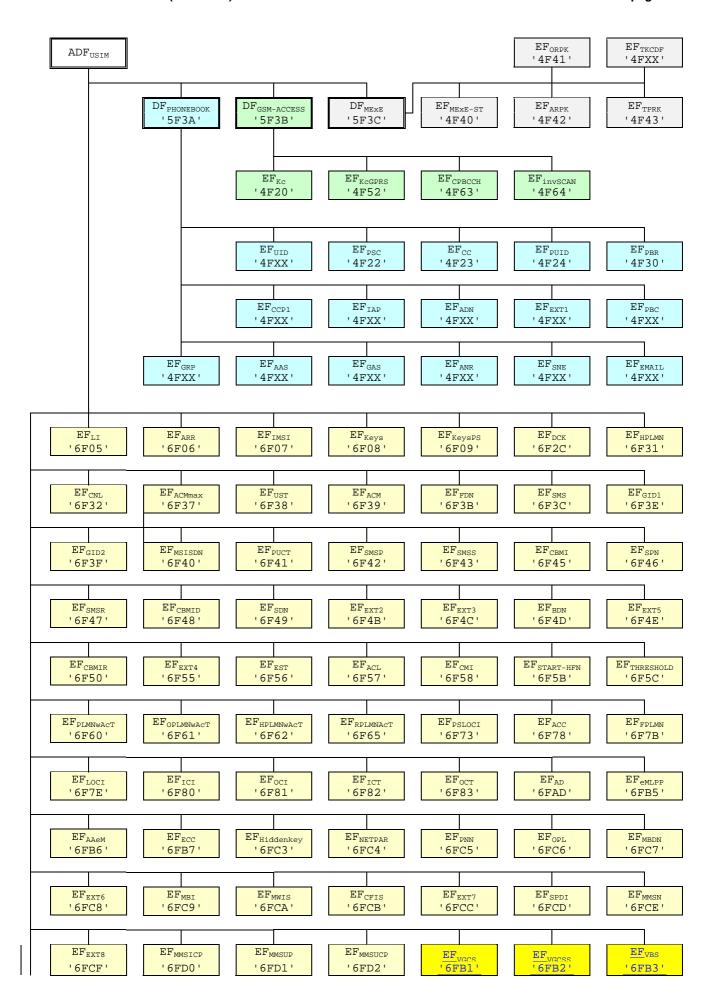
4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

Figure 4.1: File identifiers and directory structures of UICC



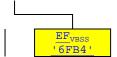


Figure 4.2: File identifiers and directory structures of USIM

5.2.x Voice Group Call Services

Requirement: Service n°xx "allocated and activated".

Voice Group Call Service

Request: The ME performs the reading procedure with EF_{VGCS}.

Voice Group Call Service Status

Request: The ME performs the reading procedure with EF_{VGCSS}.

Update: The ME performs the updating procedure with EF_{VGCSS}.

5.2.X Voice Broadcast Services

Requirement: Service n°yy "allocated and activated".

Voice Broadcast Service

Request: The ME performs the reading procedure with EF_{VBS}.

Voice Broadcast Service Status

Request: The ME performs the reading procedure with EF_{VBSS}.

<u>Update:</u> The ME performs the updating procedure with EF_{VBSS}.

[...]

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphring key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	HPLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

le identification	Description	Change advise
'6F40'	MSISDN storage	Yes
'6F41'	PUCT	Yes
'6F42'	SMS parameters	Yes
'6F43'	SMS status	Yes
'6F45'	CBMI	Caution
'6F46'	Service provider name	Yes
'6F47'	Short message status reports	Yes
'6F48'	CBMID	Yes
'6F49'	Service Dialling Numbers	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 5	Yes
'6F4F'	Capability configuration parameters 2	Yes
'6F50'	CBMIR	Yes
'6F54'	SetUp Menu Elements	Yes
'6F55'	Extension 4	Yes
'6F56'	Enabled services table	Caution
'6F57'	Access point name control list	Yes
'6F58'		Yes
'6F5B'	Comparison method information	Caution
	Initialisation value for Hyperframe number	
'6F5C'	Maximum value of START	Yes
'6F60'	User controlled PLMN selector with Access Technology	No
'6F61'	Operator controlled PLMN selector with Access	Caution
IOFOOI	Technology	0 ::
'6F62'	HPLMN selector with Access Technology	Caution
'6F65'	RPLMN last used Access Technology	Caution
'6F73'	Packet switched location information	Caution
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (Note 1)
'6F80'	Incoming call information	Yes
'6F81'	Outgoing call information	Yes
'6F82'	Incoming call timer	Yes
'6F83'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
<u>'6FB1'</u>	Voice Group Call Service	<u>Yes</u>
'6FB2'	Voice Group Call Service Status	Yes
'6FB3'	Voice Broadcast Service	Yes
'6FB4'	Voice Broadcast Service Status	Yes
'6FB5'	Enhanced Multi Level Pre-emption and Priority	Yes
'6FB6'	Automatic Answer for eMLPP Service	Yes
'6FB7'	Emergency Call Codes	Caution
'6FC3'	Key for hidden phone book entries	No
'6FC4'	Network Parameters	No
'6FC5'	PLMN Network Name	Yes
'6FC6'	Operator Network List	Yes
'6FC7'	Mailbox Dialling Numbers	Yes
'6FC8'	Extension 6	Yes
'6FC9'	Mailbox Identifier	
		Caution
'6FCA'	Message Waiting Indication Status	Caution
'6FCB'	Call Forwarding Indication Status	Caution
'6FCC'	Extension 7	Yes
'6FCD'	Service Provider Display Information	Yes
'6FCE'	MMS Notification	Yes
'6FCF'	Extension 8	Yes
'6FD0'	MMS Issuer Connectivity Parameters	Yes
	1444011 5 (\/
'6FD1' '6FD2'	MMS User Preferences MMS User Connectivity Parameters	Yes Yes

NOTE1: If EF_{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF_{LOCI} accordingly.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
	switched domain	
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
6F49'	Service Dialling Numbers	FFFF'
0F49	Extension 2	'00FFFF'
		, , , , , , , , , , , , , , , , , , ,
'6F4B' '6F4C'	Extension 3	'00FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

[...]

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Tdoc # T3-031019

(revised from T3-030931)

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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:

- 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 $\underline{\text{ftp://ftp.3gpp.org/specs/}}$ 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.

4.2.6 EF_{HPPLMN} (H<u>ighest Priority PLMN</u> search period)

This EF contains the interval of time between searches for the highest priority HPLMN (see TS 22.011 [2]).

Identifi	er: '6F31'	Str	ucture: transparent		Mandatory
	SFI: '12'				
F	File size: 1 byte		Update	activity	: low
Access Condit READ UPDAT DEACT ACTIVA	TE TIVATE	PIN ADM ADM ADM			
Bytes		Descriptio	n	M/O	Length
1	Time interval			М	1 byte

- Time interval.

Contents:

the time interval between two searches.

Coding:

the time interval is coded in integer multiples of n minutes. The range is from n minutes to a maximum value. The value '00' indicates that no attempts shall be made to search for <u>any higher priority</u> the HPLMN. The encoding is:

- '00': No higher priority HPLMN search attempts;
- '01': n minutes;
- '02': 2n minutes;
- :
- 'YZ': (16Y+Z)n minutes (maximum value).
- All other values shall be interpreted by the ME as a default period.

For specification of the integer timer interval n, the maximum value and the default period refer to TS 22.011 [2].

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .

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:

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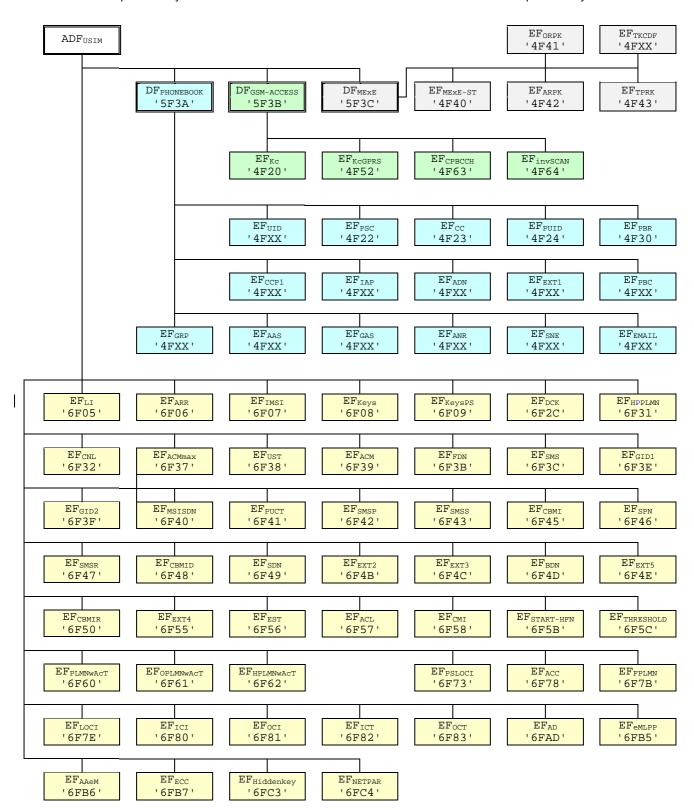


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.1.1.2 USIM initialisation

The ME requests the emergency call codes. For service requirements, see TS 22.101 [24].

The ME requests the Language Indication. The preferred language selection shall always use the EF_{LI} in preference to the EF_{PL} at the MF unless any of the following conditions applies:

- if the EF_{LI} has the value 'FFFF' in its highest priority position, then the preferred language selection shall be the language preference in the EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if the ME does not support any of the language codes indicated in EF_{LI} , or if EF_{LI} is not present, then the language selection shall be as defined in EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if neither the languages of EF_{LI} nor EF_{PL} are supported by the terminal, then the terminal shall use its own internal default selection.

The ME then runs the user verification procedure. If the procedure is not performed successfully, the USIM initialisation stops.

The ME performs the administrative information request.

The ME performs the USIM Service Table request.

The ME performs the Enabled Services Table Request.

In case FDN is enabled, an ME which does not support FDN shall allow emergency calls but shall not allow MO-CS calls and MO-SMS.

If BDN is enabled, an ME which does not support Call Control shall allow emergency calls but shall not allow MO-CS calls.

If ACL is enabled, an ME which does not support ACL shall not send any APN to the network.

If all these procedures have been performed successfully then 3G session shall start. In all other cases 3G session shall not start.

Afterwards, the ME runs the following procedures if the ME and the USIM support the related services:

- IMSI request.
- Access control information request.
- Highest Priority PLMN search period request.
- HPLMN selector with Access Technology request;
- User controlled PLMN selector with Access Technology request;
- Operator controlled PLMN selector with Access Technology request;
- GSM initialisation requests.
- Location Information request for CS-and/or PS-mode.
- Cipher key and integrity key request for CS- and/or PS-mode.
- Forbidden PLMN request.
- Initialisation value for hyperframe number request.
- Maximum value of START request.
- CBMID request.
- Depending on the further services that are supported by both the ME and the USIM the corresponding EFs have to be read.

7

After the USIM initialisation has been completed successfully, the ME is ready for a 3G session and shall indicate this to the USIM by sending a particular STATUS command.

5.2.4 Highest Priority PLMN search period request

The ME performs the reading procedure with EF_{HPPLMN}.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F75'	CPBCCH Information	No
'4F76	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F07'	IMSI	Caution (Note 1)
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F20'	Ciphering key Kc	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	Highest Priority PLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F4F'	Extended Capability configuration parameters	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping life Grouping information alpha string	'FFFF'
'4FXX'		
	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F20'	Ciphering key Kc	'FFFF07'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	Highest Priority PLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
	• '	'FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	
'6F4B'	Extension 2	'00FFFF'
'6F4C'	Extension 3	'00FFFF'

Annex H (normative): List of SFI Values

This annex lists SFI values assigned in this specification.

List of SFI Values at the USIM ADF Level H.1

File Identification	SFI	Description			
'6FB7'	'01'	Emergency call codes			
'6F05'	'02'	anguage indication			
'6FAD'	'03'	dministrative data			
'6F38'	'04'	USIM service table			
'6F56'	'05'	Enabled services table			
'6F78'	'06'	Access control class			
'6F07'	'07'	IMSI			
'6F08'	'08'	Ciphering and integrity keys			
'6F09'	'09'	Ciphering and integrity keys for packet switched domain			
'6F60'	'0A'	User PLMN selector			
'6F7E	'0B'	Location information			
'6F73'	'0C'	Packet switched location information			
'6F7B'	'0D'	Forbidden PLMNs			
'6F48'	'0E'	CBMID			
'6F5B'	'0F'	Hyperframe number			
'6F5C'	'10'	Maximum value of hyperframe number			
'6F61'	'11'	Operator PLMN selector			
'6F31'	'12'	Highest Priority PLMN search period			
'6F62'	'13'	Preferred HPLMN access technology			
'6F80'	'14'	Incoming call information			
'6F81'	'15'	Outgoing call information			
'6F4F'	'16'	Capability configuration parameters 2			
'6F06'	'17'	Access Rule Reference			
'6F39'	'1C'	Accumulated Call Meter			
NOTE: When used to	the value '1C	shall be used as SFI for EF _{ACM} , for compatibility reasons the terminal shall			
accept other	values.				

All other SFI values are reserved for future use.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

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Other specs affected:	¥	Y N X X	Test	core spenspecification		器					
Other comments	s: X										

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4.2.6 EF_{HPPLMN} (Highest Priority PLMN search period)

This EF contains the interval of time between searches for the highest priority HPLMN (see TS 22.011 [2]).

Identifie	er: '6F31'	Stru	ucture: transparent		Mandatory
	SFI: '12'				
F	ile size: 1 byte		Update	activity	: low
Access Condition READ UPDATI DEACTI ACTIVA	E IVATE	PIN ADM ADM ADM			
Bytes		Description	١	M/O	Length
1	Time interval			М	1 byte

- Time interval.

Contents:

the time interval between two searches.

Coding

the time interval is coded in integer multiples of n minutes. The range is from n minutes to a maximum value. The value '00' indicates that no attempts shall be made to search for <u>any higher priority</u> the HPLMN. The encoding is:

- '00': No <u>higher priority</u> HPLMN search attempts;
- '01': n minutes;
- '02': 2n minutes;
- : :
- 'YZ': (16Y+Z)n minutes (maximum value).
- All other values shall be interpreted by the ME as a default period.

For specification of the integer timer interval n, the maximum value and the default period refer to TS 22.011 [2].

4.7 Files of USIM

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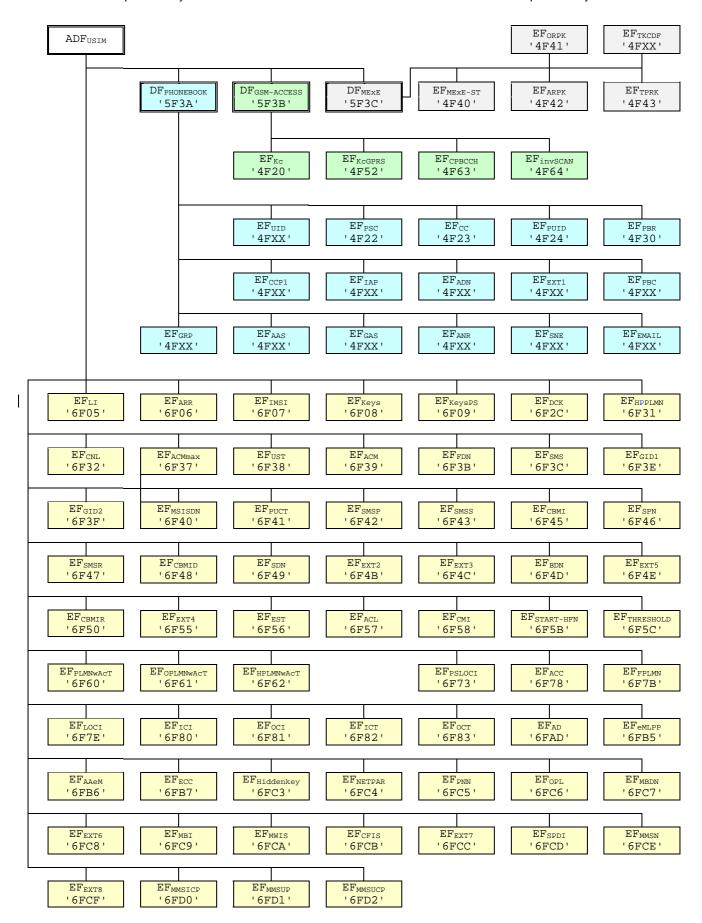


Figure 4.2: File identifiers and directory structures of USIM

5.1.1.2 USIM initialisation

The ME requests the emergency call codes. For service requirements, see TS 22.101 [24].

The ME requests the Language Indication. The preferred language selection shall always use the EF_{LI} in preference to the EF_{PL} at the MF unless any of the following conditions applies:

- if the EF_{LI} has the value 'FFFF' in its highest priority position, then the preferred language selection shall be the language preference in the EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if the ME does not support any of the language codes indicated in EF_{LI} , or if EF_{LI} is not present, then the language selection shall be as defined in EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if neither the languages of EF_{LI} nor EF_{PL} are supported by the terminal, then the terminal shall use its own internal default selection.

The ME then runs the user verification procedure. If the procedure is not performed successfully, the USIM initialisation stops.

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The ME performs the USIM Service Table request.

The ME performs the Enabled Services Table Request.

In case FDN is enabled, an ME which does not support FDN shall allow emergency calls but shall not allow MO-CS calls and MO-SMS.

If BDN is enabled, an ME which does not support Call Control shall allow emergency calls but shall not allow MO-CS calls.

If ACL is enabled, an ME which does not support ACL shall not send any APN to the network.

If all these procedures have been performed successfully then 3G session shall start. In all other cases 3G session shall not start.

Afterwards, the ME runs the following procedures if the ME and the USIM support the related services:

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- Access control information request.
- Highest Priority PLMN search period request.
- HPLMN selector with Access Technology request;
- User controlled PLMN selector with Access Technology request;
- Operator controlled PLMN selector with Access Technology request;
- GSM initialisation requests.
- Location Information request for CS-and/or PS-mode.
- Cipher key and integrity key request for CS- and/or PS-mode.
- Forbidden PLMN request.
- Initialisation value for hyperframe number request.
- Maximum value of START request.
- CBMID request.

- Depending on the further services that are supported by both the ME and the USIM the corresponding EFs have to be read.

After the USIM initialisation has been completed successfully, the ME is ready for a 3G session and shall indicate this to the USIM by sending a particular STATUS command.

5.2.4 Highest Priority PLMN search period request

The ME performs the reading procedure with $EF_{H\underline{P}PLMN}$.

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphering key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1)
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	Highest Priority PLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes
	Continued	

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphering key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'		'FFFF'
	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant
'6F07'	DF _{TELECOM})	Operator dependent
		Operator dependant
'6F08' '6F09'	Ciphering and integrity keys Ciphering and integrity keys for packet	'07FFFF'
6509	switched domain	0/FFFF
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	Highest Priority PLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
	Extension 2	'00FFFF'
<u>'6F4B'</u> '6F4C'	Extension 3	'00FFFF'

Annex H (normative): List of SFI Values

This annex lists SFI values assigned in the present document.

H.1 List of SFI Values at the USIM ADF Level

File Identification	SFI	Description				
'6FB7'	'01'	Emergency call codes				
'6F05'	'02'	Language indication				
'6FAD'	'03'	Administrative data				
'6F38'	'04'	SIM service table				
'6F56'	'05'	Enabled services table				
'6F78'	'06'	Access control class				
'6F07'	'07'	IMSI				
'6F08'	'08'	Ciphering and integrity keys				
'6F09'	'09'	Ciphering and integrity keys for packet switched domain				
'6F60'	'0A'	User PLMN selector				
'6F7E	'0B'	Location information				
'6F73'	'0C'	Packet switched location information				
'6F7B'	'0D'	Forbidden PLMNs				
'6F48'	'0E'	CBMID				
'6F5B'	'0F'	Hyperframe number				
'6F5C'	'10'	Maximum value of hyperframe number				
'6F61'	'11'	Operator PLMN selector				
'6F31'	'12'	Highest Priority PLMN search period				
'6F62'	'13'	Preferred HPLMN access technology				
'6F80'	'14'	Incoming call information				
'6F81'	'15'	Outgoing call information				
'6F4F'	'16'	Capability configuration parameters 2				
'6F06'	'17'	Access Rule Reference				
'6FC5'	'19'	PLMN Network Name				
'6FC6'	'1A'	Operator Network List				
'6FCD'	'1B'	Service Provider Display Information				
'6F39'	'1C'	Accumulated Call Meter				
NOTE: When used the value '1C' shall be used as SFI for EF _{ACM} , for compatibility reasons the terminal shall						
accept other values.						

All other SFI values are reserved for future use.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

CHANGE REQUEST									CR-Form-v7
*	31.102	CR	184	≋rev	- 3	ß C	Current versi	on: 5.6. () #
For <u>HELP</u> on us Proposed change as			e bottom of th		_		oop-up text o		symbols.
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Source: #	T3								
Work item code: ₩	TEI						Date: ₩	20/11/03	
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Consequences if not approved:	₩ Mis-	alignm	ent between	the T3, CN	and S/	A spe	ecifications		
Clauses affected:	₩ 4.2.	6, 4.7, 5	5.1.1.2, 5.2.4	, Annex A,	Annex	E, Ar	nex H.1		
Other specs affected:	Y N 米 X X	Other Test	core specification	S	₩				

How to create CRs using this form:

 \mathfrak{R}

Other comments:

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:

- 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 $\underline{\text{ftp://ftp.3gpp.org/specs/}}$ 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.

4.2.6 EF_{HPPLMN} (Highest Priority PLMN search period)

This EF contains the interval of time between searches for the highest priority HPLMN (see TS 22.011 [2]).

Identifie	er: '6F31'	Stru	ucture: transparent		Mandatory
	SFI: '12'				
File size: 1 byte			Update	: low	
Access Conditions: READ UPDATE DEACTIVATE ACTIVATE		PIN ADM ADM ADM			
Bytes	Description		1	M/O	Length
1	Time interval			М	1 byte

- Time interval.

Contents:

the time interval between two searches.

Coding

the time interval is coded in integer multiples of n minutes. The range is from n minutes to a maximum value. The value '00' indicates that no attempts shall be made to search for <u>any higher priority</u> the HPLMN. The encoding is:

- '00': No higher priority HPLMN search attempts;
- '01': n minutes;
- '02': 2n minutes;
- : :
- 'YZ': (16Y+Z)n minutes (maximum value).
- All other values shall be interpreted by the ME as a default period.

For specification of the integer timer interval n, the maximum value and the default period refer to TS 22.011 [2].

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .

:

:

:

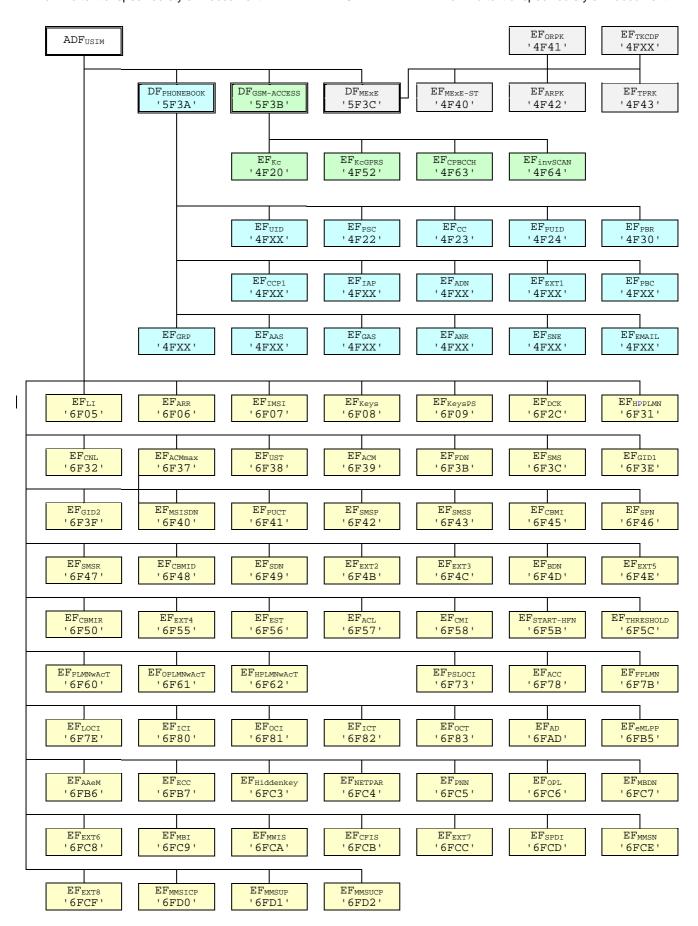


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.1.1.2 USIM initialisation

The ME requests the emergency call codes. For service requirements, see TS 22.101 [24].

The ME requests the Language Indication. The preferred language selection shall always use the EF_{LI} in preference to the EF_{PL} at the MF unless any of the following conditions applies:

- if the EF_{LI} has the value 'FFFF' in its highest priority position, then the preferred language selection shall be the language preference in the EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if the ME does not support any of the language codes indicated in EF_{LI} , or if EF_{LI} is not present, then the language selection shall be as defined in EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if neither the languages of EF_{LI} nor EF_{PL} are supported by the terminal, then the terminal shall use its own internal default selection.

The ME then runs the user verification procedure. If the procedure is not performed successfully, the USIM initialisation stops.

The ME performs the administrative information request.

The ME performs the USIM Service Table request.

The ME performs the Enabled Services Table Request.

In case FDN is enabled, an ME which does not support FDN shall allow emergency calls but shall not allow MO-CS calls and MO-SMS.

If BDN is enabled, an ME which does not support Call Control shall allow emergency calls but shall not allow MO-CS calls.

If ACL is enabled, an ME which does not support ACL shall not send any APN to the network.

If all these procedures have been performed successfully then 3G session shall start. In all other cases 3G session shall not start.

Afterwards, the ME runs the following procedures if the ME and the USIM support the related services:

- IMSI request.
- Access control information request.
- Highest Priority PLMN search period request.
- HPLMN selector with Access Technology request;
- User controlled PLMN selector with Access Technology request;
- Operator controlled PLMN selector with Access Technology request;
- GSM initialisation requests.
- Location Information request for CS-and/or PS-mode.
- Cipher key and integrity key request for CS- and/or PS-mode.
- Forbidden PLMN request.
- Initialisation value for hyperframe number request.
- Maximum value of START request.
- CBMID request.

- Depending on the further services that are supported by both the ME and the USIM the corresponding EFs have to be read.

After the USIM initialisation has been completed successfully, the ME is ready for a 3G session and shall indicate this to the USIM by sending a particular STATUS command.

5.2.4 Highest Priority PLMN search period request

The ME performs the reading procedure with $\text{EF}_{\text{HPPLMN}}.$

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphring key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1)
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	Highest Priority PLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes
	Continued	

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	FFFF
'4FXX'	Grouping file	'0000' 'FFFF'
'4FXX'	Grouping information alpha string	
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	Highest Priority PLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
		•
'6F3F'	Group identifier level 2	Operator dependant 'FFFF'
'6F40'	MSISDN storage	
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
105.451	Extension 2	'00FFFF'
'6F4B'		

Annex H (normative): List of SFI Values

This annex lists SFI values assigned in the present document.

H.1 List of SFI Values at the USIM ADF Level

File Identification	SFI	Description
'6FB7'	'01'	Emergency call codes
'6F05'	'02'	Language indication
'6FAD'	'03'	Administrative data
'6F38'	'04'	USIM service table
'6F56'	'05'	Enabled services table
'6F78'	'06'	Access control class
'6F07'	'07'	IMSI
'6F08'	'08'	Ciphering and integrity keys
'6F09'	'09'	Ciphering and integrity keys for packet switched domain
'6F60'	'0A'	User PLMN selector
'6F7E	'0B'	Location information
'6F73'	'0C'	Packet switched location information
'6F7B'	'0D'	Forbidden PLMNs
'6F48'	'0E'	CBMID
'6F5B'	'0F'	Hyperframe number
'6F5C'	'10'	Maximum value of hyperframe number
'6F61'	'11'	Operator PLMN selector
'6F31'	'12'	Highest Priority PLMN search period
'6F62'	'13'	Preferred HPLMN access technology
'6F80'	'14'	Incoming call information
'6F81'	'15'	Outgoing call information
'6F4F'	'16'	Capability configuration parameters 2
'6F06'	'17'	Access Rule Reference
'6FC5'	'19'	PLMN Network Name
'6FC6'	'1A'	Operator Network List
'6FCD'	'1B'	Service Provider Display Information

All other SFI values are reserved for future use.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

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Clauses affecte	ed: Ж	4.2.6,	4.7, 5.1.1.2	2, 5.2.4, 1	Annex A,	Annex	κ E, Ar	nex H.1			
Other specs affected:	Ж	X	Other core Fest specif D&M Spec	fications		*					
Other comment	ts: #										

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:

- 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 $\underline{\text{ftp://ftp.3gpp.org/specs/}}$ 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.

4.2.6 EF_{HPPLMN} (Highest Priority PLMN search period)

This EF contains the interval of time between searches for the highest priority HPLMN (see TS 22.011 [2]).

Identifie	Identifier: '6F31' Stru		ucture: transparent		Mandatory
	SFI: '12'				
F	ile size: 1 byte		Update	activity	: low
Access Conditions: READ UPDATE DEACTIVATE ACTIVATE		PIN ADM ADM ADM			
Bytes		Description	1	M/O	Length
1	Time interval			М	1 byte

Time interval.

Contents:

the time interval between two searches.

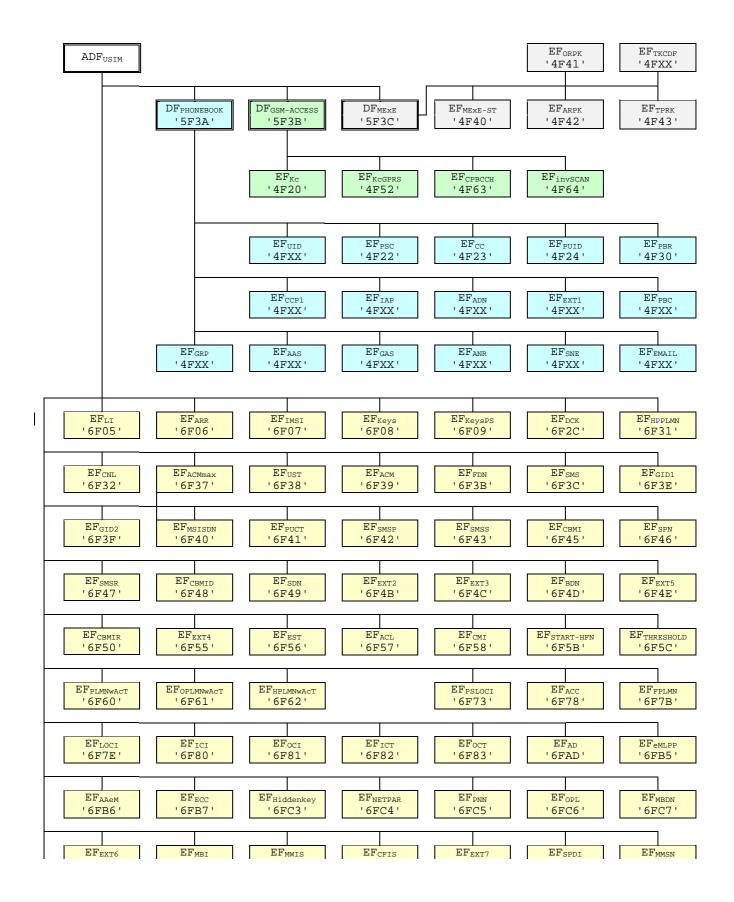
Coding:

the time interval is coded in integer multiples of n minutes. The range is from n minutes to a maximum value. The value '00' indicates that no attempts shall be made to search for <u>any higher priority</u> the HPLMN. The encoding is:

- '00': No higher priority HPLMN search attempts;
- '01': n minutes;
- '02': 2n minutes;
- _ •
- 'YZ': (16Y+Z)n minutes (maximum value).
- All other values shall be interpreted by the ME as a default period.

For specification of the integer timer interval n, the maximum value and the default period refer to TS 22.011 [2].

4.7 Files of USIM



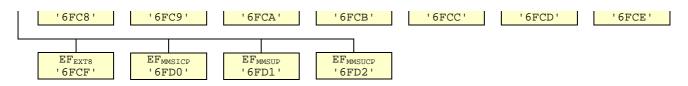


Figure 4.2: File identifiers and directory structures of USIM

DF '5F70' is reserved for SoLSA. EF '4F30' (EF_{SAL}) and EF '4F31' (EF_{SLL}) are reserved under DF '5F70' (SoLSA).

5.1.1.2 USIM initialisation

The ME requests the emergency call codes. For service requirements, see TS 22.101 [24].

The ME requests the Language Indication. The preferred language selection shall always use the EF_{LI} in preference to the EF_{PL} at the MF unless any of the following conditions applies:

- if the EF_{LI} has the value 'FFFF' in its highest priority position, then the preferred language selection shall be the language preference in the EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if the ME does not support any of the language codes indicated in EF_{LI} , or if EF_{LI} is not present, then the language selection shall be as defined in EF_{PL} at the MF level according the procedure defined in TS 31.101[11];
- if neither the languages of EF_{LI} nor EF_{PL} are supported by the terminal, then the terminal shall use its own internal default selection.

The ME then runs the user verification procedure. If the procedure is not performed successfully, the USIM initialisation stops.

The ME performs the administrative information request.

The ME performs the USIM Service Table request.

The ME performs the Enabled Services Table Request.

In case FDN is enabled, an ME which does not support FDN shall allow emergency calls but shall not allow MO-CS calls and MO-SMS.

If BDN is enabled, an ME which does not support Call Control shall allow emergency calls but shall not allow MO-CS calls.

If ACL is enabled, an ME which does not support ACL shall not send any APN to the network.

If all these procedures have been performed successfully then 3G session shall start. In all other cases 3G session shall not start.

Afterwards, the ME runs the following procedures if the ME and the USIM support the related services:

- IMSI request.
- Access control information request.
- Highest Priority PLMN search period request.
- HPLMN selector with Access Technology request;
- User controlled PLMN selector with Access Technology request;
- Operator controlled PLMN selector with Access Technology request;
- GSM initialisation requests.
- Location Information request for CS-and/or PS-mode.
- Cipher key and integrity key request for CS- and/or PS-mode.
- Forbidden PLMN request.
- Initialisation value for hyperframe number request.
- Maximum value of START request.
- CBMID request.

- Depending on the further services that are supported by both the ME and the USIM the corresponding EFs have to be read.

After the USIM initialisation has been completed successfully, the ME is ready for a 3G session and shall indicate this to the USIM by sending a particular STATUS command.

5.2.4 Highest Priority PLMN search period request

The ME performs the reading procedure with $\text{EF}_{\text{HPPLMN}}.$

Annex A (informative): EF changes via Data Download or USAT applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by a USAT Application, is advisable. Updating of certain EFs "over the air" such as EF_{ACC} could result in unpredictable behaviour of the UE; these are marked "Caution" in the table below. Certain EFs are marked "No"; under no circumstances should "over the air" changes of these EFs be considered.

File identification	Description	Change advised
'2F00'	Application directory	Caution
'2F05'	Preferred languages	Yes
'2F06'	Access rule reference	Caution
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4F20'	GSM Ciphering key Kc	No
'4FXX'	Image Instance data Files	Yes
'4FXX'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4FXX'	Capability configuration parameters 1	Yes
'4F52'	GPRS Ciphring key KcGPRS	No
'4F63'	CPBCCH Information	No
'4F64'	Investigation Scan	Caution
'4FXX'	Additional number alpha string	Yes
'4FXX'	Additional number	Yes
'4FXX'	Second name entry	Yes
'4FXX'	Grouping information alpha string	Yes
'4FXX'	Phone book control	Yes
'4FXX'	E-mail addresses	Yes
'4FXX'	Index administration phone book	Yes
'4FXX'	Extension 1	Yes
'4FXX'	Abbreviated dialling numbers	Yes
'4FXX'	Grouping file	Yes
'6F05'	Language indication	Yes
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Caution
'6F07'	IMSI	Caution (Note 1)
'6F08'	Ciphering and integrity keys	No
'6F09'	Ciphering and integrity keys for packet switched domain	No
'6F2C'	De-personalization Control Keys	Caution
'6F31'	Highest Priority PLMN search period	Caution
'6F32'	Co-operative network list	Caution
'6F37'	ACM maximum value	Yes
'6F38'	USIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3B'	Fixed dialling numbers	Yes
'6F3C'	Short messages	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes
	Continued	

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping ine Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
	Additional number	FFFF
'4FXX' '4FXX'		
	Extension 1	'00FFFF'
'6F05'	Language indication	
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant
105071	DF _{TELECOM})	On a rate of days and and
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
ICEOCI	switched domain	
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	Highest Priority PLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
'6F4B'	Extension 2	'00FFFF'
'6F4C'	Extension 3	'00FFFF'
	l eretr e	1

Annex H (normative): List of SFI Values

This annex lists SFI values assigned in the present document.

H.1 List of SFI Values at the USIM ADF Level

File Identification	SFI	Description
'6FB7'	'01'	Emergency call codes
'6F05'	'02'	Language indication
'6FAD'	'03'	Administrative data
'6F38'	'04'	USIM service table
'6F56'	'05'	Enabled services table
'6F78'	'06'	Access control class
'6F07'	'07'	IMSI
'6F08'	'08'	Ciphering and integrity keys
'6F09'	'09'	Ciphering and integrity keys for packet switched domain
'6F60'	'0A'	User PLMN selector
'6F7E	'0B'	Location information
'6F73'	'0C'	Packet switched location information
'6F7B'	'0D'	Forbidden PLMNs
'6F48'	'0E'	CBMID
'6F5B'	'0F'	Hyperframe number
'6F5C'	'10'	Maximum value of hyperframe number
'6F61'	'11'	Operator PLMN selector
'6F31'	'12'	Highest Priority PLMN search period
'6F62'	'13'	Preferred HPLMN access technology
'6F80'	'14'	Incoming call information
'6F81'	'15'	Outgoing call information
'6F4F'	'16'	Capability configuration parameters 2
'6F06'	'17'	Access Rule Reference
'6FC5'	'19'	PLMN Network Name
'6FC6'	'1A'	Operator Network List
'6FCD'	'1B'	Service Provider Display Information

All other SFI values are reserved for future use.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Tdoc T3-030955 ₩

(revised from T3-030573)

CR-Form-v7

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	 SFI are missing, despite the fact that they are mandatory. The phonebook only contains EF_{UID} whereas in section 4.4.2.12, it is specified that "If synchronisation is supported in the phonebook, then EF_{PSC}, EF_{UID}, EF_{PUID} and EF_{CC} are all mandatory".
Summary of changes w	Annay Coorrections
Summary of change: ₩	
	- addition of SFI for all files for which SFI is mandatory
	- removal of EF _{UID}

Consequences if not approved:

**Risk of misinterpretation of the specification leading to wrong implementations.

Clauses affected:	第 Annex G
Other specs affected:	Y N X Other core specifications Test specifications O&M Specifications
Other comments:	# Equivalent CRs needed for further releases

How to create CRs using this form:

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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.

Annex G (informative): Phonebook Example

This example phonebook has more than 254 entries. Additional number (3 additional numbers) information, second name and e-mail information can be added to each ADN entry. In addition each entry has a 2 byte Unique ID (UID) attached to it. The phonebook also contains three files that are shared EF_{EXT1} , EF_{AAS} and EF_{GAS} . These files are addressed from inside a file. EF_{EXT1} is addressed via EF_{ADN} , EF_{ADN1} , EF_{ADS} is addressed via EF_{GRP1} . The phonebook supports two levels of grouping and hidden entries in EF_{PBC} .

Two records are needed in the phonebook reference file PBR '4F30' for supporting more than 254 entries. The content of the phonebook reference file PBR '4F30' records is as shown in table G.2. The structure of the DF_{PHONEBOOK} is shown in table G.1.

The content of phonebook entries in the range from 1-508 is described in the tables G.3 and G.4.

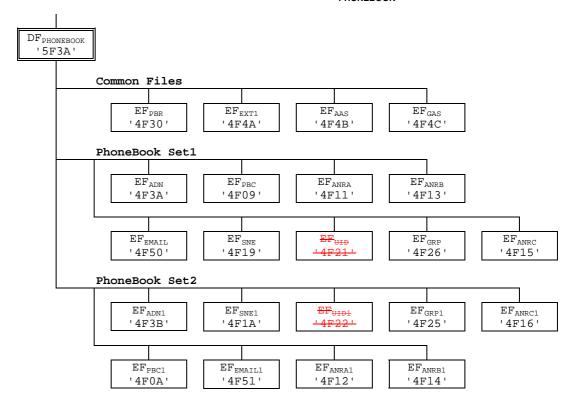


Table G.1: Structure of EFs inside DF_{PHONEBOOK}

Table G.2: Contents of EF_{PBR}

ĺ	Rec 1 Tag'A8' L='286' (for Phonebook Set1)
	Tag'C0' L='03' '4F3A' '01' Tag'C5' L='03' '4F09' '02' Tag'C6' L='0 <u>32'</u> '4F26' <u>'03'</u> Tag'C4' L='0 <u>32'</u>
	'4F11' <u>'04'</u> Tag'C4' L='0 <u>3</u> 2' '4F13' <u>'05'</u> Tag'C4' L='0 <u>3</u> 2' '4F15' <u>'06'</u> Tag'C3' L='0 <u>3</u> 2' '4F19' <u>'07'</u>
	Tag'C9' L='02' '4F21' Tag'CA' L='032' '4F50' '09'
	Tag'AA' L='0DC'
I	Tag'C2' L='032' '4F4A' '08' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C'

Rec 2 Tag'A8' L='284' (for Phonebook Set 2)
Tag'C0' L='0 <u>3</u> 2' '4F3B' <u>'0A'</u> Tag'C5' L='0 <u>3</u> 2' '4F0A' <u>'0B'</u> Tag'C6' L='0 <u>3</u> 2' '4F25' <u>'0C'</u> Tag'C4' L='0 <u>3</u> 2'
'4F12' <u>'0D'</u> Tag'C4' L='0 <u>32'</u> '4F14' <u>'0E'</u> Tag'C4' L='0 <u>32'</u> '4F16' <u>'0F'</u> Tag'C3' L='0 <u>32'</u> '4F1A' <u>'10'</u>
Tag'C9' L='02' '4F22' Tag'CA' L='023' '4F51' '11'
Tag'AA' L='0DC'
Tag'C2' L='032' '4F4A' '08' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C 'FF' 'FF'

Table G.3: Structure of the 254 first entries in the phonebook

	Phone book entry	AI '4F SFI		PBC '4F09' SFI '02'	GRP '4F26' <u>SFI '03'</u>	ANRA '4F11' <u>SFI '04'</u>	ANRB '4F13' <u>SFI '05'</u>	ANRC '4F15' <u>SFI '06'</u>	SNE '4F19' <u>SFI '07'</u>	UID '4F21'	EXT1 '4F4A' <u>SFI '08'</u>	AAS '4F4B'	GAS '4F4C'	EMAIL '4F50' <u>SFI '09'</u>
	#1	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID rec N° 3)	Rec n°1 Rec n°3 '00'	ANRA Rec n°1	ANRB Rec n°1	ANRC Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP	Email address
	# 2	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA Rec n°2	ANRB Rec n°2	ANRC Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP	Email address
,	# 3													
	:													
	:													
	:													
	# 254													

Table G.4: Structure of phone book entries 255 to 508 (Rec 1-254)

	Phone book	AD '4F	N1 3B'	PBC1 '4F0A'	GRP1 '4F25'	ANRA1 '4F12'	ANRB1 '4F14'	ANRC1 '4F16'	SNE1 '4F1A'	UID1 '4F22'	EXT1 '4F4A'	AAS '4F4B'	GAS '4F4C'	EMAIL1 '4F51'
١.	entry	SFI	<u>'0A'</u>	SFI '0B'	SFI '0C'	SFI '0D'	SFI '0E'	SFI '0F'	<u>SFI '10'</u>		SFI '08'			SFI '11'
	#255	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID Rec n° 3)	Rec n°1 Rec n°3 '00'	ANRA1 Rec n°1	ANRB1 Rec n°1	ANRC1 Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
1	#256	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA1 Rec n°2	ANRB1 Rec n°2	ANRC1 Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
•	#257													
	:								•					
	:													
	:													
	#508													

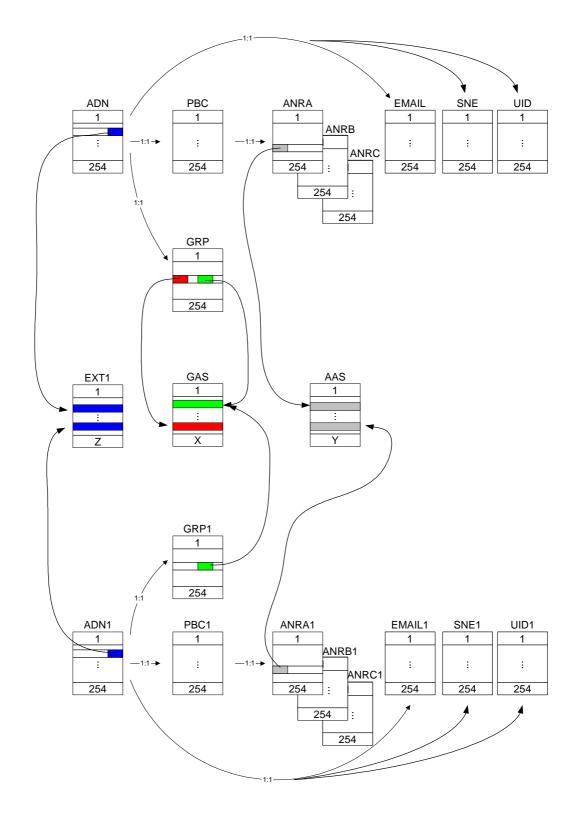


Figure G.1: Structure and Relations of the Example Phone Book

Rapporteur's note: UID and UID1 to be removed from figure G.1

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

	CHANGE REQ	CR-Form-v7
X	31.102 CR 187 #rev	- [♯] Current version: 4.10.0 [♯]
For <u>HELP</u> on u	sing this form, see bottom of this page or	look at the pop-up text over the 発 symbols.
Proposed change	iffects: UICC apps業 <mark>X</mark> ME <mark>X</mark>	Radio Access Network Core Network
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Source: #	Т3	
Work item code: ₩	TEI	<i>Date:</i>
Category: ∺	Use one of the following categories: F (correction) A (corresponds to a correction in an ea B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categorie be found in 3GPP TR 21.900.	R97 (Release 1997) R98 (Release 1998) R99 (Release 1999)
Reason for change	SFI are missing, despite the faThe phonebook only contains	act that they are mandatory. EF _{UID} whereas in section 4.4.2.12, it is on is supported in the phonebook, then EF _{PSC} ,
Summary of chang	e: # Annex G correction: - addition of SFI for all files for whi - removal of EF _{UID}	ch SFI is mandatory
Consequences if not approved:	# Risk of misinterpretation of the spe	ecification leading to wrong implementations.
Clauses affected:	₩ Annex G	
Other specs affected:	Y N X Other core specifications Test specifications O&M Specifications	*
Other comments:	策 Equivalent CRs needed for further	releases

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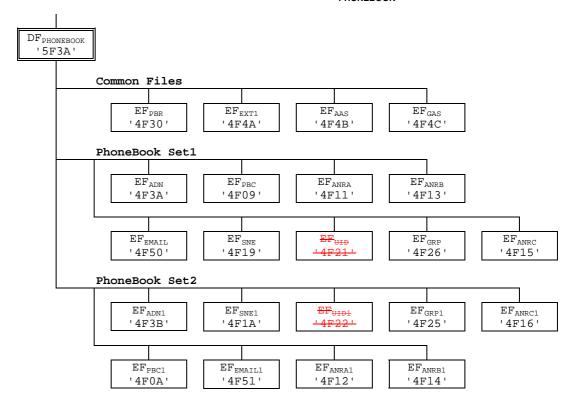


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ĺ	Rec 1 Tag'A8' L='286' (for Phonebook Set1)
	Tag'C0' L='03' '4F3A' '01' Tag'C5' L='03' '4F09' '02' Tag'C6' L='0 <u>32'</u> '4F26' <u>'03'</u> Tag'C4' L='0 <u>32'</u>
	'4F11' <u>'04'</u> Tag'C4' L='0 <u>3</u> 2' '4F13' <u>'05'</u> Tag'C4' L='0 <u>3</u> 2' '4F15' <u>'06'</u> Tag'C3' L='0 <u>3</u> 2' '4F19' <u>'07'</u>
	Tag'C9' L='02' '4F21' Tag'CA' L='032' '4F50' '09'
	Tag'AA' L='0DC'
I	Tag'C2' L='032' '4F4A' '08' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C'

Rec 2 Tag'A8' L='284' (for Phonebook Set 2)
Tag'C0' L='0 <u>3</u> 2' '4F3B' <u>'0A'</u> Tag'C5' L='0 <u>3</u> 2' '4F0A' <u>'0B'</u> Tag'C6' L='0 <u>3</u> 2' '4F25' <u>'0C'</u> Tag'C4' L='0 <u>3</u> 2'
'4F12' <u>'0D'</u> Tag'C4' L='0 <u>32'</u> '4F14' <u>'0E'</u> Tag'C4' L='0 <u>32'</u> '4F16' <u>'0F'</u> Tag'C3' L='0 <u>32'</u> '4F1A' <u>'10'</u>
Tag'C9' L='02' '4F22' Tag'CA' L='023' '4F51' '11'
Tag'AA' L='0DC'
Tag'C2' L='032' '4F4A' '08' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C 'FF' 'FF'

Table G.3: Structure of the 254 first entries in the phonebook

	Phone book entry	AI '4F SFI		PBC '4F09' SFI '02'	GRP '4F26' <u>SFI '03'</u>	ANRA '4F11' <u>SFI '04'</u>	ANRB '4F13' <u>SFI '05'</u>	ANRC '4F15' <u>SFI '06'</u>	SNE '4F19' <u>SFI '07'</u>	UID '4F21'	EXT1 '4F4A' <u>SFI '08'</u>	AAS '4F4B'	GAS '4F4C'	EMAIL '4F50' <u>SFI '09'</u>
	#1	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID rec N° 3)	Rec n°1 Rec n°3 '00'	ANRA Rec n°1	ANRB Rec n°1	ANRC Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP	Email address
	# 2	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA Rec n°2	ANRB Rec n°2	ANRC Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP	Email address
,	# 3													
	:													
	:													
	:													
	# 254													

Table G.4: Structure of phone book entries 255 to 508 (Rec 1-254)

	Phone book	AD '4F	N1 3B'	PBC1 '4F0A'	GRP1 '4F25'	ANRA1 '4F12'	ANRB1 '4F14'	ANRC1 '4F16'	SNE1 '4F1A'	UID1 '4F22'	EXT1 '4F4A'	AAS '4F4B'	GAS '4F4C'	EMAIL1 '4F51'
١.	entry	SFI	<u>'0A'</u>	SFI '0B'	SFI '0C'	SFI '0D'	SFI '0E'	SFI '0F'	<u>SFI '10'</u>		SFI '08'			SFI '11'
	#255	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID Rec n° 3)	Rec n°1 Rec n°3 '00'	ANRA1 Rec n°1	ANRB1 Rec n°1	ANRC1 Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
1	#256	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA1 Rec n°2	ANRB1 Rec n°2	ANRC1 Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
•	#257													
	:								•					
	:													
	:													
	#508													

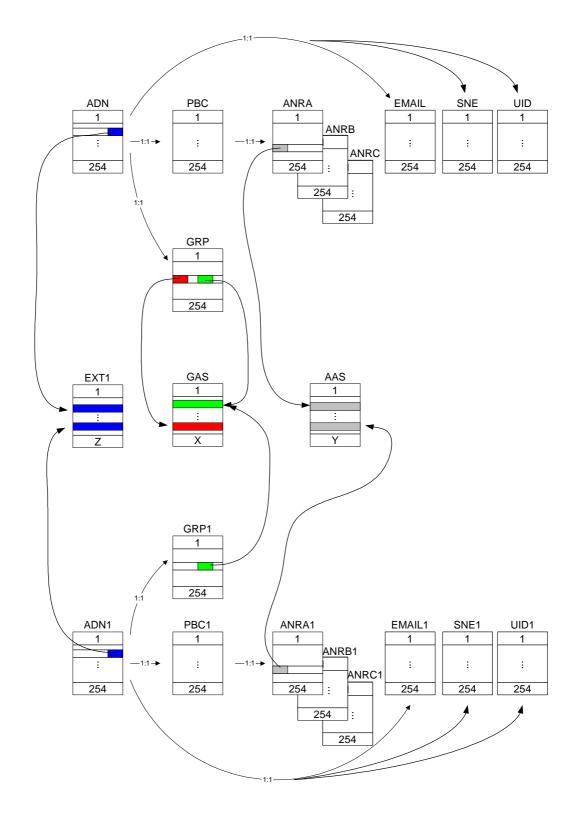


Figure G.1: Structure and Relations of the Example Phone Book

Rapporteur's note: UID and UID1 to be removed from figure G.1

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

			CHAN	GE R	REQ	UE	ST				CR-Form-v7
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For <u>HELP</u> on u	ising th	is form, s	ee bottom o	of this pa	age or	look a	at the	e pop-up t	ext over	r the ₩ syi	mbols.
Proposed change	affects	: UICC	C appsЖ <mark>X</mark>] 1	ME X	Rad	lio Ad	ccess Net	work	Core Ne	etwork
Title: 第	Corre	ection of	SFI support								
Source: #	T3										
Work item code: ∺	TEI							Date	:	11/2003	
Category: ∺	F A B C D	(correction) (corresponding) (addition) (function) (editorial) (deditorial)	ollowing cate, on) onds to a cor of feature), al modification tions of the a	rection in on of featu) above cat	ure)		elease	2	e of the fo (GSI (Rele (Rele (Rele (Rele (Rele (Rele	el-5 ollowing rela M Phase 2) ease 1996) ease 1998) ease 1999) ease 4) ease 5)	
Reason for change		SFI aThe parameter	G contains sare missing, phonebook ified that "Ifo, EF _{PUID} and	despite only con synchro	the fac tains E nisatio	ct tha EF _{UID} on is s	whe supp	reas in se orted in th	ction 4.4		
Summary of chang	•	- addition	correction: of SFI for a l of EF _{UID}	all files fo	or whic	h SF	'I is n	nandatory	,		
Consequences if not approved:	*	Risk of m	nisinterpreta	ition of th	ne spe	cifica	tion	leading to	wrong i	mplement	ations.
Clauses affected:		Annex G									
Other specs affected:	¥	X Tes	ner core spe st specificat M Specifica	ions	ns	æ					
Other comments:	\mathbb{H}	Equivale	nt CRs need	ded for fo	urther	relea	ses				

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Annex G (informative): Phonebook Example

This example phonebook has more than 254 entries. Additional number (3 additional numbers) information, second name and e-mail information can be added to each ADN entry. In addition each entry has a 2 byte Unique ID (UID) attached to it. The phonebook also contains three files that are shared EF_{EXT1} , EF_{AAS} and EF_{GAS} . These files are addressed from inside a file. EF_{EXT1} is addressed via EF_{ADN} , EF_{ADN1} , EF_{ADS} is addressed via EF_{GRP1} . The phonebook supports two levels of grouping and hidden entries in EF_{PBC} .

Two records are needed in the phonebook reference file PBR '4F30' for supporting more than 254 entries. The content of the phonebook reference file PBR '4F30' records is as shown in table G.2. The structure of the DF_{PHONEBOOK} is shown in table G.1.

The content of phonebook entries in the range from 1-508 is described in the tables G.3 and G.4.

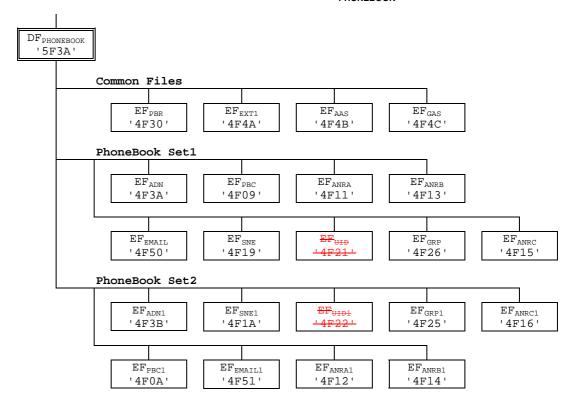


Table G.1: Structure of EFs inside DF_{PHONEBOOK}

Table G.2: Contents of EF_{PBR}

ĺ	Rec 1 Tag'A8' L='286' (for Phonebook Set1)
	Tag'C0' L='03' '4F3A' '01' Tag'C5' L='03' '4F09' '02' Tag'C6' L='0 <u>32'</u> '4F26' <u>'03'</u> Tag'C4' L='0 <u>32'</u>
	'4F11' <u>'04'</u> Tag'C4' L='0 <u>3</u> 2' '4F13' <u>'05'</u> Tag'C4' L='0 <u>3</u> 2' '4F15' <u>'06'</u> Tag'C3' L='0 <u>3</u> 2' '4F19' <u>'07'</u>
	Tag'C9' L='02' '4F21' Tag'CA' L='032' '4F50' '09'
	Tag'AA' L='0DC'
I	Tag'C2' L='032' '4F4A' '08' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C'

Rec 2 Tag'A8' L='284' (for Phonebook Set 2)
Tag'C0' L='0 <u>3</u> 2' '4F3B' <u>'0A'</u> Tag'C5' L='0 <u>3</u> 2' '4F0A' <u>'0B'</u> Tag'C6' L='0 <u>3</u> 2' '4F25' <u>'0C'</u> Tag'C4' L='0 <u>3</u> 2'
'4F12' <u>'0D'</u> Tag'C4' L='0 <u>32'</u> '4F14' <u>'0E'</u> Tag'C4' L='0 <u>32'</u> '4F16' <u>'0F'</u> Tag'C3' L='0 <u>32'</u> '4F1A' <u>'10'</u>
Tag'C9' L='02' '4F22' Tag'CA' L='023' '4F51' '11'
Tag'AA' L='0DC'
Tag'C2' L='032' '4F4A' '08' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C 'FF' 'FF'

Table G.3: Structure of the 254 first entries in the phonebook

	Phone book entry	AI '4F SFI		PBC '4F09' SFI '02'	GRP '4F26' <u>SFI '03'</u>	ANRA '4F11' <u>SFI '04'</u>	ANRB '4F13' <u>SFI '05'</u>	ANRC '4F15' <u>SFI '06'</u>	SNE '4F19' <u>SFI '07'</u>	UID '4F21'	EXT1 '4F4A' <u>SFI '08'</u>	AAS '4F4B'	GAS '4F4C'	EMAIL '4F50' <u>SFI '09'</u>
	#1	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID rec N° 3)	Rec n°1 Rec n°3 '00'	ANRA Rec n°1	ANRB Rec n°1	ANRC Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP	Email address
	# 2	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA Rec n°2	ANRB Rec n°2	ANRC Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP	Email address
,	# 3													
	:													
	:													
	:													
	# 254													

Table G.4: Structure of phone book entries 255 to 508 (Rec 1-254)

	Phone book	ADN1 '4F3B'		PBC1 '4F0A'	GRP1 '4F25'	ANRA1 '4F12'	ANRB1 '4F14'	ANRC1 '4F16'	SNE1 '4F1A'	UID1 '4F22'	EXT1 '4F4A'	AAS '4F4B'	GAS '4F4C'	EMAIL1 '4F51'
١.	entry	<u>SFI '0A'</u>		SFI '0B'	SFI '0C'	SFI '0D'	SFI '0E'	SFI '0F'	<u>SFI '10'</u>		SFI '08'			SFI '11'
	#255	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID Rec n° 3)	Rec n°1 Rec n°3 '00'	ANRA1 Rec n°1	ANRB1 Rec n°1	ANRC1 Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
1	#256	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA1 Rec n°2	ANRB1 Rec n°2	ANRC1 Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
•	#257													
	:								•					
	:													
	:													
	#508													

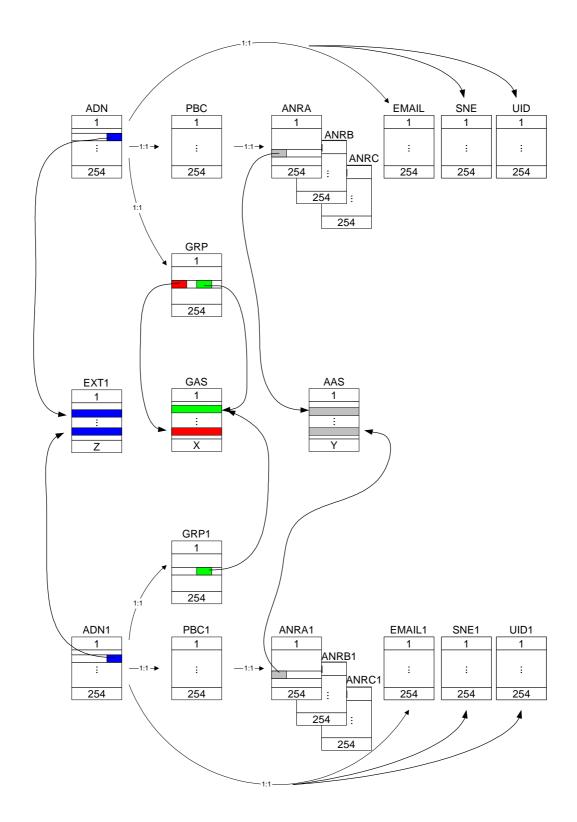


Figure G.1: Structure and Relations of the Example Phone Book

Rapporteur's note: UID and UID1 to be removed from figure G.1

3GPP TSG-T3 Meeting #29 Dallas, TEXAS (USA), 18.- 21. November 2003

Tdoc # T3-030958

(revised from T3-030906)

						CR-Form-v7				
CHANGE REQUEST										
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	F (correction)A (corresponds to	a correction in an	earlier release		(GSM Phase 2) (Release 1996)					
	B (addition of feat		carner release,		(Release 1997)					
	C (functional modi	fication of feature)			(Release 1998)					
	D (editorial modified				(Release 1999)					
	tailed explanations of		ries can		(Release 4)					
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	 Added abbreviation EF_IIDF for "Image Instance Data Files" 									
	Added EF_IIDFn for "Image Instance Data Files" under DF_GRAPHICS in									
	the section	n "Files of USIM	,,							
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	YN									
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Other comments:	\mathbb{H}									

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

4.6.1.2 <u>EF_{IIDF} (Image Instance Data Files)</u>

Residing under $DF_{GRAPHICS}$, there may be several image instance data files. These EFs containing image instance data shall have the following attributes:

Identifier:	'4FXX'	Stru	ucture: transparent		Optional
Record	d length: Y bytes	3	Update a	activity:	low
Access Condition READ UPDATE DEACTIV ACTIVATI	ATE	PIN ADM ADM ADM			
Bytes		Description	on	M/O	Length
1 to Y	Image Instance	Data		M	Y bytes

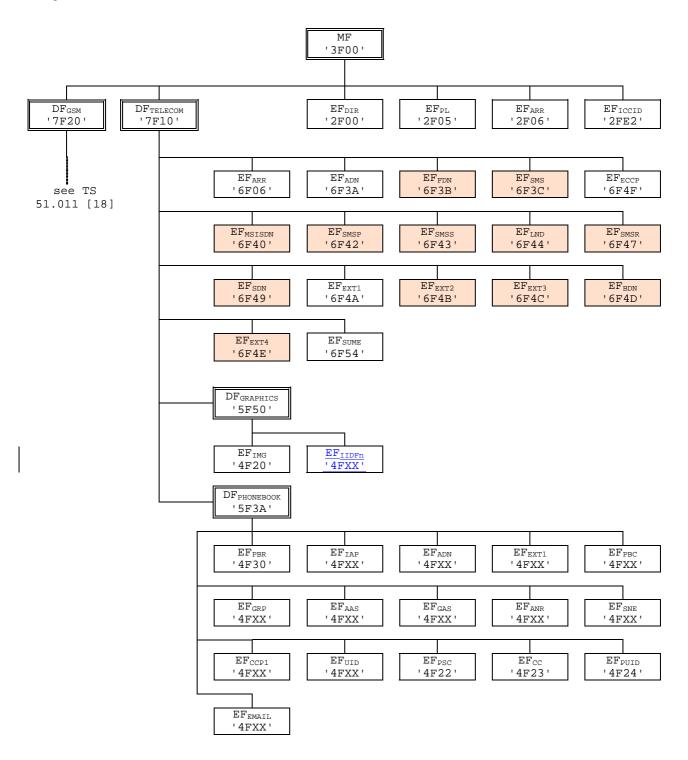
Contents and coding:

- Image instance data are accessed using the image instance descriptors provided by EF_{IMG} (see clause 4.6.1.1).

The identifier '4FXX' shall be different from one image instance data file to the other. For the range of 'XX', TS 31.101 [11]. The length Y may be different from one image instance data file to the other.

4.7 Files of USIM

This clause contains two figures depicting the file structure of the UICC and the ADF_{USIM} . ADF_{USIM} shall be selected using the AID and information in EF_{DIR} .



NOTE 1: Files under DF_{TELECOM} with shaded background are defined in TS 51.011 [18].

NOTE 2: The value '6F65' under ADFUSIM was used in earlier versions of this specification, and should not be reassigned in future versions.

Figure 4.1: File identifiers and directory structures of UICC

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Other comments.	<i>:</i>	This CR r	mirrors a CR m	ade to TS	23.040, w	here the Vide	omail Messag	ge

Indication feature is added in Rel-6.

4.2.62 EF_{MBI} (Mailbox Identifier)

This EF contains information to associate mailbox dialling numbers in EF_{MBDN} with a message waiting indication group type and subscriber profile (as defined in TS 23.097 [36]). A message waiting indication group type may either be Voicemail, Fax, Electronic Mail, or Other or Videomail (as defined in TS 23.04038 [65] for Data Coding Scheme).

This EF contains as many records as there are subscriber profiles (shall be record to subscriber profile). Each record contains references to mailbox dialling numbers in EF_{MBDN} (one reference for each message waiting indication group type).

This EF is mandatory if EF_{UST} indicates that the Mailbox Dialling Numbers service is available.

Identifier	: '6FC9'	Str	ucture: linear fixed		Optional			
Record le	ength: X bytes, X	>=4	Update activity: low					
Access Condition READ UPDATE DEACTIV ACTIVAT	'ATE	PIN PIN/AI (fixed ADM ADM	DM during administrative	manage	ment)			
Bytes		Description	on	M/O	Length			
1	Mailbox Dialling	Number Ide	ntifier – Voicemail	M	1 byte			
2	Mailbox Dialling	Number Ide	ntifier – Fax	М	1 byte			
3	Mailbox Dialling Mail	Number Ide	entifier – Electronic	М	1 byte			
4	Mailbox Dialling	Number Ide	entifier – Other	M	1byte			
<u>5</u>	Mailbox Dialling	Number Ide	entifier – Videomail	0	<u>l byte</u>			

- Mailbox Dialling Number Identifier (message waiting group type = Voicemail, Fax, Electronic Mail, or Other or Videomail).

Contents:

Identifies the mailbox dialling number to be associated with message waiting type.

Coding:

'00' – no mailbox dialling number associated with message waiting indication group type.

'xx' – record number in EF_{MBDN} associated with message waiting indication group type.

4.2.63 EF_{MWIS} (Message Waiting Indication Status)

This EF contains the status of indicators that define whether or not a Voicemail, Fax, Electronic Mail, or Other or Videomail message is waiting (as defined in TS 23.038.040 [65] for message waiting indication group types. The ME uses the status after re-activation to determine whether or not to display the respective message-waiting indication on its display.

This EF contains as many records as there are subscriber profiles (shall be record to subscriber profile) as defined in TS 23.097 [36] for MSP.

Identifier: '6	FCA'	Stru	ucture: Linear fixed		Optional
Record leng	th: X bytes, X	>= 5	Update a	activity:	high
Access Conditions: READ UPDATE DEACTIVA ACTIVATE					
Bytes		Descript	ion	M/O	Length
1	Message Wai	ting Indicator	r Status	М	1 byte
2	Number of Vo	icemail Mess	sages Waiting	М	1 byte
3	Number of Fa	x Messages	Waiting	M	1 byte
4	Number of Ele	Messages Waiting	M	1 byte	
5	Number of Ot	her Message	es Waiting	M	1 byte
<u>6</u>	Number of Vic	deomail Mes	sages waiting	<u>O</u>	1 byte

Message Waiting Indication Status

Contents:

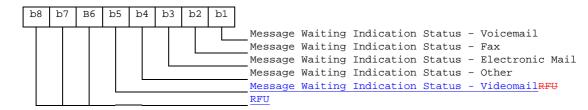
Indicates the status of the message-waiting indication.

Coding:

The indicator status for each indicator type is 1 bit long and set as follows:

bit = 1: Set Indication Active

bit = 0: Set Indication Inactive



Number of Voicemail Messages Waiting

Contents:

Contains the number of voicemail messages waiting (see TS 23.040 [6]).

Coding:

Binary.

Number of Fax Messages Waiting

Contents:

Contains the number of fax messages waiting (see TS 23.040 [6]).

Coding:

Binary.

Number of Electronic Mail Messages Waiting

Contents:

Contains the number of electronic mail messages waiting (see TS 23.040 [6])

Coding:

Binary.

Number of Other Messages Waiting

Contents:

Contains the number of other messages waiting (see TS 23.040 [6]).

Coding:

Binary.

Number of Videomail Messages Waiting

Contents:

Contains the number of Videomail messages waiting (see TS 23.040 [6]).

Coding: Binary.

Other comments:

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★ CR needs to be applied to all existing releases (R99 to Rel-6).

4 Contents of the Files

This clause specifies the EFs for the 3G session defining access conditions, data items and coding. A data item is a part of an EF which represents a complete logical entity, e.g. the alpha tag in an EF_{ADN} record.

EFs or data items having an unassigned value, or, which during the 3G session, are cleared by the ME, shall have their bytes set to 'FF'. After the administrative phase all data items shall have a defined value or have their bytes set to 'FF'. If a data item is 'deleted' during a 3G session by the allocation of a value specified in another 3GPP TS, then this value shall be used and the data item is not unassigned. For example, for a deleted LAI in EF_{LOCI} the last byte takes the value 'FE' (TS 24.008 [9] refers).

A file is associated with attributes that depending of the file type indicates how data is to be accessed e.g. file size, record length etc. Although in the present document some files and data items stored in a file are indicated as having a fixed length; when reading such structures the terminal shall derive the length of the data item from the attributes provided in the file information i.e. not use the fixed value specified for the file in the present document. Although the terminal is able to read the entire structure it should only use those elements in the data item which is recognised by the terminal.

EFs are mandatory (M) or optional (O). The file size of an optional EF may be zero. All implemented EFs with a file size greater than zero shall contain all mandatory data items. Optional data items may either be filled with 'F', or, if located at the end of an EF, need not exist.

For any EFs, when the SFI is not indicated in the description of the file it is not allowed to assign an SFI. If in the description of the file an SFI value is indicated the file shall support SFI. The SFI value shall be assigned by the card issuer. It is mandatory for EFs stating an SFI value ('YY') in the description of their structure to provide an SFI. For files where in the file description the SFI is indicated as 'Optional' the file may support an SFI.

When the coding is according to ITU-T Recommendation T.50 [23], bit 8 of every byte shall be set to 0.

For an overview containing all files see figures 4.1 and 4.2.

4.4.2.1 EF_{PBR} (Phone Book Reference file)

This file describes the structure of the phonebook. All EFs representing the phonebook are specified here <u>(with the exception of EF_{PSC}, EF_{PUID} and EF_{CC})</u>, together with their file identifiers (FID) and their short file identifiers (SFI), if applicable.

Certain kinds of EFs can occur more than once in the phonebook, e.g. there may be two entities of Abbreviated Dialling Numbers, EF_{ADN} and EF_{ADN1} . For these kinds of EFs, no fixed FID values are specified. Instead, the value '4FXX' indicates that the value is to be assigned by the card issuer. These assigned values are then indicated in the associated TLV object in EF_{PBR} .

It is mandatory for EFs stating an SFI value ('YY') in the description of their structure to provide an SFI. For files where in the file description the SFI is indicated as 'Optional' the file may support an SFI. The SFI value assigned to an EF which is indicated in EF_{PBR} shall correspond to the SFI indicated in the TLV object in EF_{PBR} .

The reference file is a file that contains information how the information in the different files is to be combined together to form a phone book entry. The reference file contains records. Each record specifies the structure of up to 254 entries in the phone book. Each phone book entry consists of data stored in files indicated in the reference file record. The entry structure shall be the same over all the records in the EF _{PBR}. If more than 254 entries are to be stored, a second record is needed in the reference file. The structure of a phone book entry is defined by different TLV objects that are stored in a reference file record. The reference file record structure describes the way a record in a file that is part of the phonebook is used to create a complete entry. Three different types of file linking exist.

- Type 1 files: Files that contain as many records as the reference/master file (EF_{ADN} , EF_{ADN1}) and are linked on record number bases (Rec1 -> Rec1). The master file record number is the reference.
- Type 2 files: Files that contain less entries than the master file and are linked via pointers in the index administration file (EF_{IAP}).
- Type 3 files are files that are linked by a record identifier within a record.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Dallas, USA, 18-21 November 2003										
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Summary of ch	nange:	section Adde	on 4 ("Co d the cla	ontents of t	he files"). hat EF _{PSC} ,	EF _{PUI}		m section 4.4	·	,
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Other comments: # CR needs to be applied to all existing releases (R99 to Rel-6).

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A file is associated with attributes that depending of the file type indicates how data is to be accessed e.g. file size, record length etc. Although in the present document some files and data items stored in a file are indicated as having a fixed length; when reading such structures the terminal shall derive the length of the data item from the attributes provided in the file information i.e. not use the fixed value specified for the file in the present document. Although the terminal is able to read the entire structure it should only use those elements in the data item which is recognised by the terminal.

EFs are mandatory (M), optional (O), or conditional (C). A conditional file is mandatory if a specific requirement is fulfilled. The file size of an optional EF may be zero. All implemented EFs with a file size greater than zero shall contain all mandatory data items. Optional data items may either be filled with 'F', or, if located at the end of an EF, need not exist.

For any EFs, when the SFI is not indicated in the description of the file it is not allowed to assign an SFI. If in the description of the file an SFI value is indicated the file shall support SFI. The SFI value shall be assigned by the card issuer. It is mandatory for EFs stating an SFI value ('YY') in the description of their structure to provide an SFI. For files where in the file description the SFI is indicated as 'Optional' the file may support an SFI.

When the coding is according to ITU-T Recommendation T.50 [23], bit 8 of every byte shall be set to 0.

For an overview containing all files see figures 4.1 and 4.2.

4.4.2.1 EF_{PBR} (Phone Book Reference file)

This file describes the structure of the phonebook. All EFs representing the phonebook are specified here <u>(with the exception of EF_{PSC}, EF_{PUID} and EF_{CC})</u>, together with their file identifiers (FID) and their short file identifiers (SFI), if applicable.

Certain kinds of EFs can occur more than once in the phonebook, e.g. there may be two entities of Abbreviated Dialling Numbers, EF_{ADN} and EF_{ADN1} . For these kinds of EFs, no fixed FID values are specified. Instead, the value '4FXX' indicates that the value is to be assigned by the card issuer. These assigned values are then indicated in the associated TLV object in EF_{PBR} .

It is mandatory for EFs stating an SFI value ('YY') in the description of their structure to provide an SFI. For files where in the file description the SFI is indicated as 'Optional' the file may support an SFI. The SFI value assigned to an EF which is indicated in EF_{PBR} shall correspond to the SFI indicated in the TLV object in EF_{PBR} .

The reference file is a file that contains information how the information in the different files is to be combined together to form a phone book entry. The reference file contains records. Each record specifies the structure of up to 254 entries in the phone book. Each phone book entry consists of data stored in files indicated in the reference file record. The entry structure shall be the same over all the records in the EF _{PBR}. If more than 254 entries are to be stored, a second record is needed in the reference file. The structure of a phone book entry is defined by different TLV objects that are stored in a reference file record. The reference file record structure describes the way a record in a file that is part of the phonebook is used to create a complete entry. Three different types of file linking exist.

- Type 1 files: Files that contain as many records as the reference/master file (EF_{ADN}, EF_{ADN1}) and are linked on record number bases (Rec1 -> Rec1). The master file record number is the reference.
- Type 2 files: Files that contain less entries than the master file and are linked via pointers in the index administration file (EF_{IAP}).
- Type 3 files are files that are linked by a record identifier within a record.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Dallas, USA, 1	8-21 r	Nover	nber 20	03							
			Cł	HANGI	E REQ	UE	ST				CR-Form-v7
*	31.	102	CR	193	⊭rev	-	ж	Current vers	ion:	5.6.0	ж
For <u>HELP</u> on	using	this for	m, see b	ottom of th	is page or	look	at th	e pop-up text	over	the	nbols.
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Clauses affected	l: ¥	4, 4.2	2.9, 4.4.2	.1, 4.4.2.7	, 4.4.2.8, <i>F</i>	Annex	H.1				

Rel-5 equivalent to Rel-4 CRs: CR162 (TP-030179) plus CR192 (T3-031033) Equivalent CR needed for Rel-6.

X Other core specifications
X Test specifications
X O&M Specifications

Other specs affected:

Other comments:

4 Contents of the Files

This clause specifies the EFs for the 3G session defining access conditions, data items and coding. A data item is a part of an EF which represents a complete logical entity, e.g. the alpha tag in an EF_{ADN} record.

EFs or data items having an unassigned value, or, which during the 3G session, are cleared by the ME, shall have their bytes set to 'FF'. After the administrative phase all data items shall have a defined value or have their bytes set to 'FF'. If a data item is 'deleted' during a 3G session by the allocation of a value specified in another 3GPP TS, then this value shall be used and the data item is not unassigned. For example, for a deleted LAI in EF_{LOCI} the last byte takes the value 'FE' (TS 24.008 [9] refers).

A file is associated with attributes that depending of the file type indicates how data is to be accessed e.g. file size, record length etc. Although in the present document some files and data items stored in a file are indicated as having a fixed length; when reading such structures the terminal shall derive the length of the data item from the attributes provided in the file information i.e. not use the fixed value specified for the file in the present document. Although the terminal is able to read the entire structure it should only use those elements in the data item which is recognised by the terminal.

EFs are mandatory (M), optional (O), or conditional (C). A conditional file is mandatory if a specific requirement is fulfilled. The file size of an optional EF may be zero. All implemented EFs with a file size greater than zero shall contain all mandatory data items. Optional data items may either be filled with 'F', or, if located at the end of an EF, need not exist.

For any EF, when the SFI is not indicated in the description of the file it is not allowed to assign an SFI. If in the description of the file an SFI value is indicated the file shall support SFI. The SFI value shall be assigned by the card issuer. It is mandatory for EFs stating an SFI value ('YY') in the description of their structure to provide an SFI. For files where in the file description the SFI is indicated as 'Optional' the file may support an SFI.

When the coding is according to ITU-T Recommendation T.50 [23], bit 8 of every byte shall be set to 0.

For an overview containing all files see figures 4.1 and 4.2.

4.2.9 EF_{ACM} (Accumulated Call Meter)

This EF contains the total number of units for both the current call and the preceding calls.

NOTE: The information may be used to provide an indication to the user for advice or as a basis for the calculation of the monetary cost of calls (see TS 22.086 [15]).

Identifie	r: '6F39'	,	Structure: cyclic	Optional				
SFI: Op	<u>tional</u> Recommend	ed						
Reco	ord length: 3 bytes		Update	activity:	high			
Access Condition	ns:							
READ		PIN						
UPDATE		PIN/PIN	PIN/PIN2					
		(fixed d	(fixed during administrative management)					
INCREAS	SE	PIN						
DEACTI\	/ATE	ADM	ADM					
ACTIVAT	Έ	ADM						
Bytes		Description	n	M/O	Length			
1 to 3	Accumulated cou	nt of units		М	3 bytes			
NOTE:		•	•					
If a SFI is	assigned, the rec	ommended	value is '1C'. Howe	ver card	ds may exist that			
indicate another	r value. Therefore	the terminal	shall be able to handl	e other	values.			

- Accumulated count of units

Contents:

value of the ACM.

Coding:

see the coding of EF_{ACMmax} .

If a GSM application is present on the UICC and the ACM value is to be shared between the GSM and the USIM application this file shall be shared between the two applications.

4.4.2.1 EF_{PBR} (Phone Book Reference file)

This file describes the structure of the phonebook. All EFs representing the phonebook are specified here <u>(with the exception of EF_{PSC}, EF_{PUID} and EF_{CC})</u>, together with their file identifiers (FID) and their short file identifiers (SFI), if applicable.

Certain kinds of EFs can occur more than once in the phonebook, e.g. there may be two entities of Abbreviated Dialling Numbers, EF_{ADN} and EF_{ADN1} . For these kinds of EFs, no fixed FID values are specified. Instead, the value '4FXX' indicates that the value is to be assigned by the card issuer. These assigned values are then indicated in the associated TLV object in EF_{PBR} .

EFs stating an SFI value ('YY') in the description of their structure shall provide an SFI. The value shall be assigned by the card issuer and is indicated in the associated TLV object in EF_{PBR}. The SFI value assigned to an EF which is indicated in EF_{PBR} shall correspond to the SFI indicated in the TLV object in EF_{PBR}.

The reference file is a file that contains information how the information in the different files is to be combined together to form a phone book entry. The reference file contains records. Each record specifies the structure of up to 254 entries in the phone book. Each phone book entry consists of data stored in files indicated in the reference file record. The entry structure shall be the same over all the records in the EF _{PBR}. If more than 254 entries are to be stored, a second record is needed in the reference file. The structure of a phone book entry is defined by different TLV objects that are stored in a reference file record. The reference file record structure describes the way a record in a file that is part of the phonebook is used to create a complete entry. Three different types of file linking exist.

- Type 1 files: Files that contain as many records as the reference/master file (EF_{ADN}, EF_{ADN1}) and are linked on record number bases (Rec1 -> Rec1). The master file record number is the reference.
- Type 2 files: Files that contain less entries than the master file and are linked via pointers in the index administration file (EF_{IAP}).
- Type 3 files are files that are linked by a record identifier within a record.

4.4.2.7 EF_{AAS} (Additional number Alpha String)

This file contains the alpha strings that are associated with the user defined naming tags for additional numbers referenced in EF_{ANR} .

Structure of EF_{AAS}

Identifier:	'4FXX'	Str	ucture: linear fixed		Optional		
SFI: Opt	ional-						
Record	d length: X bytes	}	Update activity: low				
Access Condition READ UPDATE DEACTIV ACTIVATI	ATE	PIN PIN ADM ADM					
Bytes		Description	on	M/O	Length		
1 to X	Alpha text string	<u>. </u>		М	X bytes		

- Alpha text string.

Content:

- user defined text for additional number.

Coding:

- same as the alpha identifier in EF_{ADN} .

4.4.2.8 EF_{GAS} (Grouping information Alpha String)

This file contains the alpha strings that are associated with the group name referenced in EF_{GRP}.

Structure of EF_{GAS}

Identifier:	'4FXX'	Structure: linear fixed			Conditional (see Note)		
SFI: Opt	ional <mark>-</mark>				·		
Record	d length: X bytes	3	Update a	activity:	low		
Access Condition READ UPDATE DEACTIV ACTIVATI	ATE	PIN PIN ADM ADM					
Bytes		Description	on	M/O	Length		
1 to X	Alpha text string	9		М	X bytes		
NOTE: This file is mandatory if and only if EF _{GRP} is present.							

- Alpha text string

Content:

- group names.

Coding:

- same as the alpha identifier in EF_{ADN} .

H.1 List of SFI Values at the USIM ADF Level

File Identification	SFI	Description
'6FB7'	'01'	Emergency call codes
'6F05'	'02'	Language indication
'6FAD'	'03'	Administrative data
'6F38'	'04'	USIM service table
'6F56'	'05'	Enabled services table
'6F78'	'06'	Access control class
'6F07'	'07'	IMSI
'6F08'	'08'	Ciphering and integrity keys
'6F09'	'09'	Ciphering and integrity keys for packet switched domain
'6F60'	'0A'	User PLMN selector
'6F7E	'0B'	Location information
'6F73'	'0C'	Packet switched location information
'6F7B'	'0D'	Forbidden PLMNs
'6F48'	'0E'	CBMID
'6F5B'	'0F'	Hyperframe number
'6F5C'	'10'	Maximum value of hyperframe number
'6F61'	'11'	Operator PLMN selector
'6F31'	'12'	HPLMN search period
'6F62'	'13'	Preferred HPLMN access technology
'6F80'	'14'	Incoming call information
'6F81'	'15'	Outgoing call information
'6F4F'	'16'	Capability configuration parameters 2
'6F06'	'17'	Access Rule Reference
'6FC5'	'19'	PLMN Network Name
'6FC6'	'1A'	Operator Network List
'6FCD'	'1B'	Service Provider Display Information
<u>'6F39'</u>	<u>'1C'</u>	Accumulated Call Meter

<u>TE.</u> When used the value '1C' shall be used as SFI for EF_{ACM}, for compatibility reasons the terminal shall accept other

All other SFI values are reserved for future use.

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

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Reason	for chang	іе: Ж			s to the SFI ot referenced			s.Ma	andatory SFI	can a	llso apply	for files
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			X	O&M	Specification	าร						

Rel-6 equivalent to Rel-5 CR193 (T3-031034)

 Rel-6 equivalent to Rel-5 CR193 (T3-031034)

 Rel-6 equivalent to Rel-5 CR193 (T3-031034)

Other comments:

4 Contents of the Files

This clause specifies the EFs for the 3GPP session defining access conditions, data items and coding. A data item is a part of an EF which represents a complete logical entity, e.g. the alpha tag in an EF_{ADN} record.

A file is associated with attributes that depending of the file type indicates how data is to be accessed e.g. file size, record length etc. Although in the present document some files and data items stored in a file are indicated as having a fixed length; when reading such structures the terminal shall derive the length of the data item from the attributes provided in the file information i.e. not use the fixed value specified for the file in the present document. Although the terminal is able to read the entire structure it should only use those elements in the data item which is recognised by the terminal.

For any EF, when the SFI is not indicated in the description of the file it is not allowed to assign an SFI. If in the description of the file an SFI value is indicated the file shall support SFI. The SFI value shall be assigned by the card issuer. It is mandatory for EFs stating an SFI value ('YY') in the description of their structure to provide an SFI. For files where in the file description the SFI is indicated as 'Optional' the file may support an SFI.

For an overview containing all files see figures 4.1 and 4.2.

4.2.9 EF_{ACM} (Accumulated Call Meter)

This EF contains the total number of units for both the current call and the preceding calls.

NOTE: The information may be used to provide an indication to the user for advice or as a basis for the calculation of the monetary cost of calls (see TS 22.086 [15]).

Identifie	r: '6F39'	,	Structure: cyclic		Optional
SFI: Op	<u>tional</u> Recommend	ed			
Reco	ord length: 3 bytes		Update	activity:	high
Access Condition	ns:				
READ		PIN			
UPDATE		PIN/PIN	√2		
		(fixed d	uring administrative m	nanagen	nent)
INCREAS	SE	PIN			
DEACTI\	/ATE	ADM			
ACTIVAT	Έ	ADM			
Bytes		Description	n	M/O	Length
1 to 3	Accumulated cou	nt of units		М	3 bytes
NOTE:		•	•		
If a SFI is	assigned, the rec	ommended	value is '1C'. Howe	ver card	ds may exist that
indicate another	r value. Therefore	the terminal	shall be able to handl	e other	values.

- Accumulated count of units

Contents:

value of the ACM.

Coding:

see the coding of EF_{ACMmax} .

If a GSM application is present on the UICC and the ACM value is to be shared between the GSM and the USIM application this file shall be shared between the two applications.

4.4.2.1 EF_{PBR} (Phone Book Reference file)

This file describes the structure of the phonebook. All EFs representing the phonebook are specified here <u>(with the exception of EF_{PSC}, EF_{PUID} and EF_{CC})</u>, together with their file identifiers (FID) and their short file identifiers (SFI), if applicable.

Certain kinds of EFs can occur more than once in the phonebook, e.g. there may be two entities of Abbreviated Dialling Numbers, EF_{ADN} and EF_{ADN1} . For these kinds of EFs, no fixed FID values are specified. Instead, the value '4FXX' indicates that the value is to be assigned by the card issuer. These assigned values are then indicated in the associated TLV object in EF_{PBR} .

EFs stating an SFI value ('YY') in the description of their structure shall provide an SFI. The value shall be assigned by the card issuer and is indicated in the associated TLV object in EF_{PBR}-The SFI value assigned to an EF which is indicated in EF_{PBR} shall correspond to the SFI indicated in the TLV object in EF_{PBR}.

The reference file is a file that contains information how the information in the different files is to be combined together to form a phone book entry. The reference file contains records. Each record specifies the structure of up to 254 entries in the phone book. Each phone book entry consists of data stored in files indicated in the reference file record. The entry structure shall be the same over all the records in the EF _{PBR}. If more than 254 entries are to be stored, a second record is needed in the reference file. The structure of a phone book entry is defined by different TLV objects that are stored in a reference file record. The reference file record structure describes the way a record in a file that is part of the phonebook is used to create a complete entry. Three different types of file linking exist.

- Type 1 files: Files that contain as many records as the reference/master file (EF_{ADN}, EF_{ADN1}) and are linked on record number bases (Rec1 -> Rec1). The master file record number is the reference.
- Type 2 files: Files that contain less entries than the master file and are linked via pointers in the index administration file (EF_{IAP}).
- Type 3 files are files that are linked by a record identifier within a record.

4.4.2.7 EF_{AAS} (Additional number Alpha String)

This file contains the alpha strings that are associated with the user defined naming tags for additional numbers referenced in EF_{ANR} .

Structure of EF_{AAS}

Identifier:	'4FXX'	Stru	ucture: linear fixed		Optional
SFI: Opt	ional-				
Record	d length: X bytes		Update	activity:	low
Access Condition READ UPDATE DEACTIV ACTIVATI	ATE	PIN PIN ADM ADM			
Bytes		Description	on	M/O	Length
1 to X	Alpha text string			М	X bytes

- Alpha text string.

Content:

- user defined text for additional number.

Coding:

- same as the alpha identifier in EF_{ADN} .

4.4.2.8 EF_{GAS} (Grouping information Alpha String)

This file contains the alpha strings that are associated with the group name referenced in EF_{GRP}.

Structure of EF_{GAS}

Identifier:	'4FXX'	Str	ucture: linear fixed		Conditional (see Note)
SFI: Opt	ional <mark>-</mark>				
Record	d length: X bytes	3	Update a	activity	: low
Access Condition READ UPDATE DEACTIV ACTIVATI	ATE	PIN PIN ADM ADM			
Bytes		Description	on	M/O	Length
1 to X	Alpha text string	9		М	X bytes
NOTE: This file	e is mandatory i	f and only if I	EF _{GRP} is present.		

- Alpha text string

Content:

- group names.

Coding:

- same as the alpha identifier in EF_{ADN} .

H.1 List of SFI Values at the USIM ADF Level

File Identification	SFI	Description
'6FB7'	'01'	Emergency call codes
'6F05'	'02'	Language indication
'6FAD'	'03'	Administrative data
'6F38'	'04'	USIM service table
'6F56'	'05'	Enabled services table
'6F78'	'06'	Access control class
'6F07'	'07'	IMSI
'6F08'	'08'	Ciphering and integrity keys
'6F09'	'09'	Ciphering and integrity keys for packet switched domain
'6F60'	'0A'	User PLMN selector
'6F7E	'0B'	Location information
'6F73'	'0C'	Packet switched location information
'6F7B'	'0D'	Forbidden PLMNs
'6F48'	'0E'	CBMID
'6F5B'	'0F'	Hyperframe number
'6F5C'	'10'	Maximum value of hyperframe number
'6F61'	'11'	Operator PLMN selector
'6F31'	'12'	HPLMN search period
'6F62'	'13'	Preferred HPLMN access technology
'6F80'	'14'	Incoming call information
'6F81'	'15'	Outgoing call information
'6F4F'	'16'	Capability configuration parameters 2
'6F06'	'17'	Access Rule Reference
'6FC5'	'19'	PLMN Network Name
'6FC6'	'1A'	Operator Network List
'6FCD'	'1B'	Service Provider Display Information
<u>'6F39'</u>	<u>'1C'</u>	Accumulated Call Meter

<u>TE.</u> When used the value '1C' shall be used as SFI for EF_{ACM}, for compatibility reasons the terminal shall accept other

All other SFI values are reserved for future use.

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Proposed change				ppsЖ	•				ccess Netv	vork	Core	e Network
Title:	€ Cla	rificatio	n of "fi	ee" entry	in EF_E	XT1/E	F_E	XT4				
Source:	Т 3											
Work item code: 3	E TE								Date:	 # 2	20/11/03	
	Deta be fo	F (corr A (corr B (add C (fund D (edit iled exp bund in :	ection) respond ition of ctional i orial me lanatio 3GPP 1	ds to a cor feature), modification odification ns of the a FR 21.900	rection in on of featu) above cate	re) egories	can		2 R96 R97 R98 R99 Rel-4 Rel-5	of the (G (R (R (R (R (R (R	SSM Phas Release 19 Release 19 Release 19 Release 4) Release 5) Release 6)	996) 997) 998) 999)
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Other comments:	ж											

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:

- 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.

4.4.2.4 EF_{EXT1} (Extension1)

This EF contains extension data of an ADN/SSC.

Extension data is caused by:

- an ADN/SSC which is greater than the 20 digit capacity of the ADN/SSC Elementary File or where common digits are required to follow an ADN/SSC string of less than 20 digits. The remainder is stored in this EF as a record, which is identified by a specified identification byte inside the ADN/SSC Elementary File. The EXT1 record in this case is specified as additional data;
- an associated called party subaddress. The EXT1 record in this case is specified as subaddress data.

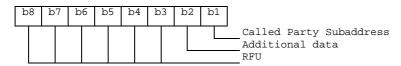
Identifie	er: '4FXX'	Str	ucture: linear fixed		Optional
SF	I: 'YY'				
Reco	ord length: 13 byte	s	Update	activity	: low
Access Condit	ions:				
READ		PIN			
UPDAT	ГЕ	PIN			
DEACT	ΓΙVΑΤΕ	ADM			
ACTIV	ATE	ADM			
Б.	T	D		14/0	1 4
Bytes		Descriptio	n	M/O	Length
1	Record type			М	1 byte
2 to 12	Extension data			М	11 bytes
13	Identifier			М	1 byte

- Record type.

Contents:

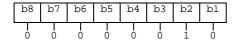
- type of the record.

Coding:



- b3-b8 are reserved and set to 0;
- a bit set to 1 identifies the type of record;
- only one type can be set;
- '00' indicates the type "unknown" or "free".

The following example of coding means that the type of extension data is "additional data":



Extension data.

Contents:

additional data or Called Party Subaddress depending on record type.

Coding:

Case 1, Extension1 record is additional data:

- The first byte of the extension data gives the number of bytes of the remainder of ADN/SSC. The coding of remaining bytes is BCD, according to the coding of ADN/SSC. Unused nibbles at the end shall be set

to 'F'. It is possible if the number of additional digits exceeds the capacity of the additional record to chain another record inside the EXT1 Elementary File by the identifier in byte 13.

Case 2, Extension1 record is Called Party Subaddress:

- The subaddress data contains information as defined for this purpose in TS 24.008 [9]. All information defined in TS 24.008, except the information element identifier, shall be stored in the USIM. The length of this subaddress data can be up to 22 bytes. In those cases where two extension records are needed, these records are chained by the identifier field. The extension record containing the first part of the called party subaddress points to the record which contains the second part of the subaddress.
- Identifier.

Contents:

identifier of the next extension record to enable storage of information longer than 11 bytes.

Coding:

record number of next record. 'FF' identifies the end of the chain.

- Example of a chain of extension records being associated to an ADN/SSC. The extension1 record identifier (Byte 14+X) of ADN/SSC is set to 3.

No of Record	Type	Extension Data	Next	Record
:	:	:	:	
:	:	:	:	
Record 3	'02'	xxxx	'06'	—
Record 4	'xx'	xxxx	'xx'	
Record 5	'01'	xxxx	'FF'	◀──
Record 6	'01'	xxxx	'05'	←
:	:	:	:	
:	:	:	:	

In this example ADN/SSC is associated to additional data (record 3) and a called party subaddress whose length is more than 11 bytes (records 6 and 5).

Requirement: Service n°27 "available".

Request: The ME performs the reading procedure with EF_{Kc} .

Update: The ME performs the updating procedure with EF_{Kc} .

5.3.2 Dialling numbers

Requirements:

- Service n°1 "available" for ADN located under the local phonebook;
- Presence of EFADN in EFPBR for ADN located under the global phonebook;
- Presence of EFANR in EFPBR for ANR;
- Service n°2 "available" for FDN;
- Service n°21 "available" for MSISDN;
- Service n°4 "available" for SDN;
- Service n°6 "available" for BDN;
- Service n°8 "available" for EFOCI;
- Service n°9 "available" for EFICI.

The following procedures may not only be applied to EF_{ADN} and its associated extension files EF_{CCP1} and EF_{EXT1} as described in the procedures below, but also to EF_{ANR} , EF_{FDN} , EF_{MSISDN} , EF_{BDN} , EF_{SDN} , EF_{OCI} , EF_{ICI} and their associated extension files. If these files are not allocated and activated, as denoted in the USIM service table, the current procedure shall be aborted and the appropriate EF_{SDN} shall remain unchanged.

As an example, the following procedures are described as applied to ADN.

Update: The ME analyses and assembles the information to be stored as follows (the byte identifiers used below correspond to those in the definition of the relevant EFs in the present document):

- i) The ME identifies the Alpha-tagging, Capability/Configuration Identifier and Extension1 Record Identifier.
- ii) The dialling number/SSC string shall be analysed and allocated to the bytes of the EF as follows:
 - if a "+" is found, the TON identifier is set to "International";
 - if 20 or less "digits" remain, they shall form the dialling number/SSC string;
 - if more than 20 "digits" remain, the procedure shall be as follows:
 - The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The first 20 "digits" are stored in the dialling number/SSC string. The value of the length of BCD number/SSC contents is set to the maximum value, which is 11. The Extension1 record identifier is coded with the associated record number in the EF_{EXT1}. The remaining digits are stored in the selected Extension1 record where the type of the record is set to "additional data". The first byte of the Extension1 record is set with the number of bytes of the remaining additional data. The number of bytes containing digit information is the sum of the length of BCD number/SSC contents of EF_{ADN} and byte 2 of all associated chained Extension1 records containing additional data.
- iii) If a called party subaddress is associated to the ADN/SSC the procedure shall proceed as follows:
- If the length of the called party subaddress is less than or equal to 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the Extension1 record, and sets the Extension1 record type to "called party subaddress".
 - If the length of the called party subaddress is greater than 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for two free records in EF_{EXT1}. If no such two records are found, the ME runs the Purge procedure. If two Extension1 records are still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the two Extension1 records. The identifier field in the Extension1 record containing the first part of the subaddress data is coded with the associated EF_{EXT1} record number containing the second part of the subaddress data. Both Extension1 record types are set to "called party subaddress".

Once i), ii), and iii) have been considered the ME performs the updating procedure with EF_{ADN}. If the USIM has no available empty space to store the received ADN/SSC, or if the procedure has been aborted, the ME advises the user.

For reasons of memory efficiency, the ME may analyse all Extension1 records to recognise if the additional or subaddress data to be stored is already existing in EF_{EXT1} . In this case, the ME may use the existing chain or the last part of the existing chain from more than one ADN. The ME is only allowed to store extension data in unused records. If existing records are used for multiple access, the ME shall not change any data in those records to prevent corruption of existing chains.

Erasure: The ME sends the identification of the information to be erased. The content of the identified record in EF_{ADN} is marked as "free".

Request: The ME sends the identification of the information to be read. The ME shall analyse the data of

 EF_{ADN} to ascertain, whether additional data is associated in EF_{EXT1} or EF_{CCP1} . If necessary, then the ME performs the reading procedure on these EFs to assemble the complete ADN/SSC.

Purge: The ME shall access each EF which references EF_{EXT1} (EF_{EXT2}) for storage and shall identify

records in these files using extension data (additional data or called party subaddress). Note that existing chains have to be followed to the end. All referred Extension1 (Extension2) records are noted by the ME. All Extension1 (Extension2) records not noted are then marked by the ME as

"free" by setting the whole record to '00FF...FF'.

NOTE: Dependent upon the implementation of the ME, and in particular the possibility of erasure of ADN/SSC records by Phase 1 MEs, which have no knowledge of the EF_{EXT1}, it is possible for Extension1 records to be marked as "used space" (not equal to 'FF'), although in fact they are no longer associated with an ADN/SSC record.

The following three procedures are only applicable to service n°2 (FDN).

FDN capability request. The ME shall check the state of service $n^{\circ}2$, i.e. if FDN is "enabled" or "disabled". If FDN is enabled, the ME shall only allow outgoing calls as defined in the fixed number dialling description in TS 22.101 [24]. To ascertain the state of FDN, the ME shall check in EF_{UST} and EF_{EST} if FDN is enabled (service activated and available). In all other cases service $n^{\circ}2$ is disabled.

FDN enabling is done by activating the FDN service in EF_{EST}.

FDN disabling is done by deactivating the FDN service in EF_{EST}.

The following three procedures are only applicable to service n°6 (BDN).

- BDN capability request. The ME shall check the state of service $n^{\circ}6$, i.e. if BDN is "enabled" or "disabled". To ascertain the state of BDN, the ME shall check in EF_{UST} and EF_{EST} if BDN is "enabled" (service available and activated). In all other cases, the BDN service is "disabled".
- BDN enabling is done by activating the BDN service in EF_{EST}.
- BDN disabling is done by deactivating the BDN service in EF_{EST}.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet	'07FFFF'
IOFOOL	switched domain	IEE EE071
'6F20'	Ciphering key Kc	'FFFF07' 'FFFF'
'6F2C'	De-personalization control keys	
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
'6F4B'	Extension 2	'00FFFF'
'6F4C'	Extension 3	'00FFFF'

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F52'	GPRS Ciphering key KcGPRS	'FFFF07'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	' <u>00</u> FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'0000'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC2'	Group identity	'FFFFFFF'
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Tdoc #T3-030964

	CHANGE RE	EQUEST	CR-Form-v7
*	31.102 CR 196 #re	ev - ^{# Current version:} 4.10.0) #
For <u>HELP</u> on t	sing this form, see bottom of this page	ge or look at the pop-up text over the	mbols.
Proposed change			etwork
Title:	Clarification of "free" entry in EF_EX	XT1/EF_EXT4	
Source:	TSG-T WG3		
Work item code: ₩	TEI	Date: 第 20/11/03	
Category: #	F Use one of the following categories: F (correction) A (corresponds to a correction in a B (addition of feature), C (functional modification of feature D (editorial modification) Detailed explanations of the above category	R97 (Release 1997) re) R98 (Release 1998) R99 (Release 1999))))
Reason for change		cord in the EF_EXT1 description. een phonebook purge procedure and EF_E	EXT1 file
Summary of chang	After purge procedure, the reco 'FFFF'. Remove 'Note' in purge proced	d in EF_EXT1 in case of its record type '00 cord marked as "free" is set to '00FFFF' indure section. EF_EXT4 and EXT8 is '00FFFF'.	
Consequences if not approved:		ay differ among terminals, then there is ris lem. The specification is inconsistent with i	
Clauses affected:	# 4.4.2.4, 5.3.2, AnnexE		
Other specs affected:	Y N X Other core specifications Test specifications O&M Specifications	s #	
Other comments:	£		

How to create CRs using this form:

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

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

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.4.2.4 EF_{EXT1} (Extension1)

This EF contains extension data of an ADN/SSC.

Extension data is caused by:

- an ADN/SSC which is greater than the 20 digit capacity of the ADN/SSC Elementary File or where common digits are required to follow an ADN/SSC string of less than 20 digits. The remainder is stored in this EF as a record, which is identified by a specified identification byte inside the ADN/SSC Elementary File. The EXT1 record in this case is specified as additional data;
- an associated called party subaddress. The EXT1 record in this case is specified as subaddress data.

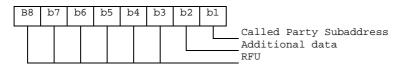
Identifie	er: '4FXX'	Stru	ucture: linear fixed		Optional
SFI	: 'YY'				
Reco	ord length: 13 byte	S	Update	activity	: low
Access Conditi	ons:				
READ		PIN			
UPDAT	E	PIN			
DEACT	IVATE	ADM			
ACTIVA	TE	ADM			
·	1	D		14/0	1 4
Bytes		Description	1	M/O	Length
1	Record type			M	1 byte
2 to 12	Extension data		·	М	11 bytes
13	Identifier			М	1 byte

Record type.

Contents:

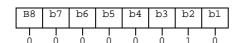
- type of the record.

Coding:



- b3-b8 are reserved and set to 0;
- a bit set to 1 identifies the type of record;
- only one type can be set;
- '00' indicates the type "unknown" or "free".

The following example of coding means that the type of extension data is "additional data":



Extension data.

Contents:

additional data or Called Party Subaddress depending on record type.

Coding:

Case 1, Extension1 record is additional data:

Case 2, Extension1 record is Called Party Subaddress:

- The first byte of the extension data gives the number of bytes of the remainder of ADN/SSC. The coding of remaining bytes is BCD, according to the coding of ADN/SSC. Unused nibbles at the end shall be set to 'F'. It is possible if the number of additional digits exceeds the capacity of the additional record to chain another record inside the EXT1 Elementary File by the identifier in byte 13. In this case byte 2 (first byte of the extension data) of all records for additional data within the same chain indicates the number of bytes ('01' to '0A') for ADN/SSC (respectively MSISDN, LND) within the same record unequal to 'FF'.

The subaddress data contains information as defined for this purpose in TS 24.008 [9]. All information defined in TS 24.008, except the information element identifier, shall be stored in the USIM. The length of this subaddress data can be up to 22 bytes. In those cases where two extension records are needed, these records are chained by the identifier field. The extension record containing the first part of the called party subaddress points to the record which contains the second part of the subaddress.

Identifier.

Contents:

identifier of the next extension record to enable storage of information longer than 11 bytes.

Coding:

record number of next record. 'FF' identifies the end of the chain.

- Example of a chain of extension records being associated to an ADN/SSC. The extension1 record identifier (Byte 14+X) of EF_{ADN} is set to 3.

		EF _{EXT1}											
	Byte: 1	2	3	4	5	6	7	8	9	10	11	12	13
	Record Type					Exte	ension	data					Identifier
													,
Record 1	01	xx	XX	XX	ХХ	XX	xx	хх	хх	XX	xx	ХХ	FF
Record 2	xx	хх	XX	XX	хх	XX	хх	хх	хх	XX	XX	хх	XX
Record 3	02	0A	XX	XX	ХХ	XX	XX	хх	хх	XX	XX	хх	04
Record 4	02	04	XX	XX	xx	XX	FF	FF	FF	FF	FF	FF	06
Record 5	xx	XX	XX	XX	ХХ	XX	XX	хх	хх	XX	XX	XX	XX
Record 6	01	xx	xx	xx	xx	xx	xx	xx	хх	xx	xx	хх	01
•	-		•	•	•	•	•		•	•	•	•	•
•													

In this example, ADN/SSC is associated to additional data (records 3 and 4) which represent the last 27 or 28 digits of the whole ADN/SSC (the first 20 digits are stored in EF_{ADN}) and a called party subaddress whose length is more than 11 bytes (records 6 and 1).

5.3.2 Dialling numbers

Requirements:

- Service n°1 "available" for ADN located under the local phonebook;
- Presence of EF_{ADN} in EF_{PBR} for ADN located under the global phonebook;
- Presence of EF_{ANR} in EF_{PBR} for ANR;
- Service n°2 "available" for FDN;
- Service n°21 "available" for MSISDN;

- 4
- Service n°4 "available" for SDN;
- Service n°6 "available" for BDN;
- Service n°8 "available" for EFOCI;
- Service n°9 "available" for EFICI.

The following procedures may not only be applied to EF_{ADN} and its associated extension files EF_{CCP1} and EF_{EXT1} as described in the procedures below, but also to EF_{ANR} , EF_{FDN} , EF_{MSISDN} , EF_{BDN} , EF_{SDN} , EF_{OCI} , EF_{ICI} , and EF_{MBDN} and their associated extension files. If these files are not allocated and activated, as denoted in the USIM service table, the current procedure shall be aborted and the appropriate EFs shall remain unchanged.

As an example, the following procedures are described as applied to ADN.

Update: The ME analyses and assembles the information to be stored as follows (the byte identifiers used below correspond to those in the definition of the relevant EFs in the present document):

- i) The ME identifies the Alpha-tagging, Capability/Configuration Identifier and Extension1 Record Identifier.
- ii) The dialling number/SSC string shall be analysed and allocated to the bytes of the EF as follows:
 - if a "+" is found, the TON identifier is set to "International";
 - if 20 or less "digits" remain, they shall form the dialling number/SSC string;
 - if more than 20 "digits" remain, the procedure shall be as follows:
 - The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The first 20 "digits" are stored in the dialling number/SSC string. The value of the length of BCD number/SSC contents is set to the maximum value, which is 11. The Extension1 record identifier is coded with the associated record number in the EF_{EXT1}. The remaining digits are stored in the selected Extension1 record where the type of the record is set to "additional data". The first byte of the Extension1 record is set with the number of bytes of the remaining additional data. The number of bytes containing digit information is the sum of the length of BCD number/SSC contents of EF_{ADN} and byte 2 of all associated chained Extension1 records containing additional data.
- iii) If a called party subaddress is associated to the ADN/SSC the procedure shall proceed as follows:
- If the length of the called party subaddress is less than or equal to 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the Extension1 record, and sets the Extension1 record type to "called party subaddress".
 - If the length of the called party subaddress is greater than 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for two free records in EF_{EXT1}. If no such two records are found, the ME runs the Purge procedure. If two Extension1 records are still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the two Extension1 records. The identifier field in the Extension1 record containing the first part of the subaddress data is coded with the associated EF_{EXT1} record number containing the second part of the subaddress data. Both Extension1 record types are set to "called party subaddress".

Once i), ii), and iii) have been considered the ME performs the updating procedure with EF_{ADN}. If the USIM has no available empty space to store the received ADN/SSC, or if the procedure has been aborted, the ME advises the user.

For reasons of memory efficiency, the ME may analyse all Extension1 records to recognise if the additional or subaddress data to be stored is already existing in EF_{EXT1} . In this case, the ME may use the existing chain or the last part of the existing chain from more than one ADN. The ME is only allowed to store extension data in unused records. If

existing records are used for multiple access, the ME shall not change any data in those records to prevent corruption of existing chains.

Erasure: The ME sends the identification of the information to be erased. The content of the identified

record in EF_{ADN} is marked as "free".

Request: The ME sends the identification of the information to be read. The ME shall analyse the data of

EF_{ADN} to ascertain, whether additional data is associated in EF_{EXT1} or EF_{CCP1}. If necessary, then the

ME performs the reading procedure on these EFs to assemble the complete ADN/SSC.

Purge: The ME shall access each EF which references EF_{EXT1} (EF_{EXT2} , EF_{EXT6}) for storage and shall

identify records in these files using extension data (additional data or called party subaddress). Note that existing chains have to be followed to the end. All referred Extension1 (Extension2, Extension6) records are noted by the ME. All Extension1 (Extension2, Extension6) records not

noted are then marked by the ME as "free" by setting the whole record to '00FF...FF'.

NOTE: Dependent upon the implementation of the ME, and in particular the possibility of erasure of ADN/SSC records by Phase 1 MEs, which have no knowledge of the EF_{EXTI}, it is possible for Extension1 records to be marked as "used space" (not equal to 'FF'), although in fact they are no longer associated with an

ADN/SSC record.

The following three procedures are only applicable to service n°2 (FDN).

FDN capability request. The ME shall check the state of service $n^{\circ}2$, i.e. if FDN is "enabled" or "disabled". If FDN is enabled, the ME shall only allow outgoing calls as defined in the fixed number dialling description in TS 22.101 [24]. To ascertain the state of FDN, the ME shall check in EF_{UST} and EF_{EST} if FDN is enabled (service activated and available). In all other cases service $n^{\circ}2$ is disabled.

FDN enabling is done by activating the FDN service in EF_{EST}.

FDN disabling is done by deactivating the FDN service in EF_{EST}.

The following three procedures are only applicable to service n°6 (BDN).

- BDN capability request. The ME shall check the state of service $n^{\circ}6$, i.e. if BDN is "enabled" or "disabled". To ascertain the state of BDN, the ME shall check in EF_{UST} and EF_{EST} if BDN is "enabled" (service available and activated). In all other cases, the BDN service is "disabled".
- BDN enabling is done by activating the BDN service in EF_{EST}.
- BDN disabling is done by deactivating the BDN service in EF_{EST}.

-

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

ile Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphering key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'		'FFFF'
	Grouping information alpha string	
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and	Card issuer/operator dependant
105051	DF _{TELECOM})	
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
'6F4B'	Extension 2	'00FFFF'
'6F4C'	Extension 3	'00FFFF'

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	' <u>00</u> FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access	'FFFFF0000FFFFF0000'
	Technology	
'6F61'	Operator controlled PLMN selector with	'FFFFF0000FFFFFF0000'
	Access Technology	
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFFF0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see
		note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FFFF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'
'6FCC'	Extension 7	'00 FFFF'
'6FCD' '6FCE'	Service Provider Display Information MMS Notification	200 00 00 FF FF'
	Extension 8	'00 00 00 FFFF'
'6FCF'		' <u>00</u> FFFF'
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'
'6FD1'	MMS User Preferences	'FFFF'
'6FD2'	MMS User Connectivity Parameters	'FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

Proposed change affects:

	CHANGE REQUEST							
31.102	CR	197	жrev	-	¥	Current version:	5.6.0	\mathfrak{H}

ME X Radio Access Network Core Network

Tdoc # T3-031036

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the \mathbb{H} symbols.

UICC apps#

Title:	Ж	Clarification of "free" entry in EF_EXT	1/4/8		
Source:	¥	Т3			
Work item code.	: #	TEI		Date: ♯	21/11/03
_					
Category:	Ж	F	ı	Release: #	
		Use <u>one</u> of the following categories:			the following releases:
		F (correction)	li 1 1		(GSM Phase 2)
		A (corresponds to a correction in an e	earlier release)		(Release 1996)
		B (addition of feature),C (functional modification of feature)			(Release 1997) (Release 1998)
		D (editorial modification)			(Release 1999)
		Detailed explanations of the above categor	ies can		(Release 4)
		be found in 3GPP TR 21.900.	100 0011		(Release 5)
					(Release 6)

Reason for change: #	No clear definition of "free" record in the EF_EXT1 description. Inconsistent statements between phonebook purge procedure and EF_EXT1 file description.
Summary of change: 第	Clear indication of "free" record in EF_EXT1 in case of its record type '00'. After purge procedure, the record marked as "free" is set to '00FFFF' instead of 'FFFF'. Remove 'Note' in purge procedure section. Pre-personalization value of EF_EXT4 and EXT8 are set to '00FFFF'.
Consequences if # not approved:	Free record implementaion may differ among terminals, then there is risk a to cause an interoperability problem. The specification is inconsistent with itself.

Clauses affected:	策 4.4.2.4, 5.3.2, AnnexE					
	Y N					
Other specs						
affected:	X Test specifications					
	X O&M Specifications					
Other comments:	∺					

How to create CRs using this form:

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

4.4.2.4 EF_{EXT1} (Extension1)

This EF contains extension data of an ADN/SSC.

Extension data is caused by:

- an ADN/SSC which is greater than the 20 digit capacity of the ADN/SSC Elementary File or where common digits are required to follow an ADN/SSC string of less than 20 digits. The remainder is stored in this EF as a record, which is identified by a specified identification byte inside the ADN/SSC Elementary File. The EXT1 record in this case is specified as additional data;
- an associated called party subaddress. The EXT1 record in this case is specified as subaddress data.

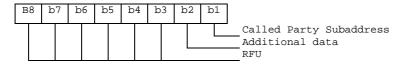
Identifier: '4FXX'		Structure: linear fixed			Optional		
SFI	: 'YY'						
Reco	ord length: 13 byte	S	Update	activity:	: low		
Access Conditi READ UPDAT DEACT ACTIVA	E IVATE	PIN PIN ADM ADM					
Bytes		Description	١	M/O	Length		
1	Record type		М	1 byte			
2 to 12	Extension data			М	11 bytes		
13	Identifier			M	1 byte		

- Record type.

Contents:

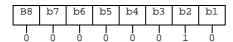
- type of the record.

Coding:



- b3-b8 are reserved and set to 0;
- a bit set to 1 identifies the type of record;
- only one type can be set;
- '00' indicates the type "unknown" or "free".

The following example of coding means that the type of extension data is "additional data":



- Extension data.

Contents:

additional data or Called Party Subaddress depending on record type.

Coding:

Case 1, Extension1 record is additional data:

- The first byte of the extension data gives the number of bytes of the remainder of ADN/SSC. The coding of remaining bytes is BCD, according to the coding of ADN/SSC. Unused nibbles at the end shall be set to 'F'. It is possible if the number of additional digits exceeds the capacity of the additional record to chain another record inside the EXT1 Elementary File by the identifier in byte 13. In this case byte 2 (first byte

of the extension data) of all records for additional data within the same chain indicates the number of bytes ('01' to '0A') for ADN/SSC (respectively MSISDN, LND) within the same record unequal to 'FF'. Case 2, Extension1 record is Called Party Subaddress:

- The subaddress data contains information as defined for this purpose in TS 24.008 [9]. All information defined in TS 24.008, except the information element identifier, shall be stored in the USIM. The length of this subaddress data can be up to 22 bytes. In those cases where two extension records are needed, these records are chained by the identifier field. The extension record containing the first part of the called party subaddress points to the record which contains the second part of the subaddress.
- Identifier.

Contents:

identifier of the next extension record to enable storage of information longer than 11 bytes.

Coding:

record number of next record. 'FF' identifies the end of the chain.

- Example of a chain of extension records being associated to an ADN/SSC. The extension1 record identifier (Byte 14+X) of EF_{ADN} is set to 3.

		EF _{EXT1}											
	Byte: 1	2	3	4	5	6	7	8	9	10	11	12	13
	Record Type					Exte	ension	data					Identifier
Record 1	01	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	хх	FF
Record 2	xx	хх	xx	хх	хх	xx	xx	xx	xx	xx	xx	хх	xx
Record 3	02	0A	xx	xx	хх	xx	xx	хх	хх	xx	xx	хх	04
Record 4	02	04	XX	хх	хх	XX	FF	FF	FF	FF	FF	FF	06
Record 5	xx	хх	XX	XX	хх	XX	XX	хх	XX	XX	XX	xx	XX
Record 6	01	xx	XX	xx	xx	XX	XX	XX	XX	XX	xx	xx	01

In this example, ADN/SSC is associated to additional data (records 3 and 4) which represent the last 27 or 28 digits of the whole ADN/SSC (the first 20 digits are stored in EF_{ADN}) and a called party subaddress whose length is more than 11 bytes (records 6 and 1).

5.3.2 Dialling numbers

Requirements:

- Service n°1 "available" for ADN located under the local phonebook;
- Presence of EF_{ADN} in EF_{PBR} for ADN located under the global phonebook;
- Presence of EF_{ANR} in EF_{PBR} for ANR;
- Service n°2 "available" for FDN;
- Service n°21 "available" for MSISDN;
- Service n°4 "available" for SDN:
- Service n°6 "available" for BDN;
- Service n°8 "available" for EFOCI;

- Service n°9 "available" for EFICI.

The following procedures may not only be applied to EF_{ADN} and its associated extension files EF_{CCP1} and EF_{EXT1} as described in the procedures below, but also to EF_{ANR} , EF_{FDN} , EF_{MSISDN} , EF_{BDN} , EF_{SDN} , EF_{OCI} , EF_{ICI} , and EF_{MBDN} and their associated extension files. If these files are not allocated and activated, as denoted in the USIM service table, the current procedure shall be aborted and the appropriate EFs shall remain unchanged.

As an example, the following procedures are described as applied to ADN.

Update: The ME analyses and assembles the information to be stored as follows (the byte identifiers used below correspond to those in the definition of the relevant EFs in the present document):

- i) The ME identifies the Alpha-tagging, Capability/Configuration Identifier and Extension1 Record Identifier.
- ii) The dialling number/SSC string shall be analysed and allocated to the bytes of the EF as follows:
 - if a "+" is found, the TON identifier is set to "International";
 - if 20 or less "digits" remain, they shall form the dialling number/SSC string;
 - if more than 20 "digits" remain, the procedure shall be as follows:
 - The ME seeks for a free record in EF_{EXT1} . If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The first 20 "digits" are stored in the dialling number/SSC string. The value of the length of BCD number/SSC contents is set to the maximum value, which is 11. The Extension1 record identifier is coded with the associated record number in the EF_{EXT1}. The remaining digits are stored in the selected Extension1 record where the type of the record is set to "additional data". The first byte of the Extension1 record is set with the number of bytes of the remaining additional data. The number of bytes containing digit information is the sum of the length of BCD number/SSC contents of EF_{ADN} and byte 2 of all associated chained Extension1 records containing additional data.
- iii) If a called party subaddress is associated to the ADN/SSC the procedure shall proceed as follows:
- If the length of the called party subaddress is less than or equal to 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the Extension1 record, and sets the Extension1 record type to "called party subaddress".
 - If the length of the called party subaddress is greater than 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for two free records in EF_{EXT1}. If no such two records are found, the ME runs the Purge procedure. If two Extension1 records are still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the two Extension1 records. The identifier field in the Extension1 record containing the first part of the subaddress data is coded with the associated EF_{EXT1} record number containing the second part of the subaddress data. Both Extension1 record types are set to "called party subaddress".

Once i), ii), and iii) have been considered the ME performs the updating procedure with EF_{ADN} . If the USIM has no available empty space to store the received ADN/SSC, or if the procedure has been aborted, the ME advises the user.

For reasons of memory efficiency, the ME may analyse all Extension1 records to recognise if the additional or subaddress data to be stored is already existing in EF_{EXT1} . In this case, the ME may use the existing chain or the last part of the existing chain from more than one ADN. The ME is only allowed to store extension data in unused records. If existing records are used for multiple access, the ME shall not change any data in those records to prevent corruption of existing chains.

Erasure: The ME sends the identification of the information to be erased. The content of the identified record in EF_{ADN} is marked as "free".

Request: The ME sends the identification of the information to be read. The ME shall analyse the data of

EF_{ADN} to ascertain, whether additional data is associated in EF_{EXT1} or EF_{CCP1}. If necessary, then the

ME performs the reading procedure on these EFs to assemble the complete ADN/SSC.

Purge: The ME shall access each EF which references EF_{EXT1} (EF_{EXT2}, EF_{EXT6}) for storage and shall

identify records in these files using extension data (additional data or called party subaddress). Note that existing chains have to be followed to the end. All referred Extension1 (Extension2, Extension6) records are noted by the ME. All Extension1 (Extension2, Extension6) records not

noted are then marked by the ME as "free" by setting the whole-record to '00FF...FF'.

NOTE: Dependent upon the implementation of the ME, and in particular the possibility of erasure of ADN/SSC records by Phase 1 MEs, which have no knowledge of the EF_{EXT1}, it is possible for Extension1 records to be marked as "used space" (not equal to 'FF'), although in fact they are no longer associated with an ADN/SSC record.

The following three procedures are only applicable to service n°2 (FDN).

FDN capability request. The ME shall check the state of service $n^{\circ}2$, i.e. if FDN is "enabled" or "disabled". If FDN is enabled, the ME shall only allow outgoing calls as defined in the fixed number dialling description in TS 22.101 [24]. To ascertain the state of FDN, the ME shall check in EF_{UST} and EF_{EST} if FDN is enabled (service activated and available). In all other cases service $n^{\circ}2$ is disabled.

FDN enabling is done by activating the FDN service in EF_{FST}.

FDN disabling is done by deactivating the FDN service in EF_{EST}.

The following three procedures are only applicable to service n°6 (BDN).

- BDN capability request. The ME shall check the state of service $n^{\circ}6$, i.e. if BDN is "enabled" or "disabled". To ascertain the state of BDN, the ME shall check in EF_{UST} and EF_{EST} if BDN is "enabled" (service available and activated). In all other cases, the BDN service is "disabled".
- BDN enabling is done by activating the BDN service in EF_{EST}.
- BDN disabling is done by deactivating the BDN service in EF_{EST}.

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	,00000000,
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	(0000)
'4F30'	Phone book reference file	Operator dependant
'4FXX'		'FFFF'
4FAA '4F52'	Capability configuration parameters 1	
	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	'FFFF'
'4FXX'	Second name entry	'FFFF'
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'		'07FFFF'
	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	'FFFF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
10 - 401	Service Dialling Numbers	'FFFF'
'6F49'	E	
'6F49' '6F4B' '6F4C'	Extension 2 Extension 3	'00FFFF' '00FFFF'

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	' <u>00</u> FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access	'FFFFF0000FFFFF0000'
	Technology	
'6F61'	Operator controlled PLMN selector with	'FFFFF0000FFFFFF0000'
	Access Technology	
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see
		note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FFFF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'
'6FCC'	Extension 7	'00 FFFF'
'6FCD'	Service Provider Display Information	200 00 00 FF FF'
'6FCE'	MMS Notification	'00 00 00 FFFF'
'6FCF'	Extension 8	' <u>00</u> FFFF'
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'
'6FD1'	MMS User Preferences	'FFFF'
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NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

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3GPP TSG-T3 Meeting #29 Dallas, USA, 18-21 November 2003

Tdoc **%** T3-031037

CHANGE REQUEST								
H	31.102 CR	198	жrev	-	¥	Current version:	6.3.0	¥
For HFLP on using this form, see bottom of this page or look at the popular toxt over the Y symbols								

For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the \mathbb{H} symbols.

ME X Radio Access Network Core Network Proposed change affects: UICC apps#

Title: Source: **₩** T3 Date: ₩ 21/11/03 ₩ F Release:

Rel-6 Category: Use one of the following releases: Use one of the following categories: F (correction) 2 (GSM Phase 2) **A** (corresponds to a correction in an earlier release) R96 (Release 1996) **B** (addition of feature), (Release 1997) R97 **C** (functional modification of feature) R98 (Release 1998) **D** (editorial modification)

Detailed explanations of the above categories can (Release 1999) R99 (Release 4) Rel-4 be found in 3GPP TR 21.900. Rel-5 (Release 5) (Release 6) Rel-6

Reason for change: #	No clear definition of "free" record in the EF_EXT1 description. Inconsistent statements between phonebook purge procedure and EF_EXT1 file description.
Summary of change: ₩	Clear indication of "free" record in EF_EXT1 in case of its record type '00'. After purge procedure, the record marked as "free" is set to '00FFFF' instead of 'FFFF'. Remove 'Note' in purge procedure section. Pre-personalization value of EF_EXT4 and EXT8 are set to '00FFFF'.
Consequences if #	Free record implementation may differ among terminals, then there is risk a to
not approved:	cause an interoperability problem. The specification is inconsistent with itself.

Clauses affected: # 4.4.2.4, 5.3.2, AnnexE

Other specs affected:	¥ €	/ N X X X	Other core specifications Test specifications O&M Specifications	¥	
Other comments:	¥				

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- 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.

4.4.2.4 EF_{EXT1} (Extension1)

This EF contains extension data of an ADN/SSC.

Extension data is caused by:

- an ADN/SSC which is greater than the 20 digit capacity of the ADN/SSC Elementary File or where common digits are required to follow an ADN/SSC string of less than 20 digits. The remainder is stored in this EF as a record, which is identified by a specified identification byte inside the ADN/SSC Elementary File. The EXT1 record in this case is specified as additional data;
- an associated called party subaddress. The EXT1 record in this case is specified as subaddress data.

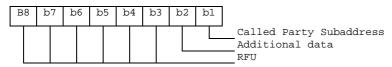
Identifie	er: '4FXX'	Str	ucture: linear fixed		Optional		
SFI	: 'YY'						
Reco	ord length: 13 byte:	S	Update	activity: low			
Access Conditi READ UPDAT DEACT ACTIVA	E IVATE	PIN PIN ADM ADM					
Bytes		Description	١	M/O	Length		
1	Record type			М	1 byte		
2 to 12	Extension data			М	11 bytes		
13	Identifier			М	1 byte		

- Record type.

Contents:

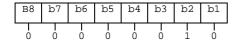
- type of the record.

Coding:



- b3-b8 are reserved and set to 0;
- a bit set to 1 identifies the type of record;
- only one type can be set;
- '00' indicates the type "unknown" or "free".

The following example of coding means that the type of extension data is "additional data":



- Extension data.

Contents:

additional data or Called Party Subaddress depending on record type.

Coding:

Case 1, Extension1 record is additional data:

- The first byte of the extension data gives the number of bytes of the remainder of ADN/SSC. The coding of remaining bytes is BCD, according to the coding of ADN/SSC. Unused nibbles at the end shall be set

to 'F'. It is possible if the number of additional digits exceeds the capacity of the additional record to chain another record inside the EXT1 Elementary File by the identifier in byte 13. In this case byte 2 (first byte of the extension data) of all records for additional data within the same chain indicates the number of bytes ('01' to '0A') for ADN/SSC (respectively MSISDN, LND) within the same record unequal to 'FF'.

Case 2, Extension1 record is Called Party Subaddress:

- The subaddress data contains information as defined for this purpose in TS 24.008 [9]. All information defined in TS 24.008, except the information element identifier, shall be stored in the USIM. The length of this subaddress data can be up to 22 bytes. In those cases where two extension records are needed, these records are chained by the identifier field. The extension record containing the first part of the called party subaddress points to the record which contains the second part of the subaddress.
- Identifier.

Contents:

identifier of the next extension record to enable storage of information longer than 11 bytes.

Coding:

record number of next record. 'FF' identifies the end of the chain.

- Example of a chain of extension records being associated to an ADN/SSC. The extension1 record identifier (Byte 14+X) of EF_{ADN} is set to 3.

		EF _{EXT1}											
	Byte: 1	2	3	4	5	6	7	8	9	10	11	12	13
	Record Type					Exte	ension	data					Identifier
Record 1	01	xx	XX	XX	xx	XX	XX	xx	xx	xx	xx	xx	FF
Record 2	xx	хх	XX	XX	ХХ	XX	XX	хх	XX	XX	XX	хх	xx
Record 3	02	0A	хх	хх	xx	хх	хх	хх	хх	XX	хх	хх	04
Record 4	02	04	XX	хх	xx	XX	FF	FF	FF	FF	FF	FF	06
Record 5	xx	хх	XX	XX	ХХ	XX	хх	хх	хх	XX	XX	хх	xx
Record 6	01	xx	XX	XX	xx	XX	ХХ	хх	хх	XX	XX	хх	01
•	-												
•													

In this example, ADN/SSC is associated to additional data (records 3 and 4) which represent the last 27 or 28 digits of the whole ADN/SSC (the first 20 digits are stored in EF_{ADN}) and a called party subaddress whose length is more than 11 bytes (records 6 and 1).

5.3.2 Dialling numbers

Requirements:

- Service n°1 "available" for ADN located under the local phonebook;
- Presence of EF_{ADN} in EF_{PBR} for ADN located under the global phonebook;
- Presence of EF_{ANR} in EF_{PBR} for ANR;
- Service n°2 "available" for FDN;
- Service n°21 "available" for MSISDN;
- Service n°4 "available" for SDN;
- Service n°6 "available" for BDN;

- Service n°8 "available" for EFOCI;
- Service n°9 "available" for EFICI.

The following procedures may not only be applied to EF_{ADN} and its associated extension files EF_{CCP1} and EF_{EXT1} as described in the procedures below, but also to EF_{ANR} , EF_{FDN} , EF_{MSISDN} , EF_{BDN} , EF_{SDN} , EF_{OCI} , EF_{ICI} , and EF_{MBDN} and their associated extension files. If these files are not allocated and activated, as denoted in the USIM service table, the current procedure shall be aborted and the appropriate EFs shall remain unchanged.

As an example, the following procedures are described as applied to ADN.

Update: The ME analyses and assembles the information to be stored as follows (the byte identifiers used below correspond to those in the definition of the relevant EFs in the present document):

- i) The ME identifies the Alpha-tagging, Capability/Configuration Identifier and Extension1 Record Identifier.
- ii) The dialling number/SSC string shall be analysed and allocated to the bytes of the EF as follows:
 - if a "+" is found, the TON identifier is set to "International";
 - if 20 or less "digits" remain, they shall form the dialling number/SSC string;
 - if more than 20 "digits" remain, the procedure shall be as follows:
 - The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The first 20 "digits" are stored in the dialling number/SSC string. The value of the length of BCD number/SSC contents is set to the maximum value, which is 11. The Extension1 record identifier is coded with the associated record number in the EF_{EXT1}. The remaining digits are stored in the selected Extension1 record where the type of the record is set to "additional data". The first byte of the Extension1 record is set with the number of bytes of the remaining additional data. The number of bytes containing digit information is the sum of the length of BCD number/SSC contents of EF_{ADN} and byte 2 of all associated chained Extension1 records containing additional data.
- iii) If a called party subaddress is associated to the ADN/SSC the procedure shall proceed as follows:
- If the length of the called party subaddress is less than or equal to 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for a free record in EF_{EXT1} . If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the Extension1 record, and sets the Extension1 record type to "called party subaddress".
 - If the length of the called party subaddress is greater than 11 bytes (see TS 24.008 [9] for coding):
 - The ME seeks for two free records in EF_{EXT1}. If no such two records are found, the ME runs the Purge procedure. If two Extension1 records are still unavailable, the procedure is aborted.
 - The ME stores the called party subaddress in the two Extension1 records. The identifier field in the Extension1 record containing the first part of the subaddress data is coded with the associated EF_{EXT1} record number containing the second part of the subaddress data. Both Extension1 record types are set to "called party subaddress".

Once i), ii), and iii) have been considered the ME performs the updating procedure with EF_{ADN} . If the USIM has no available empty space to store the received ADN/SSC, or if the procedure has been aborted, the ME advises the user.

For reasons of memory efficiency, the ME may analyse all Extension1 records to recognise if the additional or subaddress data to be stored is already existing in EF_{EXT1} . In this case, the ME may use the existing chain or the last part of the existing chain from more than one ADN. The ME is only allowed to store extension data in unused records. If existing records are used for multiple access, the ME shall not change any data in those records to prevent corruption of existing chains.

Erasure: The ME sends the identification of the information to be erased. The content of the identified

record in EF_{ADN} is marked as "free".

Request: The ME sends the identification of the information to be read. The ME shall analyse the data of

 EF_{ADN} to ascertain, whether additional data is associated in EF_{EXT1} or EF_{CCP1} . If necessary, then the

ME performs the reading procedure on these EFs to assemble the complete ADN/SSC.

Purge: The ME shall access each EF which references EF_{EXT1} (EF_{EXT2}, EF_{EXT6}) for storage and shall

identify records in these files using extension data (additional data or called party subaddress). Note that existing chains have to be followed to the end. All referred Extension1 (Extension2, Extension6) records are noted by the ME. All Extension1 (Extension2, Extension6) records not

noted are then marked by the ME as "free" by setting the whole record to '00FF...FF'.

NOTE: Dependent upon the implementation of the ME, and in particular the possibility of erasure of ADN/SSC records by Phase 1 MEs, which have no knowledge of the EF_{EXT1}, it is possible for Extension1 records to be marked as "used space" (not equal to 'FF'), although in fact they are no longer associated with an ADN/SSC record.

The following three procedures are only applicable to service n°2 (FDN).

FDN capability request. The ME shall check the state of service $n^{\circ}2$, i.e. if FDN is "enabled" or "disabled". If FDN is enabled, the ME shall only allow outgoing calls as defined in the fixed number dialling description in TS 22.101 [24]. To ascertain the state of FDN, the ME shall check in EF_{UST} and EF_{EST} if FDN is enabled (service activated and available). In all other cases service $n^{\circ}2$ is disabled.

FDN enabling is done by activating the FDN service in EF_{EST}.

FDN disabling is done by deactivating the FDN service in EF_{EST}.

The following three procedures are only applicable to service n°6 (BDN).

- BDN capability request. The ME shall check the state of service n°6, i.e. if BDN is "enabled" or "disabled". To ascertain the state of BDN, the ME shall check in EF_{UST} and EF_{EST} if BDN is "enabled" (service available and activated). In all other cases, the BDN service is "disabled".
- BDN enabling is done by activating the BDN service in EF_{EST}.
- BDN disabling is done by deactivating the BDN service in EF_{EST}.

NOTE: the value 'FF' is an invalid tag value. For ASN.1 tag assignment rules see ISO/IEC 8825 [35]

Annex E (informative): Suggested contents of the EFs at pre-personalization

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This annex suggests values in these cases.

File Identification	Description	Value
'2F00'	Application directory	Card issuer/operator dependant
'2F05'	Preferred languages	'FFFF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FFFF'
'4F20'	GSM Ciphering key Kc	'FFFF07'
'4FXX'	Image instance data files	'FFFF'
'4FXX'	Unique identifier	'0000'
'4F22'	Phone book synchronisation counter	'0000000'
'4F23'	Change counter	'0000'
'4F24'	Previous unique identifier	'0000'
'4F30'	Phone book reference file	Operator dependant
'4FXX'	Capability configuration parameters 1	'FFFF'
'4F52'	GPRS Ciphring key KcGPRS	'FFFF07'
'4F63'	CPBCCH Information	'FFFF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FFFF'
'4FXX'	Additional number alpha string	FFFF'
		FFFF'
'4FXX'	Second name entry	
'4FXX'	Abbreviated dialling numbers	'FFFF'
'4FXX'	Grouping file	'0000'
'4FXX'	Grouping information alpha string	'FFFF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FFFF'
'4FXX'	Additional number	'FFFF'
'4FXX'	Extension 1	'00FFFF'
'6F05'	Language indication	'FFFF'
'6F06'	Access rule reference (under ADF _{USIM} and DF _{TELECOM})	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FFFF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FFFF'
'6F2C'	De-personalization control keys	'FFFF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FFFF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FFFF'
'6F3C'	Short messages	'00FFFF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FFFF'
'6F41'	PUCT	'FFFFF0000'
'6F42'	SMS parameters	'FFFF'
'6F43'	SMS status	'FFFF'
'6F45'	CBMI	FFFF
6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FFFF'
'6F48'	CBMID	'FFFF'
'6F49'	Service Dialling Numbers	'FFFF'
'6F4B'	Extension 2 Extension 3	'00FFFF' '00FFFF'
'6F4C'		

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FFFF'
'6F4E'	Extension 5	'00FFFF'
'6F4F'	Capability configuration parameters 2	'FFFF'
'6F50'	CBMIR	'FFFF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'00FFFF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FFFF'
'6F58'	Comparison method information	'FFFF'
'6F5B'	Initialisation value for Hyperframe number	'F0 00 00 F0 00 00'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access	'FFFFF0000FFFFF0000'
	Technology	
'6F61'	Operator controlled PLMN selector with	'FFFFF0000FFFFF0000'
	Access Technology	
'6F62'	HPLMN selector with Access Technology	'FFFFF0000FFFFF0000'
'6F73'	Packet switched location information	'FFFFFFF FFFFFF xxxxxx 0000 FF 01' (see
		note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FFFF'
'6F7E	Location information	'FFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FFFF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FFFF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC3'	Key for hidden phone book entries	'FFFF'
'6FC4'	Network Parameters	'FFFF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FFFF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FFFF'
'6FCC'	Extension 7	'00 FFFF'
'6FCD'	Service Provider Display Information	
'6FCE'	MMS Notification	'00 00 00 FFFF'
'6FCF'	Extension 8	' <u>00</u> FFFF'
'6FD0'	MMS Issuer Connectivity Parameters	'FFFF'
'6FD1'	MMS User Preferences	'FFFF'
'6FD2'	MMS User Connectivity Parameters	'FFFF'

NOTE 1: The value '000000' means that ACMmax is not valid, i.e. there is no restriction on the ACM. When assigning a value to ACMmax, care should be taken not to use values too close to the maximum possible value 'FFFFFF', because the INCREASE command does not update EF_{ACM} if the units to be added would exceed 'FFFFFF'. This could affect the call termination procedure of the Advice of Charge function.

NOTE 2: xxxxxx stands for any valid MCC and MNC, coded according to TS 24.008 [9].

3GPP TSG-T3 Meeting #29 Dallas, USA, 18 – 21 November, 2003

		CHANGE	REQ	UEST			CR-Form-v7						
*	31.102	CR 199	жrev	= #	Current vers	6.3.0	ж						
For <u>HELP</u> on us	ing this form	, see bottom of this	s page or	look at the	pop-up text	over the 光 syr	nbols.						
Proposed change affects: UICC apps# X ME X Radio Access Network Core Network													
Title: 第	Correction t	to Annex G Phonel	ook Exar	nple									
Source: #	Т3												
Work item code: 器	TEI				<i>Date:</i> ♯	19/11/2003							
[Use one of the F (correct A (correct B (additi C (functi D (editor Detailed explate De found in 30	sponds to a correction of feature), fron of feature), fronal modification of the above GPP TR 21.900.	n in an ear feature) categories	lier release,	2) R96 R97 R98 R99 Rel-4	Rel-6 the following rele (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)	eases:						
Summary of change	Summary of change: # On table G.1, EFs for phonebook-synchronisation are added, FID for EF _{UID1} is corrected from '4F22', specified for EF _{PSC} , to '4F20', and the file-layout of phonebook-set-2 is arranged for the contrast of set-1. On table G.2 and G.3, the contents of EF _{PBR} are adjusted for all SFI applicable EFs.												
Consequences if not approved:	器 Wrong	example remains	on the spe	ecification.	It leads to w	rong implemer	ntation.						
Clauses affected:	器 Annex	G											
Other specs affected:	7	Other core specifications Test specifications O&M Specifications		*									
Other comments:													

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ 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 $\underline{\text{ftp://ftp.3gpp.org/specs/}}$. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Annex G (informative): Phonebook Example

This example phonebook has more than 254 entries. Additional number (3 additional numbers) information, second name and e-mail information can be added to each ADN entry. In addition each entry has a 2 byte Unique ID (UID) attached to it. The phonebook also contains three files that are shared EF_{EXT1} , EF_{AAS} and EF_{GAS} . These files are addressed from inside a file. EF_{EXT1} is addressed via EF_{ADN} , EF_{ADN1} , EF_{ADS} is addressed via EF_{ANRA1} , EF_{ANRA1} and EF_{GAS} is addressed via EF_{GRP} . The phonebook supports two levels of grouping and hidden entries in EF_{PBC} .

Two records are needed in the phonebook reference file PBR '4F30' for supporting more than 254 entries. The content of the phonebook reference file PBR '4F30' records is as shown in table G.2. The structure of the DF_{PHONEBOOK} is shown in table G.1.

The content of phonebook entries in the range from 1-508 is described in the tables G.3 and G.4.

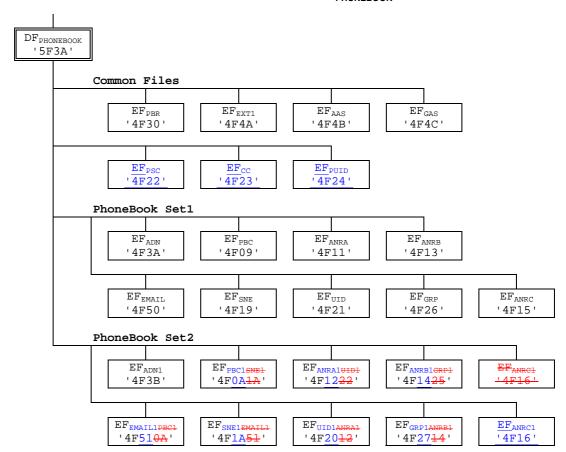


Table G.1: Structure of EFs inside DF_{PHONEBOOK}

Table G.2: Contents of EF_{PBR}

Rec	Tag'A8' L='2D2 (for Phonebook Set1)
1	Tag'C0' L='03' '4F3A' '01' Tag'C5' L='03' '4F09' '02' Tag'C6' L='02' '4F26' Tag'C4' L='02' '4F11'
	Tag'C0' L='03' 4F3A' '01' Tag'C5' L='03' 4F09' '02' Tag'C6' L='03' 4F26' '03'
	Tag'C4' L='02' '4F13' Tag'C4' L='02' '4F15' Tag'C3' L='02' '4F19' Tag'C9' L='02' '4F21'
	Tag'C4' L='03' '4F11' '04' Tag'C4' L='03' '4F13' '05' Tag'C4' L='03' '4F15' '06'
	Tag'CA' L='02' '4F50'
	Tag'C3' L='03' '4F19' '07' Tag'C9' L='03' '4F21' '12' Tag'CA' L='03' '4F50' '09'
1	Tag'AA' L='0 <u>F</u> C'
	Tag'C2' L='02' '4F4A' Tag'C7' L='02' '4F4B' Tag'C8' L='02' '4F4C'
	Tag'C2' L='03' '4F4A' '08' Tag'C7' L='03' '4F4B' '14' Tag'C8' L='03' '4F4C' '15'
Rec	2 Tag'A8' L='2 <u>D4</u> ' (for Phonebook Set 2)
Rec	2 Tag'A8' L='2 <u>D</u> 4' (for Phonebook Set 2) Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12'
Rec	
Rec	Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12'
Rec	Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12' Tag'C0' L='03' '4F3B' '10' Tag'C5' L='03' '4F0A' '11' Tag'C6' L='03' '4F25' '18'
Rec	Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12' Tag'C0' L='03' '4F3B' '10' Tag'C5' L='03' '4F0A' '11' Tag'C6' L='03' '4F25' '18' Tag'C4' L='02' '4F14' Tag'C4' L='02' '4F16' Tag'C3' L='02' '4F1A' Tag'C9' L='02' '4F22'
Rec	Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12' Tag'C0' L='03' '4F3B' '10' Tag'C5' L='03' '4F0A' '11' Tag'C6' L='03' '4F25' '18' Tag'C4' L='02' '4F16' Tag'C3' L='02' '4F1A' Tag'C9' L='02' '4F22' Tag'C4' L='03' '4F12' '12' Tag'C4' L='03' '4F14' '13' Tag'C4' L='03' '4F16' '14'
Rec	Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12' Tag'C0' L='03' '4F3B' '10' Tag'C5' L='03' '4F0A' '11' Tag'C6' L='03' '4F25' '18' Tag'C4' L='02' '4F14' Tag'C4' L='02' '4F16' Tag'C3' L='02' '4F1A' Tag'C9' L='02' '4F22' Tag'C4' L='03' '4F12' '12' Tag'C4' L='03' '4F14' '13' Tag'C4' L='03' '4F16' '14' Tag'CA' L='02' '4F51'
Rec	Tag'C0' L='02' '4F3B' Tag'C5' L='02' '4F0A' Tag'C6' L='02' '4F25' Tag'C4' L='02' '4F12' Tag'C0' L='03' '4F3B' '10' Tag'C5' L='03' '4F0A' '11' Tag'C6' L='03' '4F25' '18' Tag'C4' L='02' '4F14' Tag'C4' L='02' '4F16' Tag'C3' L='02' '4F1A' Tag'C9' L='02' '4F22' Tag'C4' L='03' '4F12' '12' Tag'C4' L='03' '4F14' '13' Tag'C4' L='03' '4F16' '14' Tag'CA' L='02' '4F51' Tag'C3' L='02' '4F51'

Table G.3: Structure of the 254 first entries in the phonebook

Phone book	ADN '4F3A'		PBC '4F09'	GRP '4F26'	ANRA '4F11'	ANRB '4F13'	ANRC '4F15'	SNE '4F19'	UID '4F21'	EXT1 '4F4A'	AAS '4F4B'	GAS '4F4C'	EMAIL '4F50'
entry	SFI	'01'	SFI '02'	SFI '03'	SFI '04'	SFI '05'	SFI '06'	SFI '07'	SFI '12'	SFI '08'	SFI '14'	SFI '15'	SFI '09'
# 1	ADN	EXT1	Hidden	Rec n°1	ANRA	ANRB	ANRC	Second	UID	Rec '02'	Record	Record	email
	Content	ldent.	(AID rec		Rec n°1	Rec n°1	Rec n°1	Name			numbers	no.'s as	address
	Bytes	(Byte	N° 3)	'00'				Alpha			as	defined	
	(1-	X+14):						String			defined in	in GRP	
	(X+13))	Rec '02'									the ANRs		
# 2	ADN	EXT1	Not	Rec n°2	ANRA	ANRB	ANRC	Second	UID	Rec '2A'	Record	Record	email
	Content	ldent.	Hidden	Rec n°1	Rec n°2	Rec n°2	Rec n°2	Name			numbers	no.'s as	address
	Bytes	(Byte		Rec n°3				Alpha			as	defined	
	(1-	X+14):						String			defined in	in GRP	
	(X+13))	Rec '2A'									the		
											ANRs		
# 3													
:													
:													
:													
# 254													

Table G.4: Structure of phone book entries 255 to 508 (Rec 1-254)

Phone book entry	ADN1 '4F3B' <u>SFI '0A'</u>		PBC1 '4F0A' <u>SFI '0B'</u>	GRP1 '4F25' <u>SFI '0C'</u>	ANRA1 '4F12' <u>SFI '0D'</u>	ANRB1 '4F14' <u>SFI '0E'</u>	ANRC1 '4F16' <u>SFI '0F'</u>	SNE1 '4F1A' <u>SFI '10'</u>	UID1 '4F <u>20</u> 22 SFI '13'	EXT1 '4F4A' <u>SFI '08'</u>	AAS '4F4B' <u>SFI '14'</u>	GAS '4F4C' <u>SFI '15'</u>	EMAIL1 '4F51' <u>SFI '11'</u>
#255	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '02'	Hidden (AID Rec n° 3)	Rec n°1 Rec n°3 '00'	ANRA1 Rec n°1	ANRB1 Rec n°1	ANRC1 Rec n°1	Second Name Alpha String	UID	Rec '02'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
#256	ADN Content Bytes (1- (X+13))	EXT1 Ident. (Byte X+14): Rec '2A'	Not Hidden	Rec n°2 Rec n°1 Rec n°3	ANRA1 Rec n°2	ANRB1 Rec n°2	ANRC1 Rec n°2	Second Name Alpha String	UID	Rec '2A'	Record numbers as defined in the ANRs	Record no.'s as defined in GRP1	email address
#257													
:		, and the second		, and the second						, and the second			
:													
:													
#508													