3GPP TSG-T (Terminals) Meeting #21 ***TP-030204***
Frankfurt, Germany
17 - 19 September, 2003

3GPP TSG-T3 #28 ***Tdoc T3-030623***
Marseilles, France 19 – 22 August 2003

Title:	Response to LS on support of GSM SIM files (and services) on the USIM
Response to:	S1-030977 (= T3-030524)
Source:	T3
To:	SA1
Cc:	T
Attachement :	3 CRs to TS 31.102 R99 (Tdoc T3-030731, Tdoc T3-030670, Tdoc T3-030733)

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1. Overall Description:

T3 thanks SA1 for their LS referenced above.

SA1 invited T3 to identify the list of files/feature that are potential candidate for being discontinued for technical reasons, so that SA1 would be capable to clarify if operators have explicit requirement for their support.

After careful investigation, T3 identified some files/features which are present on the SIM but not on the USIM:
- those related to the **SoLSA** service
- those related to the **ASCI** (VBS/VGCS) services
- those related to the **NIA** (Network's Indication of Alerting) service

T3 has prepared 3 different sets of CRs to TS 31.102 (for Rel 99 and above) in order to introduce these files in the USIM. They would allow service availability:
- for GERAN Rel5 terminals (which support the USIM mandatorily)
- for UTRAN terminals (if the service is continued from GSM to 3G)

They can be approved at the next T3 meeting, depending on SA1 decision.

2. Actions to SA1:

Identify the services that must be continued for GERAN Rel5 terminals and/or UTRAN terminals:
- SoLSA
- ASCI (VBS/VGCS)
- NIA

3. Date of Next T3 Meeting:

TSG-T3 Meeting #29 18-21 November 2003 TBD, USA.

3GPP TSG-T3 Meeting #28
Marseilles, France, 19-22 August 2003

Tdoc T3-030670 ⌘

CR-Form-v7

CHANGE REQUEST

⌘ **31.102** **CR** ⌘ **rev** ⌘ Current version: **3.13.0** ⌘

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

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

Title:	⌘	Corrections on files for support of GSM services using USIM / NIA
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	20/08/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	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	
		X	Test specifications	
		X	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.

Identifier: '6F38'	Structure: transparent	Mandatory
SFI: '04'		
File size: X bytes, X >= 1	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Services n°1 to n°8	M	1 byte
2	Services n°9 to n°16	O	1 byte
3	Services n°17 to n°24	O	1 byte
4	Services n°25 to n°32	O	1 byte
etc.			
X	Services n°(8X-7) to n°(8X)	O	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:	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:	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
	Service n°55	MMS User Connectivity Parameters
	Service n°XX	Network's indication of alerting in the MS (NIA)

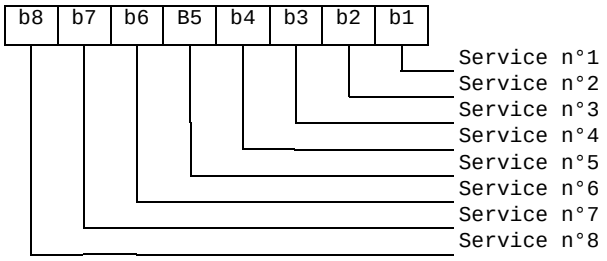
The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the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

Coding:

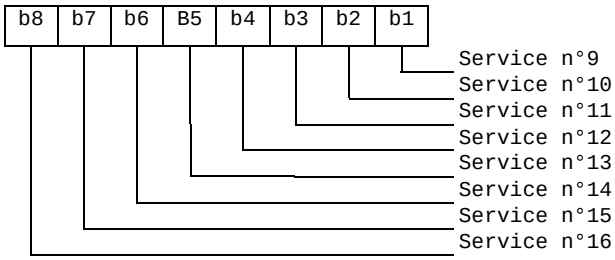
1 bit is used to code each service:
bit = 1: service available;
bit = 0: service not available.

- 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.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].

Identifier: '6FXX'	Structure: linear fixed	Optional
Record length : X+1 bytes	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	Alerting category	M	1 byte
2 to X+1	Informative text	M	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:

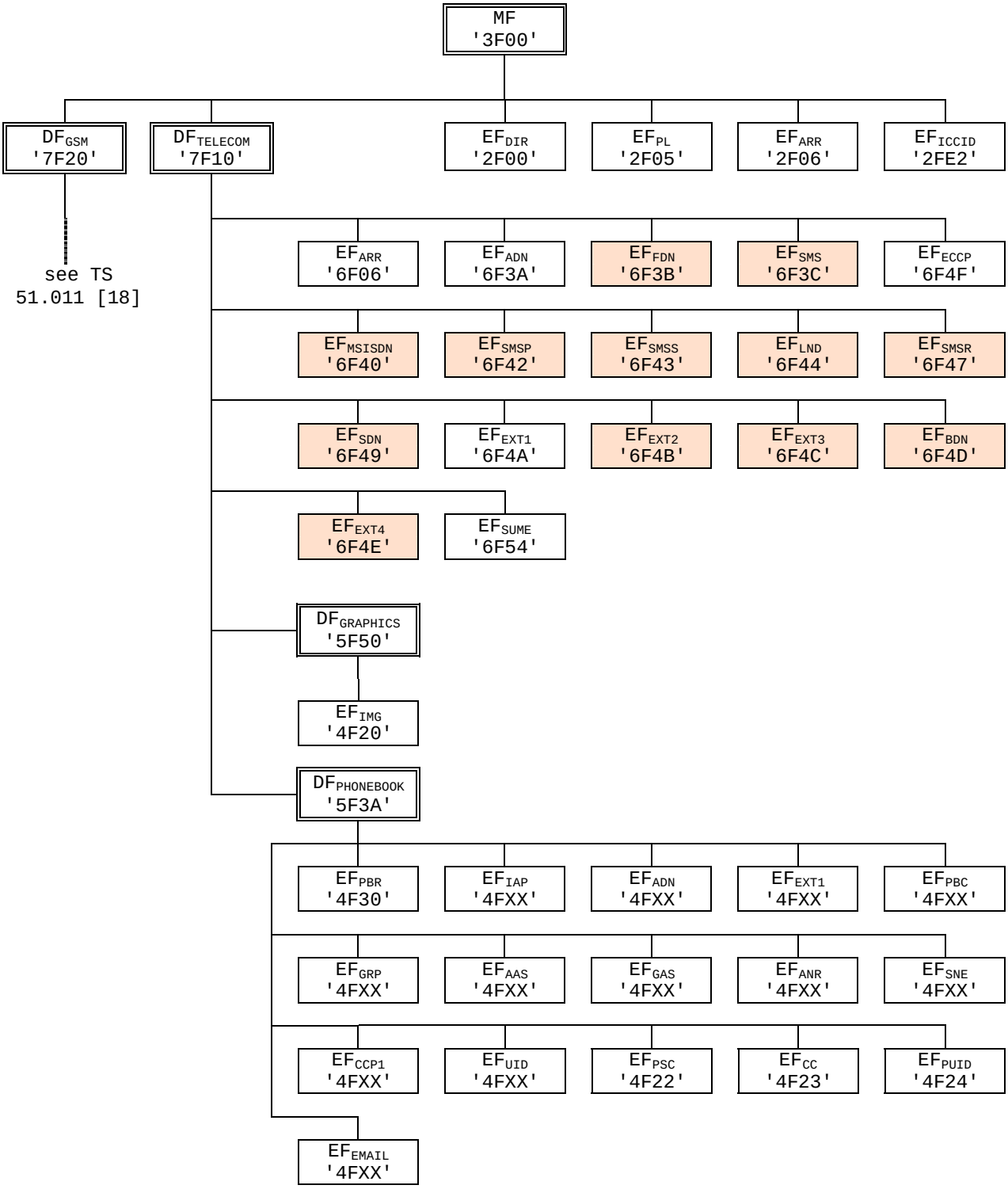
  text describing the type of terminating traffic associated with the category.

  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].

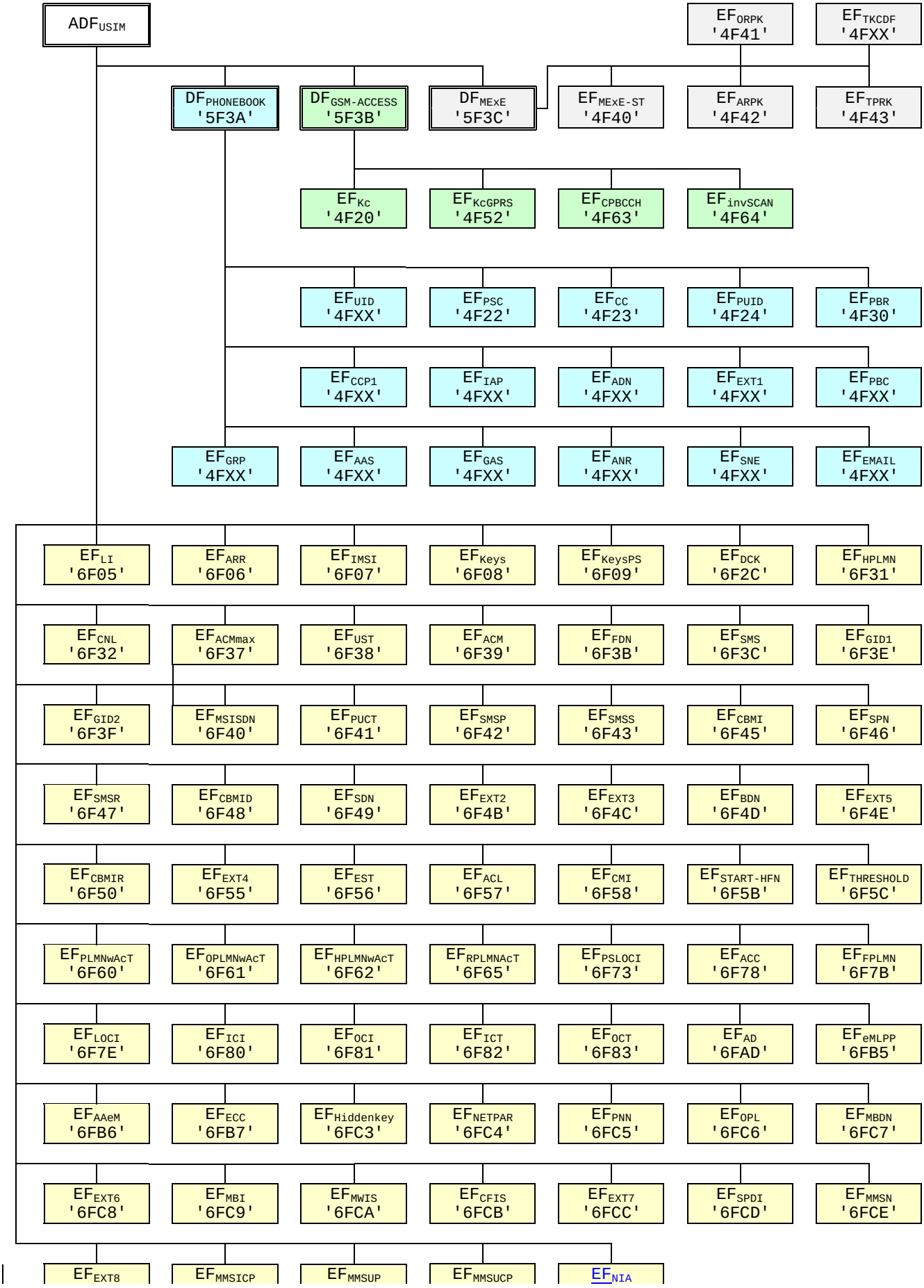
4.7 Files of USIM

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].

Figure 4.1: File identifiers and directory structures of UICC



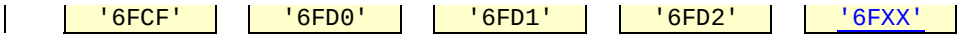


Figure 4.2: File identifiers and directory structures of USIM

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

5.3.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….

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
'6FXX'	Network's indication of alerting (NIA)	Caution
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	'FF…FF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FF...FF'
'4FXX'	Image instance data files	'FF…FF'
'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'	Capability configuration parameters 1	'FF…FF'
'4F63'	CPBCCH Information	'FF..FF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FF…FF'
'4FXX'	Additional number alpha string	'FF…FF'
'4FXX'	Second name entry	'FF…FF'
'4FXX'	Abbreviated dialling numbers	'FF...FF'
'4FXX'	Grouping file	'00…00'
'4FXX'	Grouping information alpha string	'FF…FF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FF…FF'
'4FXX'	Additional number	'FF…FF'
'4FXX'	Extension 1	'00FF...FF'
'6F05'	Language indication	'FF…FF'
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FF…FF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FF…FF'
'6F20'	Ciphering key Kc	'FF...FF07'
'6F2C'	De-personalization control keys	'FF…FF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FF…FF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FF...FF'
'6F3C'	Short messages	'00FF...FF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FF...FF'
'6F41'	PUCT	'FFFFFF0000'
'6F42'	SMS parameters	'FF...FF'
'6F43'	SMS status	'FF...FF'
'6F45'	CBMI	'FF...FF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FF…FF'
'6F48'	CBMID	'FF...FF'
'6F49'	Service Dialling Numbers	'FF...FF'
'6F4B'	Extension 2	'00FF...FF'
'6F4C'	Extension 3	'00FF...FF'

Continued....

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FF...FF'
'6F4E'	Extension 5	'00FF...FF'
'6F4F'	Capability configuration parameters 2	'FF...FF'
'6F50'	CBMIR	'FF...FF'
'6F52'	GPRS Ciphering key KcGPRS	'FF...FF07'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FF...FF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FF…FF'
'6F58'	Comparison method information	'FF…FF'
'6F5B'	Initialisation value for Hyperframe number	'00…00'
'6F5C'	Maximum value of START	Operator dependant
'6F60'	User controlled PLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FF...FF'
'6F7E	Location information	'FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FF…FF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FF…FF 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	'FFFFFFFF'
'6FC3'	Key for hidden phone book entries	'FF…FF'
'6FC4'	Network Parameters	'FF…FF'
'6FXX'	Network's Indication of Alerting (NIA)	'FF...FF'

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 #27
Marseilles, France, 19-22 August 2003

Tdoc T3-030731 ⌘

CR-Form-v7

CHANGE REQUEST

⌘ **31.102** **CR** ⌘ **rev** ⌘ Current version: **3.13.0** ⌘

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

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

Title:	⌘	Corrections on files for support of GSM services using USIM – SoLSA Files
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	20/8/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
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Rel-4	*(Release 4)*
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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

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘	A separate 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 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-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.

Identifier: '6F38'	Structure: transparent	Mandatory
SFI: '04'		
File size: X bytes, X >= 1	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Services n°1 to n°8	M	1 byte
2	Services n°9 to n°16	O	1 byte
3	Services n°17 to n°24	O	1 byte
4	Services n°25 to n°32	O	1 byte
etc.			
X	Services n°(8X-7) to n°(8X)	O	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:	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~~ Support of Localised Service Areas (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
	Service n°55	MMS User Connectivity Parameters

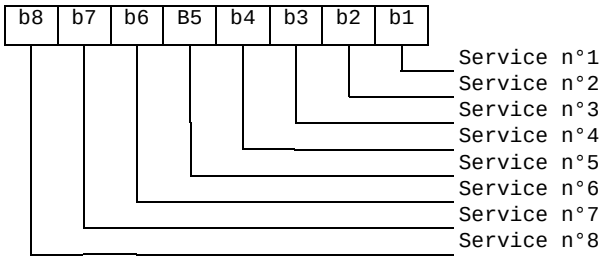
The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the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

Coding:

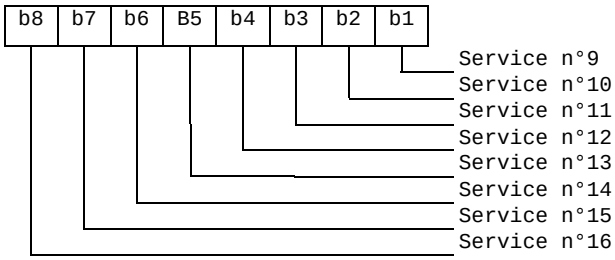
1 bit is used to code each service:
bit = 1: service available;
bit = 0: service not available.

- 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.

4.3 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'.
- $DF_{GSM\text{-}ACCESS}$ '5F3B'.
- DF_{MExE} '5F3C'.

(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).

Identifier: '4F30'	Structure: transparent	Optional
File size: X + 1 bytes	Update activity: low	

Access Conditions:

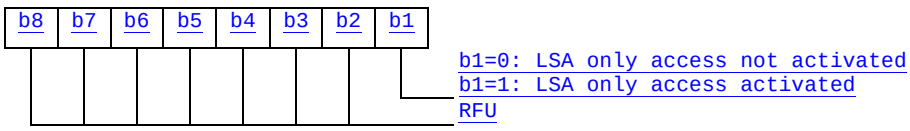
READ	PIN
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	LSA only access indicator	M	1 byte
2 to X+1	LSA only access indication text	M	X bytes

- LSA only access indicator

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

  Coding:



- 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.

Identifier: '4F31'	Structure: linear fixed	Optional
Record length: X + 10 bytes	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	PIN
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to X	LSA name	O	X bytes
X+1	Configuration parameters	M	1 byte
X+2	RFU	M	1 byte
X+3	Icon Identifier	M	1 byte
X+4	Priority	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
X+10	LSA Descriptor Record Identifier	M	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

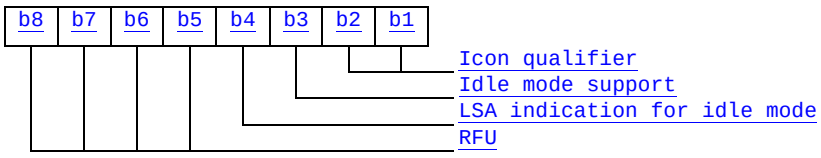
  - the SMS default 7-bit coded alphabet as defined in TS 23.038 [5] with bit 8 set to 0. The alpha identifier shall be left justified. Unused bytes shall be set to 'FF'; or

  - one of theUCS2 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.

b3 = 0:Idle mode support disabled
b3 = 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.

b4 = 0:LSA indication for idle mode disabled
b4 = 1:LSA indication for idle mode enabled

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

- Icon Identifier

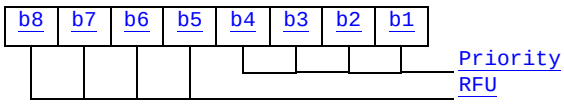
Contents: The icon identifier addresses a record in EF_{IMG}.

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.

Coding: 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.

Identifier: '4FXX'	Structure: linear fixed	Optional
Record length: n*X+2 bytes	Update activity: low	

Access Conditions:

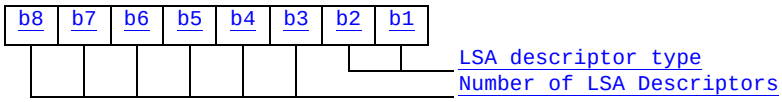
READ	PIN
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	LSA descriptor type and number	M	1 byte
2 to X+1	1st LSA Descriptor	M	X bytes
X+2 to 2X+1	2nd LSA Descriptor	M	X bytes
(n-1)*X+2 to n*X+1	nth LSA Descriptor	M	X bytes
n*X+2	Record Identifier	M	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.

  b2, b1: 00: LSA ID.
  01: LAC + CI
  10: CI
  11: LAC

  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.

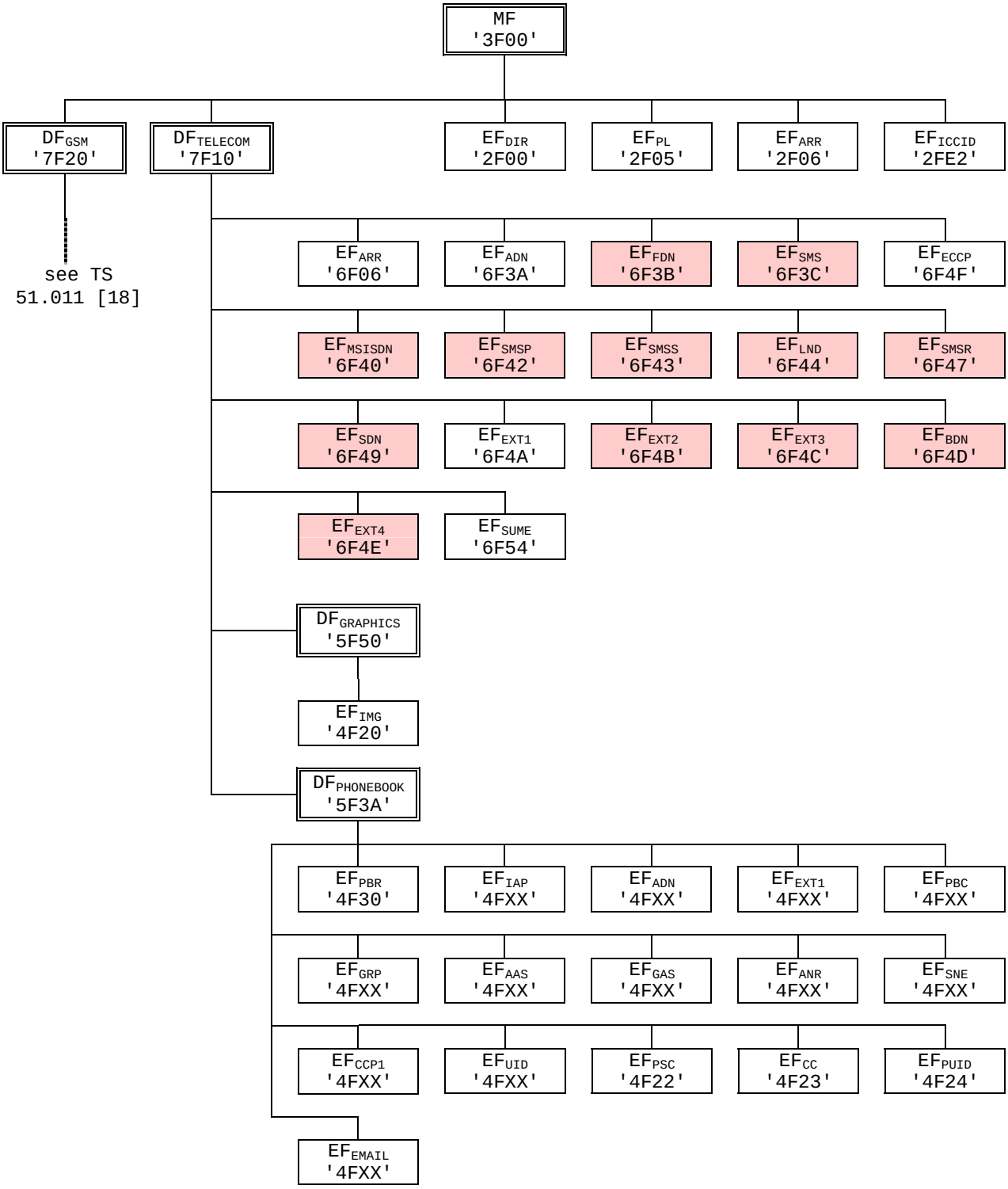
This file utilises the concept of chaining as for EF_{EXT1}.

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

[…]

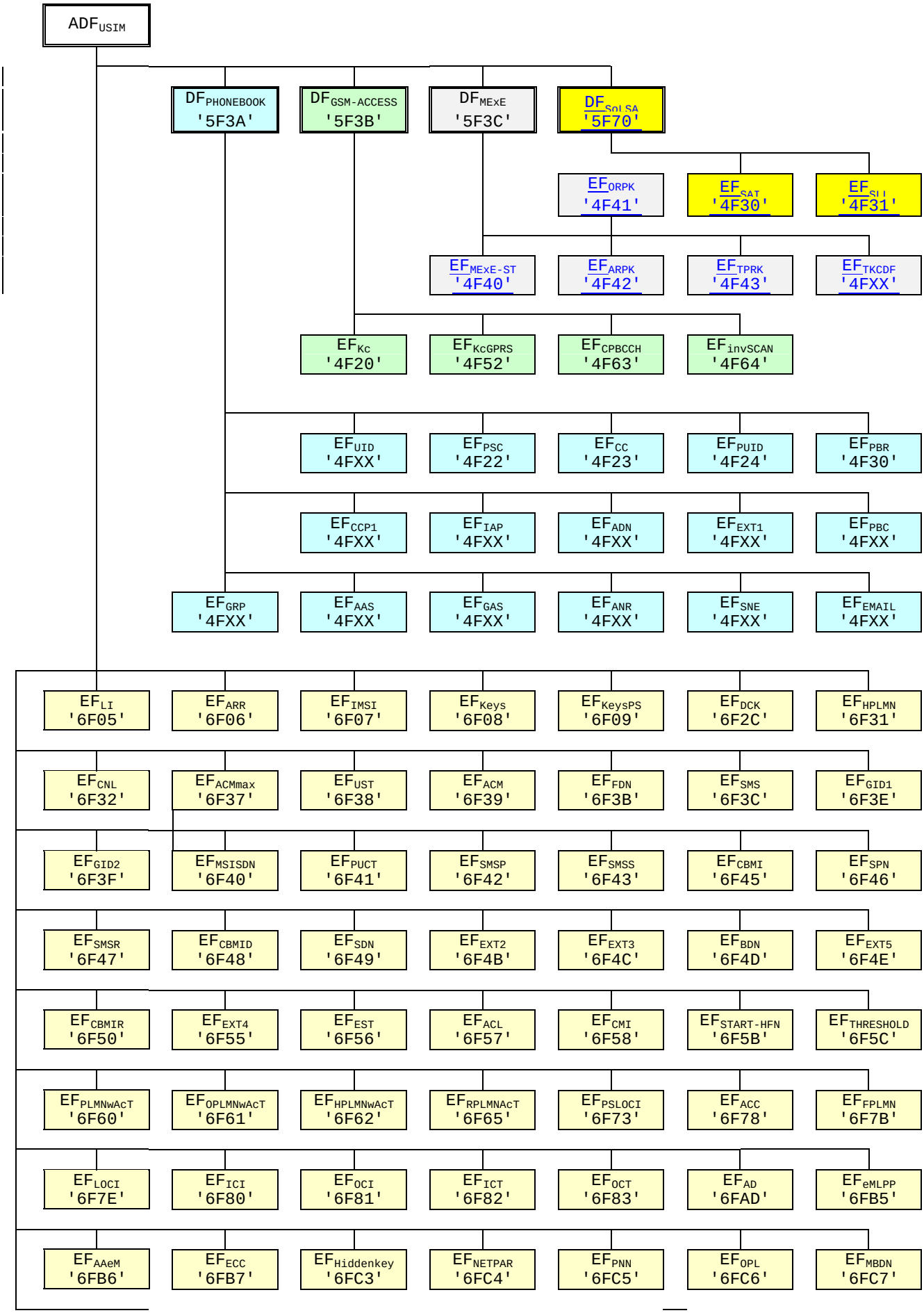
4.7 Files of USIM

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


ADF USIM
DF PHONEBOOK '5F3A'
DF GSM-ACCESS '5F3B'
DF MExE '5F3C'
DF SoLSA '5F70'
EF ORPK '4F41'
EF SAT '4F30'
EF SLI '4F31'
EF MExE-ST '4F40'
EF ARPK '4F42'
EF TPRK '4F43'
EF TKCDF '4FXX'
EF Kc '4F20'
EF KcGPRS '4F52'
EF CPBCCH '4F63'
EF invSCAN '4F64'
EF UID '4FXX'
EF PSC '4F22'
EF CC '4F23'
EF PUID '4F24'
EF PBR '4F30'
EF CCP1 '4FXX'
EF IAP '4FXX'
EF ADN '4FXX'
EF EXT1 '4FXX'
EF PBC '4FXX'
EF GRP '4FXX'
EF AAS '4FXX'
EF GAS '4FXX'
EF ANR '4FXX'
EF SNE '4FXX'
EF EMAIL '4FXX'
EF LI '6F05'
EF ARR '6F06'
EF IMSI '6F07'
EF Keys '6F08'
EF KeysPS '6F09'
EF DCK '6F2C'
EF HPLMN '6F31'
EF CNL '6F32'
EF ACMmax '6F37'
EF UST '6F38'
EF ACM '6F39'
EF FDN '6F3B'
EF SMS '6F3C'
EF GID1 '6F3E'
EF GID2 '6F3F'
EF MSISDN '6F40'
EF PUCT '6F41'
EF SMSP '6F42'
EF SMSS '6F43'
EF CBMI '6F45'
EF SPN '6F46'
EF SMSR '6F47'
EF CBMID '6F48'
EF SDN '6F49'
EF EXT2 '6F4B'
EF EXT3 '6F4C'
EF BDN '6F4D'
EF EXT5 '6F4E'
EF CBMIR '6F50'
EF EXT4 '6F55'
EF EST '6F56'
EF ACL '6F57'
EF CMI '6F58'
EF START-HFN '6F5B'
EF THRESHOLD '6F5C'
EF PLMNwAcT '6F60'
EF OPLMNwAcT '6F61'
EF HPLMNwAcT '6F62'
EF RPLMNAcT '6F65'
EF PSLOCI '6F73'
EF ACC '6F78'
EF FPLMN '6F7B'
EF LOCI '6F7E'
EF ICI '6F80'
EF OCI '6F81'
EF ICT '6F82'
EF OCT '6F83'
EF AD '6FAD'
EF eMLPP '6FB5'
EF AAeM '6FB6'
EF ECC '6FB7'
EF Hiddenkey '6FC3'
EF NETPAR '6FC4'
EF PNN '6FC5'
EF OPL '6FC6'
EF MBDN '6FC7'

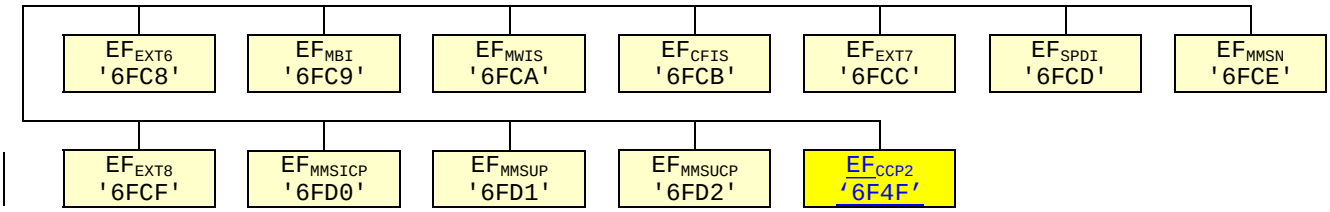


Figure 4.2: File identifiers and directory structures of USIM

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

5.2.x LSA information

- Requirement: Service n°23 "available".
- Request: The ME performs the reading procedure with EF_{SAI}, EF_{SLL} 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.

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
'4F30'	SoLSA Access Indicator	Caution
'4F31'	SoLSA LSA List	Caution
'4FXX'	LSA Descriptor files	Caution
'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

Continued….

File identification	Description	Change advised
'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 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'	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
'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
'6FD1'	MMS User Preferences	Yes
'6FD2'	MMS User Connectivity Parameters	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	'FF…FF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FF...FF'
'4F20'	GSM Ciphering key Kc	'FF...FF07'
'4FXX'	Image instance data files	'FF…FF'
'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
'4F30'	SoLSA Access Indicator	'00FF...FF'
'4F31'	SoLSA LSA List	'FF...FF'
'4FXX'	LSA Descriptor files	'FF…FF'
'4FXX'	Capability configuration parameters 1	'FF…FF'
'4F52'	GPRS Ciphring key KcGPRS	'FF...FF07'
'4F63'	CPBCCH Information	'FF..FF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FF…FF'
'4FXX'	Additional number alpha string	'FF…FF'
'4FXX'	Second name entry	'FF…FF'
'4FXX'	Abbreviated dialling numbers	'FF...FF'
'4FXX'	Grouping file	'00…00'
'4FXX'	Grouping information alpha string	'FF…FF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FF…FF'
'4FXX'	Additional number	'FF…FF'
'4FXX'	Extension 1	'00FF...FF'
'6F05'	Language indication	'FF…FF'
'6F06'	Access rule reference (under ADF_{USIM} and $DF_{TELECOM}$)	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FF…FF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FF…FF'
'6F2C'	De-personalization control keys	'FF…FF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FF…FF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FF...FF'
'6F3C'	Short messages	'00FF...FF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FF...FF'
'6F41'	PUCT	'FFFFFF0000'
'6F42'	SMS parameters	'FF...FF'
'6F43'	SMS status	'FF...FF'
'6F45'	CBMI	'FF...FF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FF…FF'
'6F48'	CBMID	'FF...FF'
'6F49'	Service Dialling Numbers	'FF...FF'
'6F4B'	Extension 2	'00FF...FF'
'6F4C'	Extension 3	'00FF...FF'

Continued....

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FF...FF'
'6F4E'	Extension 5	'00FF...FF'
'6F4F'	Capability configuration parameters 2	'FF...FF'
'6F50'	CBMIR	'FF...FF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FF...FF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FF…FF'
'6F58'	Comparison method information	'FF…FF'
'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	'FFFFFF0000..FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FF...FF'
'6F7E	Location information	'FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FF…FF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FF…FF 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	'FF…FF'
'6FC4'	Network Parameters	'FF…FF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FF...FF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FF...FF'
'6FCC'	Extension 7	'00 FF...FF'
'6FCD'	Service Provider Display Information	
‘6FCE’	MMS Notification	’00 00 00 FF…FF’
‘6FCF’	Extension 8	'FF...FF'
‘6FD0’	MMS Issuer Connectivity Parameters	‘FF…FF’
‘6FD1’	MMS User Preferences	‘FF…FF’
‘6FD2’	MMS User Connectivity Parameters	‘FF…FF’

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.

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

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

[…]

3GPP TSG-T3 Meeting #27
Marseilles, France, 19-22 August 2003

Tdoc T3-030733⌘

CR-Form-v7

CHANGE REQUEST

⌘ **31.102** **CR** ⌘**rev** ⌘ Current version: **3.13.0** ⌘

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

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

Title:	⌘	Corrections on files for support of GSM services using USIM – ASCI Files
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	20/8/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	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, files related to ASCI service.
Summary of change:	⌘	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 a 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.
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

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

Other comments:	⌘	A separate CR is raised for the SIM files related to 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.

Identifier: '6F38'	Structure: transparent	Mandatory
SFI: '04'		
File size: X bytes, X >= 1	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
DEACTIVATE	ADM
ACTIVATE	ADM

Bytes	Description	M/O	Length
1	Services n°1 to n°8	M	1 byte
2	Services n°9 to n°16	O	1 byte
3	Services n°17 to n°24	O	1 byte
4	Services n°25 to n°32	O	1 byte
etc.			
X	Services n°(8X-7) to n°(8X)	O	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:	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:	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
	Service n°55	MMS User Connectivity Parameters
	Service n°xx	VGCS Group Identifier List (EF_{VGCS} and EF_{VGCSS})
	Service n°yy	VBS Group Identifier List (EF_{VBS} and EF_{VBSS})

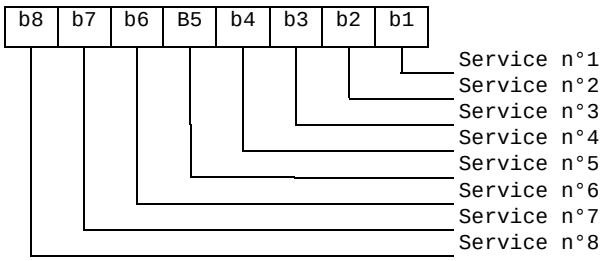
The EF shall contain at least one byte. Further bytes may be included, but if the EF includes an optional byte, then it is mandatory for the EF to also contain all bytes before that byte. Other services are possible in the future and will be coded on further bytes in the EF. The coding falls under the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

Coding:

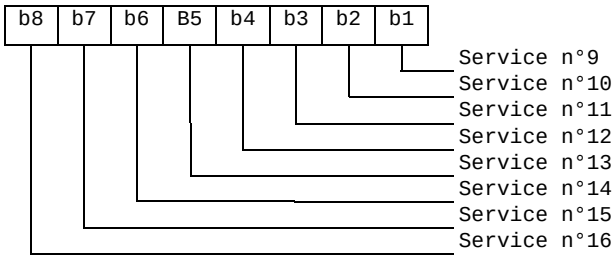
1 bit is used to code each service:
bit = 1: service available;
bit = 0: service not available.

- 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$_{VGCS}$ (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'	Structure: transparent	Optional
File size: 4n bytes (n <= 50)	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 4	Group ID 1	M	4 bytes
5 to 8	Group ID 2	O	4 bytes
:	:	:	:
(4n-3) to 4n	Group ID n	O	4 bytes

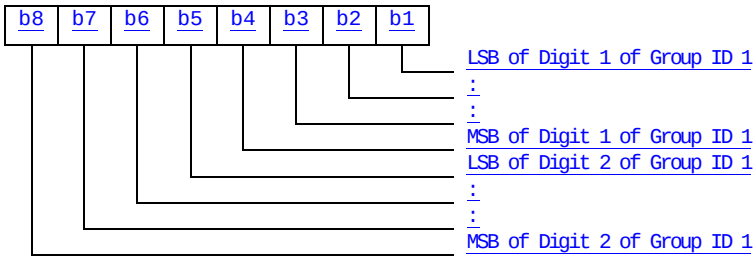
- Group ID

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

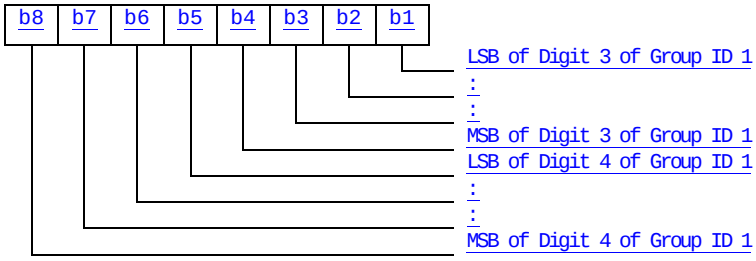
Coding:

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.

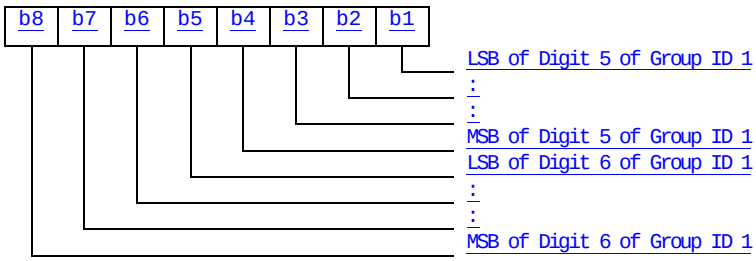
Byte 1:



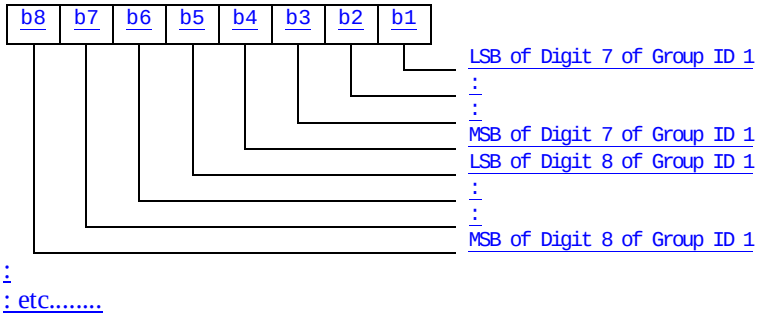
Byte 2:



Byte 3:

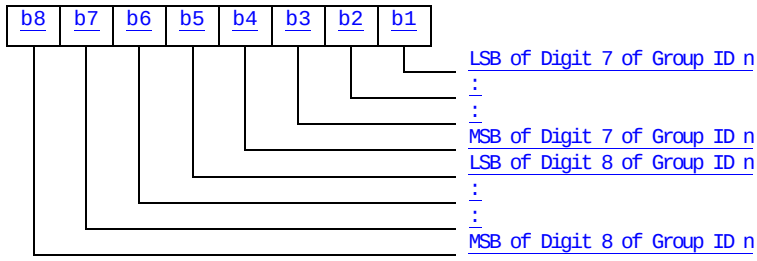


Byte 4:



:
: etc.....

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_{VGCSS} (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	Optional
File size: 7 bytes	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 7	Activation/Deactivation Flags	M	7 bytes

- Activation/Deactivation Flags

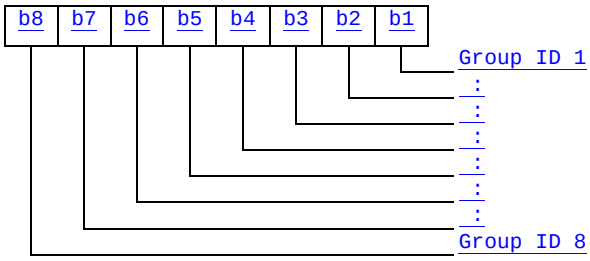
Contents: Activation/Deactivation Flags of the appropriate Group IDs

Coding:

bit = 0 means - Group ID deactivated

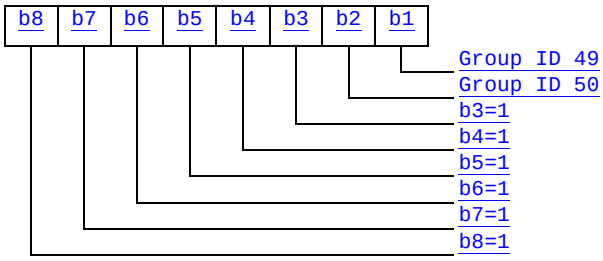
bit = 1 means - Group ID activated

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.

Identifier: '6FB3'	Structure: transparent	Optional
File size: 4n bytes (n <= 50)	Update activity: low	

Access Conditions:

READ	PIN
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 4	Group ID 1	M	4 bytes
5 to 2	Group ID 2	O	4 bytes
:	:	:	:
(4n-3) to 4n	Group ID n	O	4 bytes

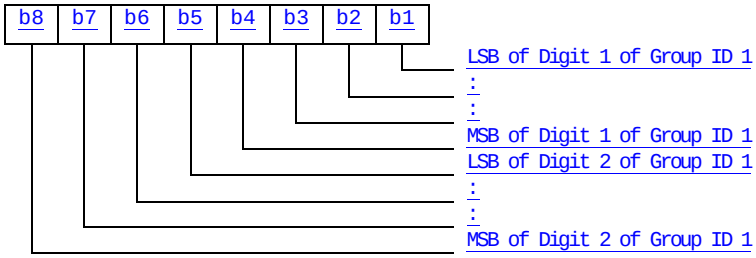
- Group ID

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

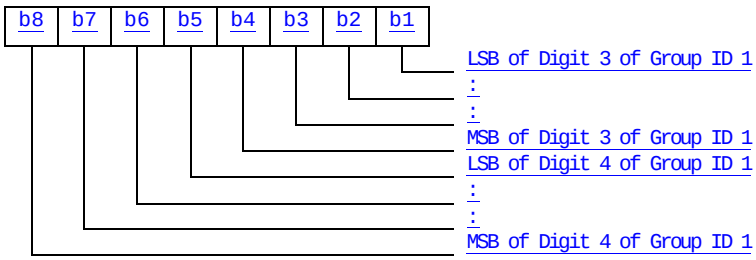
Coding:

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.

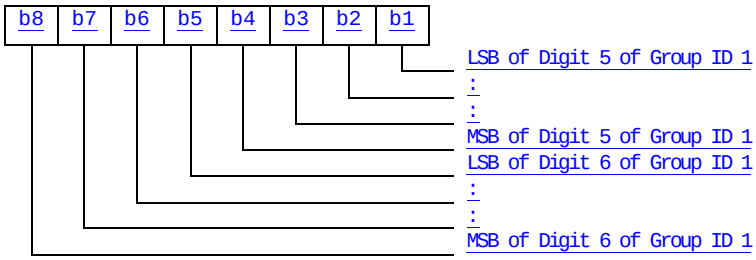
Byte 1:



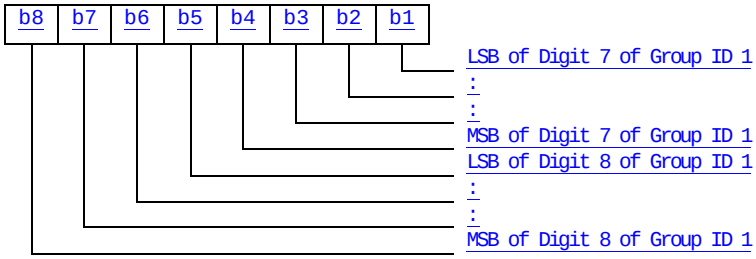
Byte 2:



Byte 3:

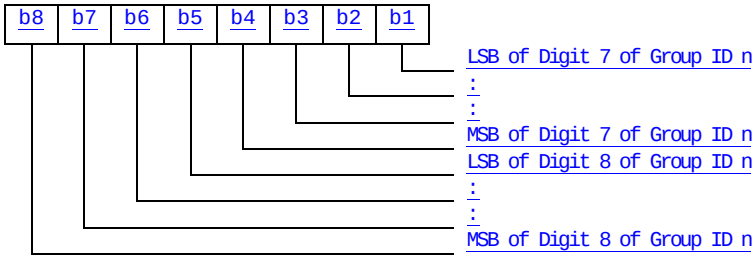


Byte 4:



:
: etc.....

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	Optional
File size: 7 bytes	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 7	Activation/Deactivation Flags	M	7 bytes

- Activation/Deactivation Flags

  Contents: Activation/Deactivation Flags of the appropriate Group IDs

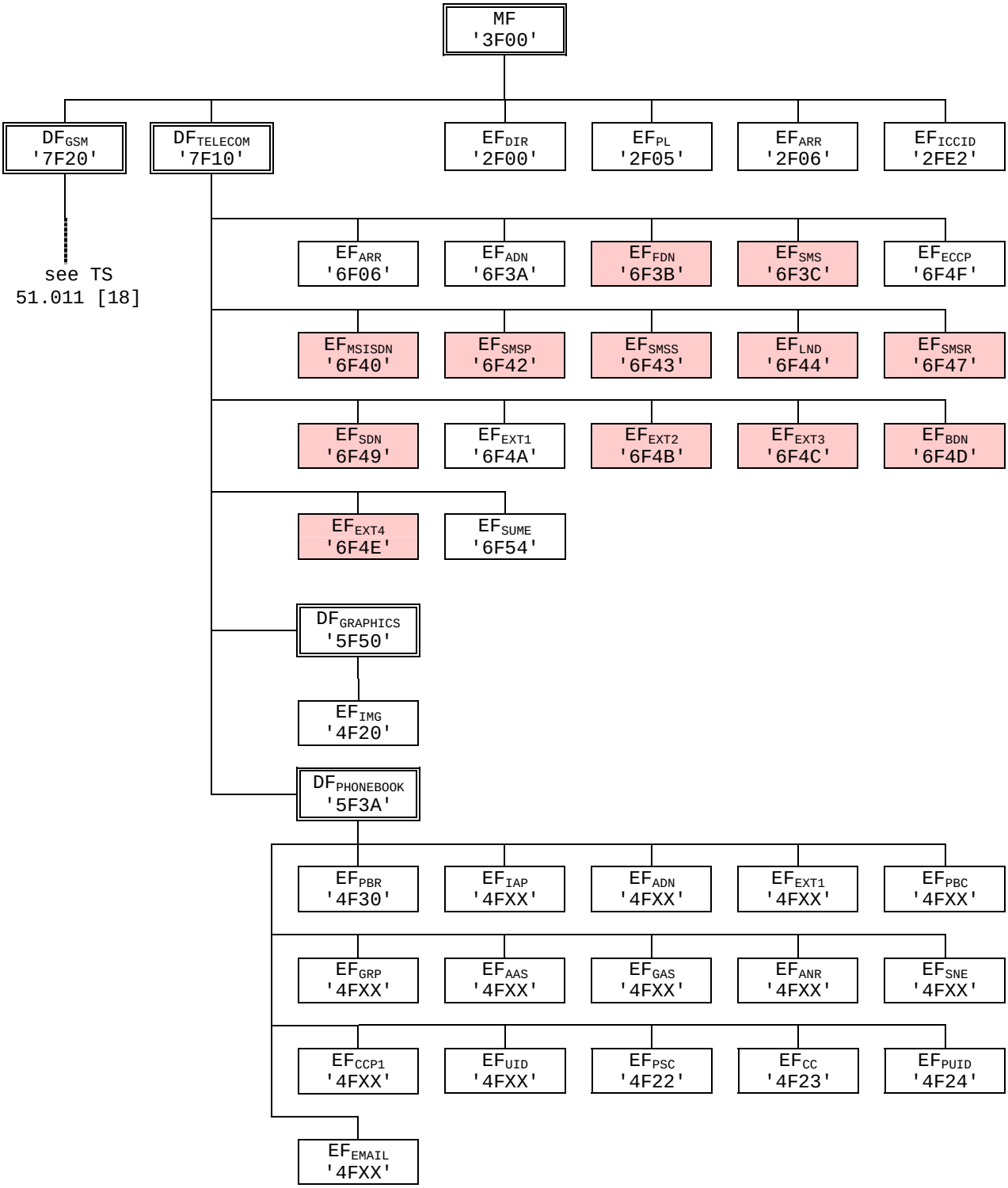
  Coding:

  see coding of EF_{VGCS}

[…]

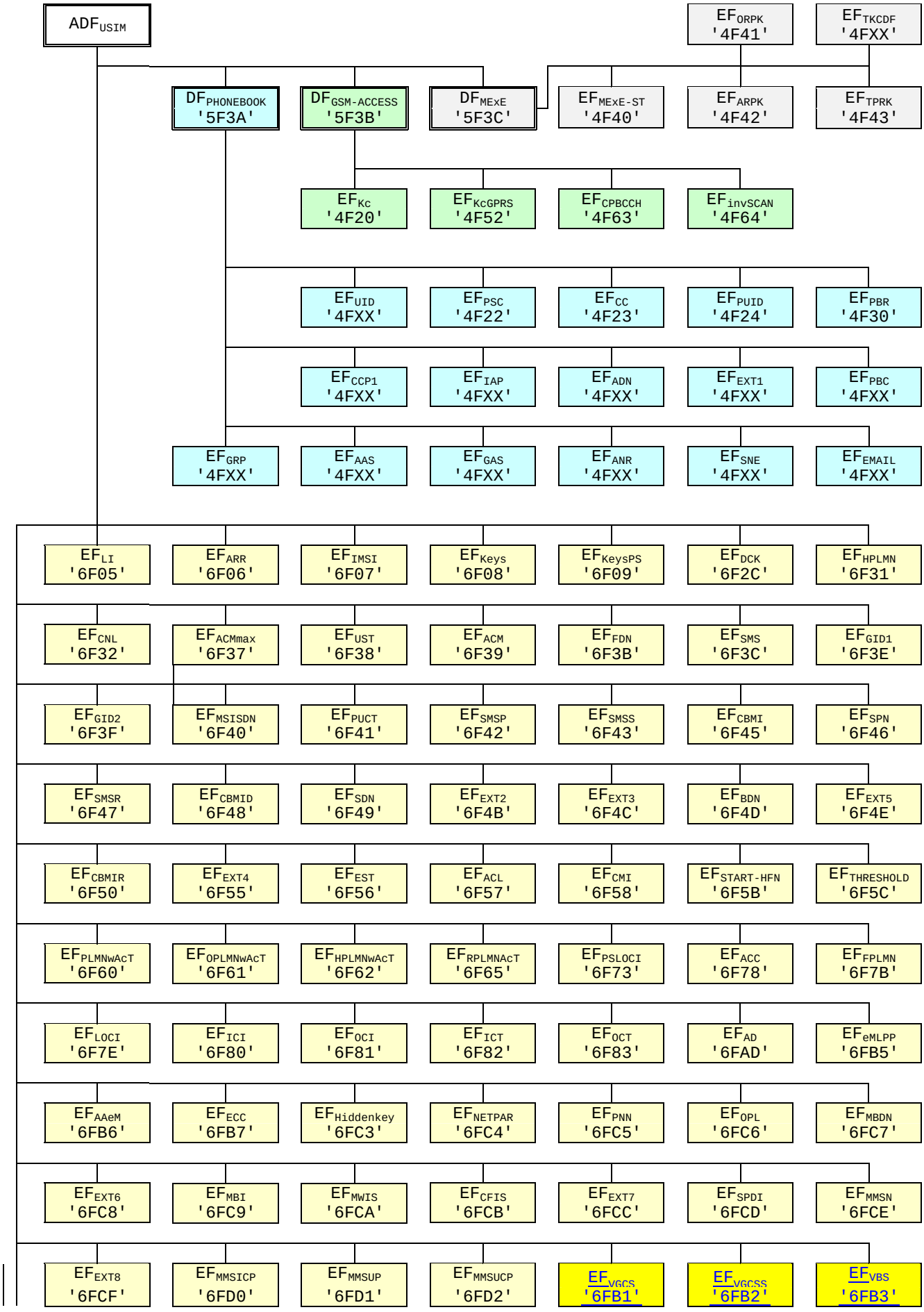
4.7 Files of USIM

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


ADF USIM
EF ORPK '4F41'
EF TKCDF '4FXX'
DF PHONEBOOK '5F3A'
DF GSM-ACCESS '5F3B'
DF MExE '5F3C'
EF MExE-ST '4F40'
EF ARPK '4F42'
EF TPRK '4F43'
EF Kc '4F20'
EF KcGPRS '4F52'
EF CPBCCH '4F63'
EF invSCAN '4F64'
EF UID '4FXX'
EF PSC '4F22'
EF CC '4F23'
EF PUID '4F24'
EF PBR '4F30'
EF CCP1 '4FXX'
EF IAP '4FXX'
EF ADN '4FXX'
EF EXT1 '4FXX'
EF PBC '4FXX'
EF GRP '4FXX'
EF AAS '4FXX'
EF GAS '4FXX'
EF ANR '4FXX'
EF SNE '4FXX'
EF EMAIL '4FXX'
EF LI '6F05'
EF ARR '6F06'
EF IMSI '6F07'
EF Keys '6F08'
EF KeysPS '6F09'
EF DCK '6F2C'
EF HPLMN '6F31'
EF CNL '6F32'
EF ACMmax '6F37'
EF UST '6F38'
EF ACM '6F39'
EF FDN '6F3B'
EF SMS '6F3C'
EF GID1 '6F3E'
EF GID2 '6F3F'
EF MSISDN '6F40'
EF PUCT '6F41'
EF SMSP '6F42'
EF SMSS '6F43'
EF CBMI '6F45'
EF SPN '6F46'
EF SMSR '6F47'
EF CBMID '6F48'
EF SDN '6F49'
EF EXT2 '6F4B'
EF EXT3 '6F4C'
EF BDN '6F4D'
EF EXT5 '6F4E'
EF CBMIR '6F50'
EF EXT4 '6F55'
EF EST '6F56'
EF ACL '6F57'
EF CMI '6F58'
EF START-HFN '6F5B'
EF THRESHOLD '6F5C'
EF PLMNwAcT '6F60'
EF OPLMNwAcT '6F61'
EF HPLMNwAcT '6F62'
EF RPLMNAcT '6F65'
EF PSLOCI '6F73'
EF ACC '6F78'
EF FPLMN '6F7B'
EF LOCI '6F7E'
EF ICI '6F80'
EF OCI '6F81'
EF ICT '6F82'
EF OCT '6F83'
EF AD '6FAD'
EF eMLPP '6FB5'
EF AAeM '6FB6'
EF ECC '6FB7'
EF Hiddenkey '6FC3'
EF NETPAR '6FC4'
EF PNN '6FC5'
EF OPL '6FC6'
EF MBDN '6FC7'
EF EXT6 '6FC8'
EF MBI '6FC9'
EF MWIS '6FCA'
EF CFIS '6FCB'
EF EXT7 '6FCC'
EF SPDI '6FCD'
EF MMSN '6FCE'
EF EXT8 '6FCF'
EF MMSICP '6FD0'
EF MMSUP '6FD1'
EF MMSUCP '6FD2'
EF VGCS '6FB1'
EF VGCSS '6FB2'
EF VBS '6FB3'

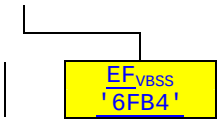


Figure 4.2: File identifiers and directory structures of USIM

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}.

Update: 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

Continued….

File identification	Description	Change advised
'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 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'	Outgoing call timer	Yes
'6FAD'	Administrative data	Caution
'6FB1'	Voice Group Call Service	Yes
'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
'6FD1'	MMS User Preferences	Yes
'6FD2'	MMS User Connectivity Parameters	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	'FF…FF'
'2F06'	Access rule reference	Card issuer/operator dependant
'2FE2'	ICC identification	operator dependant
'4F20'	Image data	'00FF...FF'
'4F20'	GSM Ciphering key Kc	'FF...FF07'
'4FXX'	Image instance data files	'FF…FF'
'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'	Capability configuration parameters 1	'FF…FF'
'4F52'	GPRS Ciphring key KcGPRS	'FF...FF07'
'4F63'	CPBCCH Information	'FF..FF'
'4F64'	Investigation PLMN scan	'00'
'4FXX'	E-mail addresses	'FF…FF'
'4FXX'	Additional number alpha string	'FF…FF'
'4FXX'	Second name entry	'FF…FF'
'4FXX'	Abbreviated dialling numbers	'FF...FF'
'4FXX'	Grouping file	'00…00'
'4FXX'	Grouping information alpha string	'FF…FF'
'4FXX'	Phone book control	'0000'
'4FXX'	Index administration phone book	'FF…FF'
'4FXX'	Additional number	'FF…FF'
'4FXX'	Extension 1	'00FF...FF'
'6F05'	Language indication	'FF…FF'
'6F06'	Access rule reference (under ADF_{USIM} and $DF_{TELECOM}$)	Card issuer/operator dependant
'6F07'	IMSI	Operator dependant
'6F08'	Ciphering and integrity keys	'07FF…FF'
'6F09'	Ciphering and integrity keys for packet switched domain	'07FF…FF'
'6F2C'	De-personalization control keys	'FF…FF'
'6F31'	HPLMN search period	'FF'
'6F32'	Co-operative network list	'FF…FF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	USIM service table	Operator dependant
'6F39'	Accumulated call meter	'000000'
'6F3B'	Fixed dialling numbers	'FF...FF'
'6F3C'	Short messages	'00FF...FF'
'6F3E'	Group identifier level 1	Operator dependant
'6F3F'	Group identifier level 2	Operator dependant
'6F40'	MSISDN storage	'FF...FF'
'6F41'	PUCT	'FFFFFF0000'
'6F42'	SMS parameters	'FF...FF'
'6F43'	SMS status	'FF...FF'
'6F45'	CBMI	'FF...FF'
'6F46'	Service provider name	Operator dependant
'6F47'	Short message status reports	'00FF…FF'
'6F48'	CBMID	'FF...FF'
'6F49'	Service Dialling Numbers	'FF...FF'
'6F4B'	Extension 2	'00FF...FF'
'6F4C'	Extension 3	'00FF...FF'

Continued....

File Identification	Description	Value
'6F4D'	Barred Dialling Numbers	'FF...FF'
'6F4E'	Extension 5	'00FF...FF'
'6F4F'	Capability configuration parameters 2	'FF...FF'
'6F50'	CBMIR	'FF...FF'
'6F54'	SetUp Menu Elements	Operator dependant
'6F55'	Extension 4	'FF...FF'
'6F56'	Enabled services table	Operator dependant
'6F57'	Access point name control list	'00FF…FF'
'6F58'	Comparison method information	'FF…FF'
'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	'FFFFFF0000..FFFFFF0000'
'6F61'	Operator controlled PLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F62'	HPLMN selector with Access Technology	'FFFFFF0000..FFFFFF0000'
'6F65'	RPLMN last used Access Technology	'0000'
'6F73'	Packet switched location information	'FFFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F78'	Access control class	Operator dependant
'6F7B'	Forbidden PLMNs	'FF...FF'
'6F7E	Location information	'FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F80'	Incoming call information	'FF…FF 000000 00 01FFFF'
'6F81'	Outgoing call information	'FF…FF 000000 01FFFF'
'6F82'	Incoming call timer	'000000'
'6F83'	Outgoing call timer	'000000'
'6FAD'	Administrative data	Operator dependant
'6FB1'	Voice Group Call Service	Operator dependant
'6FB2'	Voice Group Call Service Status	Operator dependant
'6FB3'	Voice Broadcast Service	Operator dependant
'6FB4'	Voice Broadcast Service Status	Operator dependant
'6FB5'	EMLPP	Operator dependant
'6FB6'	AaeM	'00'
'6FB7'	Emergency call codes	Operator dependant
'6FC3'	Key for hidden phone book entries	'FF…FF'
'6FC4'	Network Parameters	'FF…FF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator Network List	Operator dependant
'6FC7'	Mailbox Dialling Numbers	Operator dependant
'6FC8'	Extension 6	'00 FF...FF'
'6FC9'	Mailbox Identifier	Operator dependant
'6FCA'	Message Waiting Indication Status	'00 00 00 00 00'
'6FCB'	Call Forwarding Indication Status	'xx 00 FF...FF'
'6FCC'	Extension 7	'00 FF...FF'
'6FCD'	Service Provider Display Information	
'6FCE'	MMS Notification	'00 00 00 FF…FF'
'6FCF'	Extension 8	'FF...FF'
'6FD0'	MMS Issuer Connectivity Parameters	'FF…FF'
'6FD1'	MMS User Preferences	'FF…FF'
'6FD2'	MMS User Connectivity Parameters	'FF…FF'

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].

[…]