

Source: T3 Chairman

Title: Change Requests to TS 31.102 "Characteristics of the USIM application" on storage of network parameters

Agenda item: 5.3.3

Document for: Approval

This document contains three different solutions to address the storage of network parameters in TS 31.102 release 99.

The release 99 requirements for the storage of these parameters was received only at the last T3 meeting. A solution was during the meeting and produced shortly after the meeting in CR 31.102-060.

A second solution proposed shortly before TSG-T #10 in CR 31.102-063. The frequency is used instead of channel number. Time constraints did not allow full discussion of this document but it is considered to be a more flexible solution than CR 31.102-060.

An interim solution was proposed shortly before TSG-T #10 in CR 31.102-064. It consists of basic data-field definition but not sufficiently detailed for implementation.

Proposal to TSG-T:

- agree to adopt second solution, CR 063 subject to no objection received within 2 weeks after the end of TSG-T #10
- if an objection is received, CR 064 should be considered as approved

4.2.X EF_{NETPAR} (Network Parameters)

This EF contains information concerning the frequency parameters according to TS xx.yyy [zz].

Network Parameter storage may reduce the extent of UE's search of FDD, TDD or GSM carriers when selecting a cell. The network parameters stored in an UE shall be in accordance with the procedures specified in TS xx.yyy [zz].

<u>Identifier: '6Fxx'</u>		<u>Structure: transparent</u>		<u>Mandatory</u>	
<u>File size: 66+X+Y bytes</u>			<u>Update activity: high</u>		
<u>Access Conditions:</u>					
<u>READ</u>		<u>PIN</u>			
<u>UPDATE</u>		<u>PIN</u>			
<u>DEACTIVATE</u>		<u>ADM</u>			
<u>ACTIVATE</u>		<u>ADM</u>			
<u>Bytes</u>	<u>Description</u>	<u>M/O</u>	<u>Length</u>		
<u>1 to 66</u>	<u>TLV object containing GSM cell information</u>	<u>O</u>	<u>66 bytes</u>		
<u>67 to 66+X</u>	<u>TLV object(s) containing FDD cell information</u>	<u>O</u>	<u>X bytes</u>		
<u>67+X to 66+X+Y</u>	<u>TLV object(s) containing TDD cell information</u>	<u>O</u>	<u>Y bytes</u>		

- GSM Cell Information

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>	<u>Multiplicity</u>
<u>GSM Cell Information Tag</u>	<u>'XX'</u>	<u>M</u>	<u>1</u>	<u>1</u>
<u>Length</u>	<u>'40'</u>	<u>M</u>	<u>1</u>	<u>-</u>
<u>BSIC and BCCH ARFCN</u>	<u>according to TS xx.xxx [??]</u>	<u>M</u>	<u>2</u>	<u>32</u>

- FDD Cell Information

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>	<u>Multiplicity</u>
<u>FDD Cell Information Tag</u>	<u>'XY'</u>	<u>M</u>	<u>1</u>	<u>1 up to 4</u>
<u>Length</u>	<u>(4 + 2 x m)</u>	<u>M</u>	<u>1</u>	<u>-</u>
<u>UARFCN uplink (Nu)</u>	<u>according to TS xx.xxx [??]</u>	<u>M</u>	<u>2</u>	<u>1</u>
<u>UARFCN downlink (Nd)</u>	<u>according to TS xx.xxx [??]</u>	<u>M</u>	<u>2</u>	<u>1</u>
<u>Primary Scrambling Code</u>	<u>according to TS xx.xxx [??]</u>	<u>O</u>	<u>2</u>	<u>1 <= m <= 32</u>

- TDD Cell Information

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>	<u>Multiplicity</u>
<u>TDD Cell Information Tag</u>	<u>'XY'</u>	<u>M</u>	<u>1</u>	<u>1 up to 4</u>
<u>Length</u>	<u>(4 + n)</u>	<u>M</u>	<u>1</u>	<u>-</u>
<u>UARFCN uplink (Nt)</u>	<u>according to TS xx.xxx [??]</u>	<u>M</u>	<u>2</u>	<u>1</u>
<u>Cell parameters ID</u>	<u>according to TS xx.xxx [??]</u>	<u>O</u>	<u>1</u>	<u>1 <= n <= 32</u>

5.3.xx Network Parameter information

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

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

Annex D (informative): Tags defined in 31.102

Tag	Name of Data Element	Usage
'D8'	Indicator for type 1 EFs (amount of records equal to master EF)	Phone Book Reference File (EF _{PBR})
'D9'	Indicator for type 2 EFs (EFs linked via the index administration file)	Phone Book Reference File (EF _{PBR})
'DA'	Indicator for type 3 EFs (EFs addressed inside a TLV object) The following are encapsulated under 'XZ': 'C0' EF _{ADN} data object 'C1' EF _{IAP} data object 'C2' EF _{ECT1} data object 'C3' EF _{SNE} data object 'C4' EF _{ANR} data object 'C5' EF _{PBC} data object 'C6' EF _{GRP} data object 'C7' EF _{AAS} data object 'C8' EF _{GAS} data object 'C9' EF _{UID} data object	Phone Book Reference File (EF _{PBR})
'DB'	Successful 3G authentication	Response to AUTHENTICATE
'DC'	Synchronisation failure	Response to AUTHENTICATE
'DD'	Access Point Name	APN Control List (EF _{ACL})
'XX'	GSM cell information	Network Parameters (EF_{NETPAR})
'XY'	FDD cell information	Network Parameters (EF_{NETPAR})
'XZ'	TDD cell information	Network Parameters (EF_{NETPAR})

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'
'4F21'	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
'4F3D'	Capability configuration parameters 1	'FF...FF'
'4F63'	CPBCCCH 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 FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F74'	BCCH	'FF...FF'
'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'
'6FXX'	Network 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 3G TS 24.008 [9].

CHANGE REQUEST

⌘ **31.102 CR 063** ⌘ rev ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Storage of Network Parameters		
Source:	⌘ 31.102 rapporteur		
Work item code:	⌘ 	Date:	⌘ 05.12.00
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.			

Reason for change:	⌘ No storage of 3G network parameters has been specified in T3 31.102 so far, as clarifications with RAN2 have been ongoing.
Summary of change:	⌘ Introduction of EF_NETPAR to provide storage for the network parameters. Deletion of EF_BCCH under DF_GSM as these parameters now can be stored in EF_NETPAR.
Consequences if not approved:	⌘ TS 31.102 does not meet the requirements from RAN2

Clauses affected:	⌘ 2; 4.2.X; 4.4.3.3; 4.7; 5.3.xx; ; Annex A; Annex D; Annex H.2		
Other specs affected:	<input type="checkbox"/>	Other core specifications	⌘ TS 31.121
	<input checked="" type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘ 		

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] 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 Mobile Station (MS)".
- [5] 3GPP TS 23.038: "Alphabets and language".
- [6] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS) Point-to-Point (PP)".
- [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".
- [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 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 Short Message Service Cell Broadcast (SMSCB)".
- [17] 3GPP TS 02.07: "Mobile Stations (MS) features".
- [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".
- [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: "Numbering plan for the ISDN era".
- [23] ITU-T Recommendation T.50: "International Alphabet No. 5". (ISO 646 (1983): "Information processing - ISO 7-bits coded characters 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 FCD 7816-9 (1999): "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 Station Application 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](#)
- [34] [3GPP TS 25.102:](#)
- [35] [3GPP TS 25.223:](#)
- [36] [3GPP TS 04.18 "Mobile Radio Interface Layer 3 Specification, Radio Resource Control Protocol"](#)

4.2.X EF_{NETPAR} (Network Parameters)

This EF contains information concerning the cell frequencies ~~y~~ parameters according to TS-xx.yyy [36?].

Network Parameter storage may reduce the extent of the terminal search of FDD, TDD or GSM carriers when selecting a cell. The network parameters stored in the USIM shall be in accordance with the procedures specified in this paragraph

The RF carrier frequency information is stored on 2 bytes and coded on 16 bits starting from 0.0 MHz. Each increment of the 16 bit value is an increment of 200 kHz in frequency. This allows the exact channel frequency to be stored in this data field making it independent of any band information. It is up to the terminal to associate the indicated frequency with a particular band, e.g. GSM 900, GSM 1800 etc. This means that a range from 0 to 13.1 GHz can be covered, with the resolution of 200 kHz. The frequency indicated is always the terminal receiver carrier frequency.

The EF provides a minimum storage capacity of 46 bytes in order to provide the capability of storing at least two cell information TLV objects, e.g. GSM/FDD or FDD/TDD in its minimum configuration, i.e. the terminal can rely on the required memory space for storing at least two cell information lists offering 8 GSM neighbour carrier frequencies and 8 Intra/Inter frequencies, respectively. In what configuration the available memory actually is being used is up to the terminal.

A terminal shall ignore a TLV object or the value of a carrier frequency which is beyond its capabilities, i.e. a FDD only terminal shall ignore the GSM related frequency information. When updating this file the terminal shall update it with the current values available in the terminal. Updating of this file shall start from the beginning of the file. The terminal need not to respect the structure of any information previously stored, i.e. a FDD only terminal may over-write the GSM parameters stored in this file by an other terminal.

The GSM cell information constructed TLV object contains the information of the BCCH channel frequency the terminal is currently camped on, indicated by tag '80'. The constructed TLV object also contains an indication of up to 32 neighbour BCCH carrier frequencies indicated by tag '81'. In order to store a complete set of GSM network parameters a total of 724 bytes is required. The terminal shall convert the BCCH channel information, as specified in 04.18 [36], received from the network into the corresponding frequency before storing it in the USIM.

The FDD cell information constructed TLV object contains the scrambling code information for the intra frequency carrier, tag '80', and the inter frequency scrambling codes, tag '81'. The intra frequency carrier information may contain up to 32 scrambling codes (m) while there is a limitation of the number of inter frequency scrambling codes (n1, n2, n3). The number of inter frequencies that can be indicated is limited to three and the total amount of scrambling codes for the inter frequencies is limited to 32 (n1,+n2,+n3 <= 32), i.e. if only one inter frequency carrier is indicated it can contain up to 32 scrambling codes. If two or more inter frequency carriers are indicated a total of 32 scrambling codes can be provided. How the information is split between the inter frequency carriers is determined by the terminal. In order to store a complete set of FDD cell information a total of 146 bytes is required. The terminal shall convert the UARFCN information, as specified in 25.101 [xx], received from the network into the corresponding frequency before storing it in the USIM.

The TDD cell information constructed TLV object has the same structure as the FDD cell information TLV object.

Note: Currently there is no inter frequency cell information required for the TDD case.

<u>Identifier: '6Fxx'</u>		<u>Structure: transparent</u>		<u>Mandatory</u>	
<u>File size: X >= 46 bytes</u>			<u>Update activity: high</u>		
<u>Access Conditions:</u>					
<u>READ</u>		<u>PIN</u>			
<u>UPDATE</u>		<u>PIN</u>			
<u>DEACTIVATE</u>		<u>ADM</u>			
<u>ACTIVATE</u>		<u>ADM</u>			
<u>Bytes</u>	<u>Description</u>			<u>M/O</u>	<u>Length</u>
<u>1 - X</u>	<u>TLV object(s) containing GSM/FDD/TDD cell information</u>			<u>O</u>	

- EF_{NETPAR} Cell Information tags

<u>Description</u>	<u>Value</u>	<u>Information Element size bytes</u>
<u>GSM Cell Information Tag</u>	<u>'A0'</u>	<u>1</u>
<u>Camping Frequency Tag</u>	<u>'80'</u>	<u>1</u>
<u>Camping Frequency Information</u>		<u>2</u>
<u>Neighbour Frequency Tag</u>	<u>'81'</u>	<u>1</u>
<u>Neighbour Frequency Information</u>		<u>2*m</u> <u>(8 <= m <= 32)</u>
<u>FDD Cell Information Tag</u>	<u>'A1'</u>	<u>1</u>
<u>Intra Frequency Information Tag</u>	<u>'80'</u>	<u>1</u>
<u>Scrambling code Information</u>		<u>2*m</u> <u>(8 <= m <= 32)</u>
<u>Inter Frequency Information Tag</u>	<u>'81'</u>	<u>1</u>
<u>Scrambling code information</u>		<u>2*(n1+n2+n3)</u> <u>(8 <= n1+n2+n3 <= 32)</u>
<u>TDD Frequency information Tag</u>	<u>'A2'</u>	<u>1</u>
<u>Intra Frequency Information Tag</u>	<u>'80'</u>	<u>1</u>
<u>Cell parameters ID</u>		<u>2*m</u> <u>(8 <= m <= 32)</u>
<u>Inter Frequency Information Tag</u>	<u>'81'</u>	<u>1</u>
<u>Cell parameters ID</u>		<u>2*(n1+n2+n3)</u> <u>(8 <= n1+n2+n3 <= 32)</u>

- GSM Cell Information, if tag 'A0' is present in this EF the content of this TLV is as follows:

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>
<u>GSM Cell Information Tag</u>	<u>'A80'</u>	<u>M</u>	<u>1</u>
<u>Length</u>	<u>'64+ (2+2*m)</u> <u>(<=720) 40'</u>	<u>M</u>	<u>1</u>
<u>Current camped cell BCCH frequency information tag</u>	<u>'80'</u>	<u>M</u>	<u>1</u>
<u>Length</u>	<u>'02'</u>	<u>M</u>	<u>1</u>
<u>Current camped BCCH frequency</u>		<u>M</u>	<u>2</u>
<u>Neighbour Cell BCCH Frequency information tag</u>	<u>'81'</u>	<u>O</u>	<u>1</u>
<u>Length</u>	<u>2*m (= < 32)</u>	<u>O</u>	<u>1</u>
<u>Neighbour BCCH carrier frequencies</u>		<u>O</u>	<u>2*m</u> <u>(8 <= m <= 32)</u>
<u>BSIC and BCCH ARFCN</u>	<u>according to TS</u> <u>24.008 [9]</u>	<u>M</u>	<u>2</u>

- FDD Cell Information. If tag 'A1' is present in this EF the content of this TLV is as follows:

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>
<u>FDD Cell Information Tag</u>	'A1'	<u>M</u>	<u>1</u>
<u>Length</u>	$4+(2*m)+(4+2*n1)+(4+2*n2)+(4+2*n3) (<=144)$	<u>M</u>	<u>1</u>
<u>FDD Intra Frequency information tag</u>	'80'	<u>M</u>	<u>1</u>
<u>Length</u>	$2+2*m$	<u>M</u>	<u>1</u>
<u>Intra Frequency carrier frequency</u>		<u>M</u>	<u>2</u>
<u>Intra Frequency scrambling codes</u>		<u>M</u>	$2*m$ ($8 <= m <= 32$)
<u>FDD Inter Frequency information tag ¹⁾</u>	'81'	<u>O</u>	<u>1</u>
<u>Length</u>	$2+2*n^{2)}$	<u>O</u>	<u>1</u>
<u>Inter Frequency carrier frequencies</u>		<u>O</u>	<u>2</u>
<u>Inter Frequency scrambling codes</u>		<u>O</u>	$2*n^{2)}$
<u>NOTE 1: This TLV object may occur up to 3 times within the constructed TLV object depending how many inter frequencies are indicated</u>			
<u>NOTE 2: n is in this case n1, n2 or n3, $8 <= (n1+n2+n2)<=32$</u>			

- TDD Cell Information: If tag 'A2' is present in this EF the content of this TLV is as follows:

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>
<u>TDD Cell Information Tag</u>	'A2'	<u>M</u>	<u>1</u>
<u>Length</u>	$4+(2*m)+(4+2*n1)+(4+2*n2)+(4+2*n3) (<=144)$	<u>M</u>	<u>1</u>
<u>TDD Intra Frequency information tag</u>	'80'	<u>M</u>	<u>1</u>
<u>Length</u>	$2+2*m$	<u>M</u>	<u>1</u>
<u>Intra Frequency carrier frequency</u>		<u>M</u>	<u>2</u>
<u>Intra Frequency scrambling codes</u>		<u>M</u>	$2*m$ ($8 <= m <= 32$)
<u>TDD Inter Frequency information tag ¹⁾</u>	'81'	<u>O</u>	<u>1</u>
<u>Length</u>	$2+2*n^{2)}$	<u>O</u>	<u>1</u>
<u>Inter Frequency carrier frequencies</u>		<u>O</u>	<u>2</u>
<u>Inter Frequency scrambling codes</u>		<u>O</u>	$2*n^{2)}$
<u>NOTE 1: This TLV object may occur up to 3 times within the constructed TLV object depending how many inter frequencies are indicated</u>			
<u>NOTE 2: n is in this case n1, n2 or n3, $8 <= (n1+n2+n2)<=32$</u>			

<u>Description</u>	<u>Value</u>	<u>M/O</u>	<u>Length</u>	<u>Multiplicity</u>
<u>TDD Cell Information Tag</u>	'82'	<u>M</u>	<u>1</u>	<u>1 up to 4</u>
<u>Length</u>	$(4+n)$	<u>M</u>	<u>1</u>	<u>1</u>
<u>UARECN-uplink (Nt)</u>	<u>according to TS 25.102 [34]</u>	<u>M</u>	<u>2</u>	<u>1</u>
<u>Cell parameters ID</u>	<u>according to TS 25.223 [35]</u>	<u>O</u>	<u>1</u>	<u>1 <= n <= 32</u>

4.4.3.3 EF_{BCCH} (Broadcast Control Channels)

This EF contains information concerning the GSM BCCH according to TS 24.008 [9].

BCCH storage may reduce the extent of a User Equipment's search of GSM BCCH carriers when selecting a cell. The BCCH carrier lists in an UE shall be in accordance with the procedures specified in TS 24.008 [9]. The UE shall only store BCCH information from the System Information 2 message and not the 2bis extension message.

Identifier: '4F74'		Structure: transparent		Optional	
SFI: '03'					
File size: 16 bytes			Update activity: high		
Access Conditions:					
— READ		PIN			
— UPDATE		PIN			
— DEACTIVATE		ADM			
— ACTIVATE		ADM			
Bytes	Description			M/O	Length
1 to 16	BCCH information			M	16 bytes

— BCCH information:

Coding:

— the information is coded as octets 2-17 of the "neighbour cells description information element" in TS 24.008 [9].

4.7 Files of USIM...

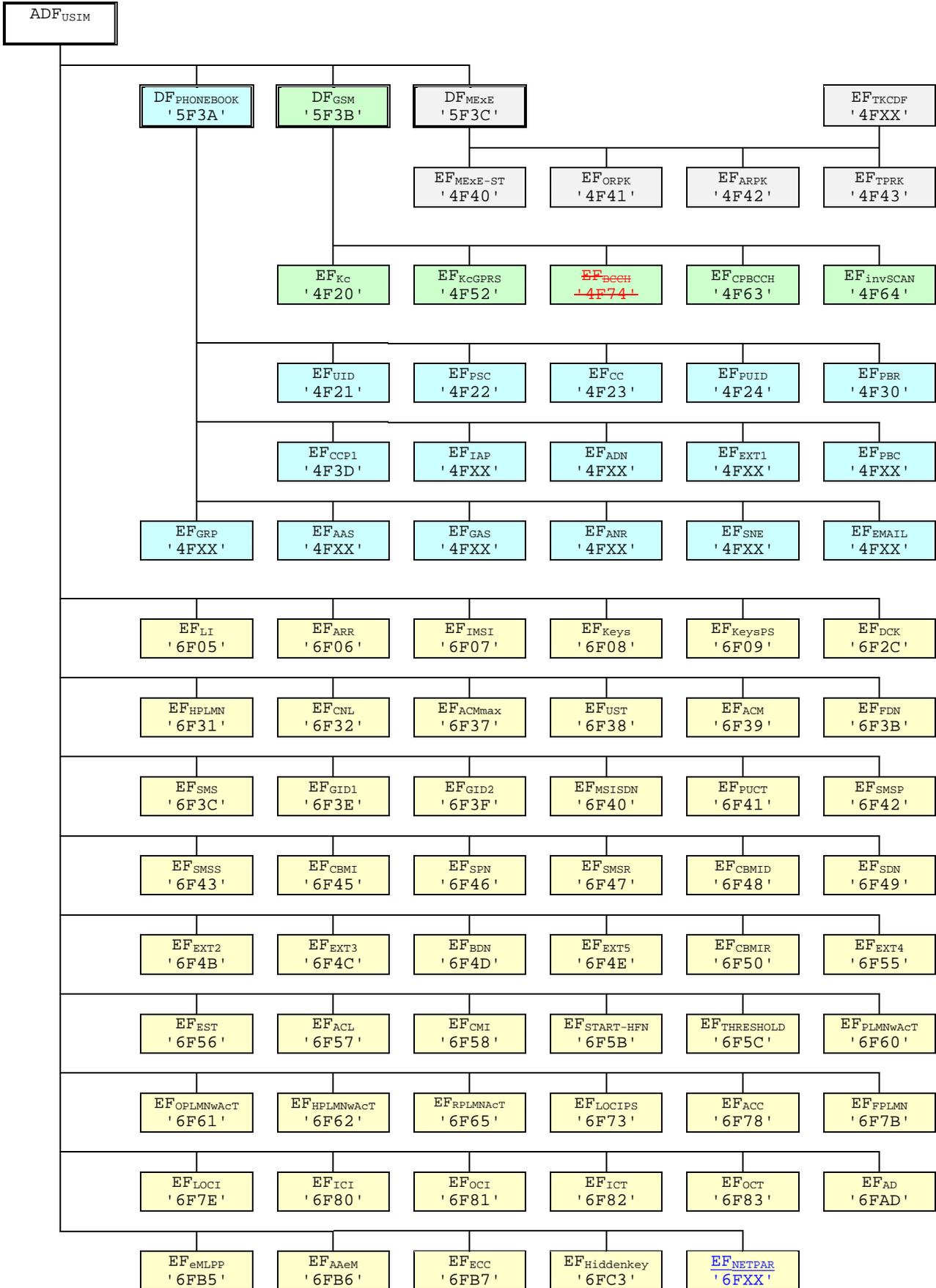


Figure 4.2: File identifiers and directory structures of USIM

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5.3.xx Network Parameter information

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

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

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
'4F21'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4F3D'	Capability configuration parameters 1	Yes
'4F75'	CPBCCCH 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
'6F3D'	Capability configuration parameters	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes
'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

File identification	Description	Change advised
'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
'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
'6F74'	BCCH	No
'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	
'6FXX'	Network Parameters	No
NOTE1: If EF _{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF _{LOC1} accordingly.		

Annex D (informative): Tags defined in 31.102

Tag	Name of Data Element	Usage
'D8'	Indicator for type 1 EFs (amount of records equal to master EF)	Phone Book Reference File (EF _{PBR})
'D9'	Indicator for type 2 EFs (EFs linked via the index administration file)	Phone Book Reference File (EF _{PBR})
'DA'	Indicator for type 3 EFs (EFs addressed inside a TLV object) The following are encapsulated under 'XZ': 'C0' EF _{ADN} data object 'C1' EF _{IAP} data object 'C2' EF _{ECT1} data object 'C3' EF _{SNE} data object 'C4' EF _{ANR} data object 'C5' EF _{PBC} data object 'C6' EF _{GRP} data object 'C7' EF _{AAS} data object 'C8' EF _{GAS} data object 'C9' EF _{UID} data object	Phone Book Reference File (EF _{PBR})
'DB'	Successful 3G authentication	Response to AUTHENTICATE
'DC'	Synchronisation failure	Response to AUTHENTICATE
'DD'	Access Point Name	APN Control List (EF _{ACL})
'81A0'	<u>GSM cell information</u> The following are encapsulated under 'A0': <u>'80' GSM Camping Frequency data object</u> <u>'81' GSM Neighbour Frequency Information data object</u>	<u>Network Parameters (EF_{NETPAR})</u>
'82A1'	<u>FDD cell information</u> The following are encapsulated under 'A1': <u>'80' FDD Intra Frequency data object</u> <u>'81' FDD Inter Frequency Information data object</u>	<u>Network Parameters (EF_{NETPAR})</u>
'83A2'	<u>TDD cell information</u> The following are encapsulated under 'A2': <u>'80' TDD Intra Frequency data object</u> <u>'81' TDD Inter Frequency Information data object</u>	<u>Network Parameters (EF_{NETPAR})</u>

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'
'4F21'	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
'4F3D'	Capability configuration parameters 1	'FF...FF'
'4F63'	CPBCCCH 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 FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F74'	BCCH	'FF...FF'
'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'
'6FXX'	Network 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 3G TS 24.008 [9].

Annex X (informative):

Structure of the Network parameters TLV objects

Structure of the GSM network parameter TLV object, $0 \leq m \leq 32$

Tag	Length	Tag	Length	BCCH Frequency downlink	Tag	Length	BCCH Neighbour Frequency 1	BCCH Neighbour Frequency 2		BCCH Neighbour Frequency m
'A0'		'80'	'02'		'81'					

Structure of the FDD network parameter TLV object, $0 \leq m \leq 32$

Tag	Length	Tag	Length	Intra Frequency downlink carrier	Primary Scrambling code 1	Primary Scrambling code m	Tag	Length	Inter Frequency downlink carrier	Primary Scrambling code n1
'A1'		'80'					'81'			

Structure of the TDD network parameter TLV object, $0 \leq m \leq 32$

Tag	Length	Tag	Length	Intra Frequency downlink carrier	Primary Scrambling code 1	Primary Scrambling code m	Tag	Length	Inter Frequency downlink carrier	Primary Scrambling code n1
'A2'		'80'					'81'			

H.2 List of SFI Values at the DF GSM Level

File Identification	SFI	Description
'4F20'	'01'	GSM Ciphering Key Kc
'4F52'	'02'	GPRS Ciphering Key KcGPRS
'4F74'	'03'	Broadcast Control Channel BCCH

All other SFI values are reserved for future use.

CHANGE REQUEST

⌘ **31.102 CR 064** ⌘ rev ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘	Storage of Network Parameters	
Source:	⌘	Gemplus	
Work item code:	⌘		Date: ⌘ 05.12.00
Category:	⌘	F	Release: ⌘ R99
		Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘	No storage of 3G network parameters has been specified in T3 31.102 so far, as clarifications with RAN2 have been ongoing.
Summary of change:	⌘	Introduction of EF_NETPAR to provide storage for the network parameters. Deletion of EF_BCCH under DF_GSM as these parameters now can be stored in EF_NETPAR.
Consequences if not approved:	⌘	TS 31.102 does not meet the requirements from RAN2

Clauses affected:	⌘	4.2.X; 4.4.3.3; 4.7; 5.3.xx; ; Annex A; Annex E; Annex H.2	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘
		<input type="checkbox"/> Test specifications	
		<input type="checkbox"/> O&M Specifications	
Other comments:	⌘		

4.2.X EF_{NETPAR} (Network Parameters)

This EF is FFS.

The EF provides a minimum storage capacity of 46 bytes.

<u>Identifier: '6Fxx'</u>		<u>Structure: transparent</u>		<u>Mandatory</u>	
<u>File size: X >= 46 bytes</u>			<u>Update activity: high</u>		
<u>Access Conditions:</u>					
<u>READ</u>		<u>PIN</u>			
<u>UPDATE</u>		<u>PIN</u>			
<u>DEACTIVATE</u>		<u>ADM</u>			
<u>ACTIVATE</u>		<u>ADM</u>			
<u>Bytes</u>	<u>Description</u>			<u>M/O</u>	<u>Length</u>
<u>1 - X</u>	<u>TLV object(s) containing GSM/FDD/TDD cell information</u>			<u>0</u>	

- Content is FFS

4.4.3.3 EF_{BCCH} (Broadcast Control Channels)

This EF contains information concerning the GSM BCCH according to TS 24.008 [9].

BCCH storage may reduce the extent of a User Equipment's search of GSM BCCH carriers when selecting a cell. The BCCH carrier lists in an UE shall be in accordance with the procedures specified in TS 24.008 [9]. The UE shall only store BCCH information from the System Information 2 message and not the 2bis extension message.

Identifier: '4F74'		Structure: transparent		Optional	
SFI: '03'					
File size: 16 bytes			Update activity: high		
Access Conditions:					
READ		PIN			
UPDATE		PIN			
DEACTIVATE		ADM			
ACTIVATE		ADM			
Bytes	Description			M/O	Length
1 to 16	BCCH information			M	16 bytes

— BCCH information:

Coding:

— the information is coded as octets 2-17 of the "neighbour cells description information element" in TS 24.008 [9].

4.7 Files of USIM...

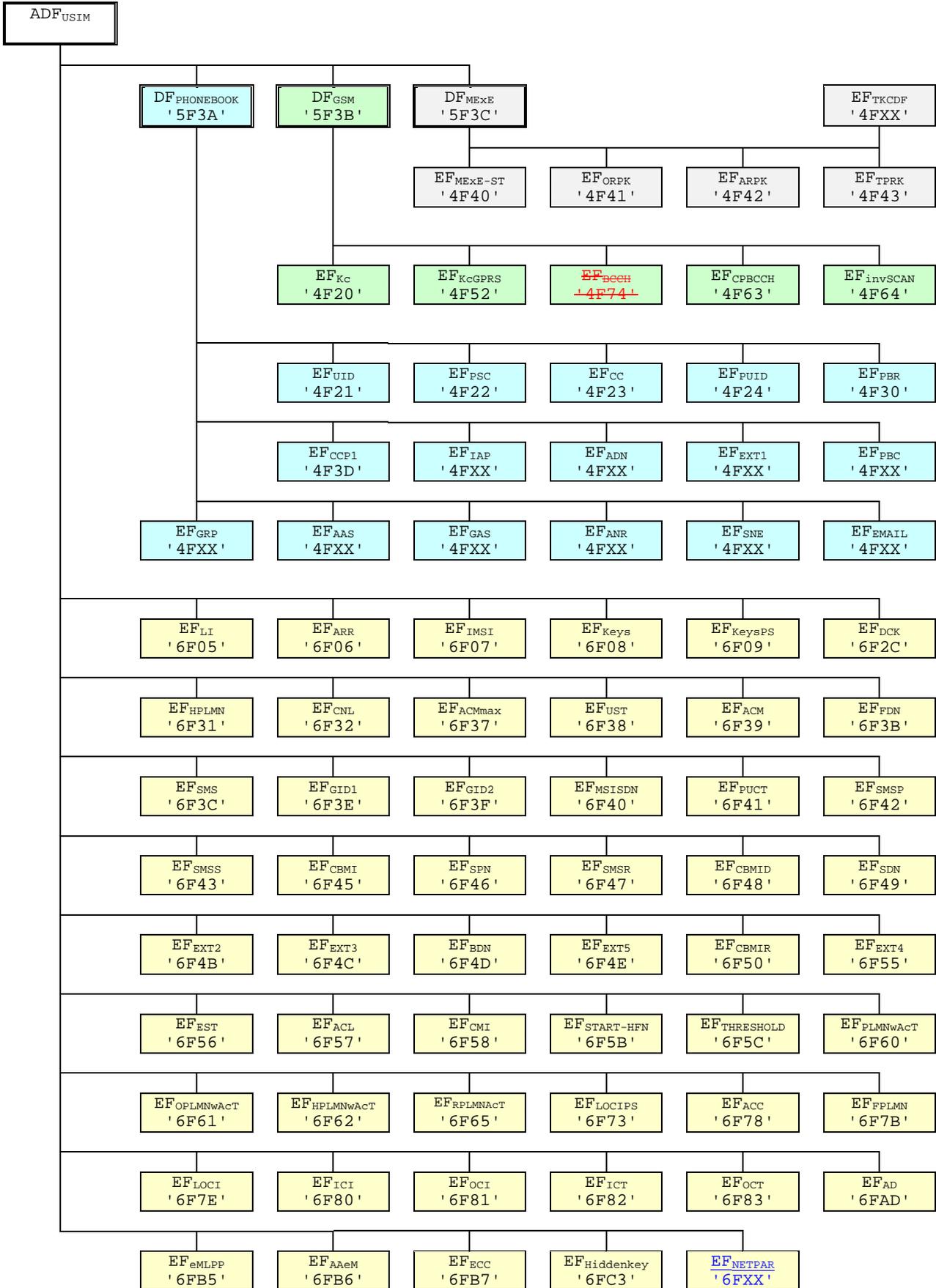


Figure 4.2: File identifiers and directory structures of USIM

|

5.3.xx Network Parameter information

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

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

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
'4F21'	Unique identifier	Yes
'4F22'	Phone book synchronisation counter	Yes
'4F23'	Change counter	Yes
'4F24'	Previous unique identifier	Yes
'4F30'	Phone book reference file	Yes
'4F3D'	Capability configuration parameters 1	Yes
'4F75'	CPBCCCH 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
'6F3D'	Capability configuration parameters	Yes
'6F3E'	Group identifier level 1	Yes
'6F3F'	Group identifier level 2	Yes
'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

File identification	Description	Change advised
'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
'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
'6F74'	BCCH	No
'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	
'6FXX'	Network Parameters	No
NOTE1: If EF _{IMSI} is changed, the UICC should issue REFRESH as defined in TS 31.111 and update EF _{LOC1} 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'
'4F21'	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
'4F3D'	Capability configuration parameters 1	'FF...FF'
'4F63'	CPBCCCH 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 FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F74'	BCCH	'FF...FF'
'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'
'6FXX'	Network 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 3G TS 24.008 [9].

H.2 List of SFI Values at the DF GSM Level

File Identification	SFI	Description
'4F20'	'01'	GSM Ciphering Key Kc
'4F52'	'02'	GPRS Ciphering Key KcGPRS
'4F74'	'03'	Broadcast Control Channel BCCH

All other SFI values are reserved for future use.