**3GPP TSG SA WG3 Security — S3#17** **S3-010013**

**27 February - 02 March, 2001**

**Gothenburg, Sweden**

---

3GPP T3 Meeting #17 ***Tdoc T3-010115***
Berlin, Germany, 17th January, 2001

## Liaison Statement

**From:** **T3**

**To:** **S1, S3**

**CC:** **TSG-T and T2**

**Subject:** **Introduction of Operator PLMN Name List for 3G Rel-4**

**attached:** **T3-010102 (draft CR to 31.102 "Introduction of the HPLMN Network Name feature from the Common PCN Handset Specification (CPHS)"**

**and**

**T3-010098 (draft CR to 31.102 "Introduction of the Operator PLMN List")**

(Contact: Preet Ahluwalia ahluwalia@tri.sbc.com , Darren Thompson darren.Thompson@voicestream.com )

T3 has drafted the attached CR, Tdoc T3-010102, ”Introduction of HPLMN Network Name feature from the Common PCN Handset Specification (CPHS)” as a part of the CPHS incorporation into 3G (Work Item UICC-CPHS) for the HPLMN name display.

Currently the PLMN name is read from the ME’s own internal list (based upon GSMA PRD SE.13) and is displayed when the subscriber is registered on a PLMN. The attached CR, T3-010102, as part of the introduction of the CPHS features, introduces the ability for a network operator to define a USIM file that contains a name to be displayed when on the HPLMN. The benefit of having this information on the USIM is that it is provided by the network operator and its contents can therefore be modified as and when required.

During the T3 meeting, it was felt that the solution for the HPLMN network name could be made such that it would not restrict any future improvements for network display purposes i.e. by allowing the capability to contain multiple network names. This would be an additional feature.

This requirement for additional network names is required because of mergers, acquisitions and even commercial agreements in the present consolidating industry. As an example, there are situations today where a network operator can have multiple Mobile Network Codes (MNCs) within a single Mobile Country Code (MCC) or even within different MCCs. This is especially true in the USA.

S1 are invited to define the service requirements to allow an operator to present his network name on the ME when roaming onto other networks in which he has a commercial interest.

Tdoc T3-010098, proposes changes to the relevant specifications which would allow this but may require further study by T3 to address any security or commercial requirements raised by S1 or S3. Before proceeding, T3 are seeking guidance from S1. The next T3 meeting will take place on the 1 - 2 March, 2001

T3 thanks S1 for their cooperation in assisting with this matter.

**3GPP T3 (USIM) Meeting #17**
**Berlin, Germany, 15 - 17 January, 2001**

***Tdoc T3-010102***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **31.102** **CR** **CR-Num** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

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

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

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Introduction of the HPLMN Network Name feature from the Common PCN Handset Specification (CPHS) |
| ***Source:*** | ⌘ | T3 |
| ***Work item code:*** | ⌘ | UICC1-CPHS |
| ***Date:*** | ⌘ | 17th January 2001 |
| ***Category:*** | ⌘ | **B** |
| ***Release:*** | ⌘ | *REL-4 (Release 4)* |

*Use one 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 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)*

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | To provide the USIM with CPHS functionality for mailbox numbers, operator name and indicator status. |
| ***Summary of change:*** | ⌘ | The following changes are proposed:<br><br>File $EF_{PNN}$(PLMN Network Name) is added to reflect the CPHS file $EF_{OpName}$ (PLMN Operator Name)<br><br>File $EF_{UST}$ is also updated to include the above files. |
| ***Consequences if not approved:*** | ⌘ | Initial 3G customers will have a reduced level of service. Possibly causes disjointed operation of mail and messaging services. Prolongs the need to keep proprietary CPHS in handsets |

| | | |
|---|---|---|
| ***Clauses affected:*** | ⌘ | 4.2.8, 4.2.x, 4.7 |
| ***Other specs Affected:*** | ⌘ | [ ] Other core specifications<br>[ ] Test specifications<br>[ ] O&M Specifications |
| | ⌘ | |
| ***Other comments:*** | ⌘ | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 4.2.8 $EF_{UST}$ (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: | Packet Switched Domain |
| | 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°xx: | PLMN Network Name |

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:

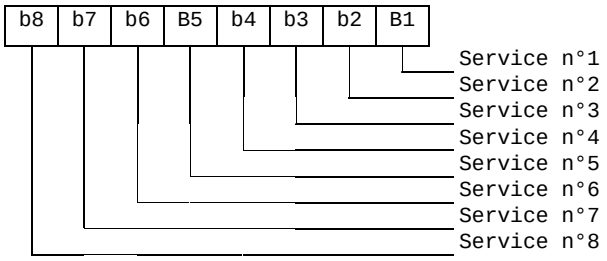
1 bit is used to code each service:

bit = 1: service available;

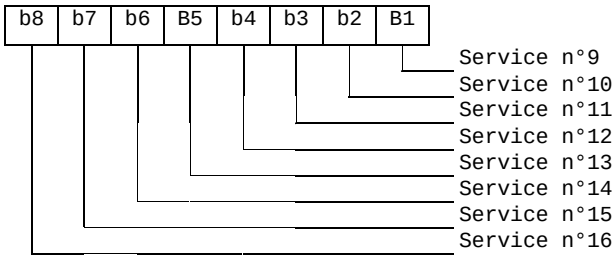
bit = 0: service not available.

- 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 $EF_{PNN}$ (PLMN Network Name)

This EF contains the full and short form versions of the network name for the registered PLMN. The ME shall use these versions in place of it's own versions of the network name for the PLMN (stored in the ME's memory list), and also in place of the versions of the network name received when registered to the PLMN, as defined by 3G TS 24.008 [9].

The first record in this EF is used for the default network name when registered to the HPLMN. Subsequent records are RFU.

| Identifier: '6FXX' | Structure: linear fixed | Optional |
|---|---|---|
| Record length: X+Y+Z bytes | Update activity: low | |

Access Conditions:

| | |
|---|---|
| READ | ALWAYS |
| UPDATE | ADM |
| ACTIVATE | ADM |
| DEACTIVATE | ADM |

| Bytes | Description | M/O | Length |
|---|---|---|---|
| 1 to X | Full name for network information element | M | X bytes |
| X+1 to X+Y | Short name for network information element | O | Y bytes |
| X+Y+1 to X+Y+Z | RFU | O | Z bytes |

Full name for network

For contents and coding use the Network Name information element, as defined in TS 24.008[9]. The length contained in the information element should be used to determine the value of X.

Short name for network

For contents and coding use the Network Name information element, as defined in TS 24.008 [9]. The length contained in the information element should be used to determine the value of Y.

# 4.7 Files of USIM

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

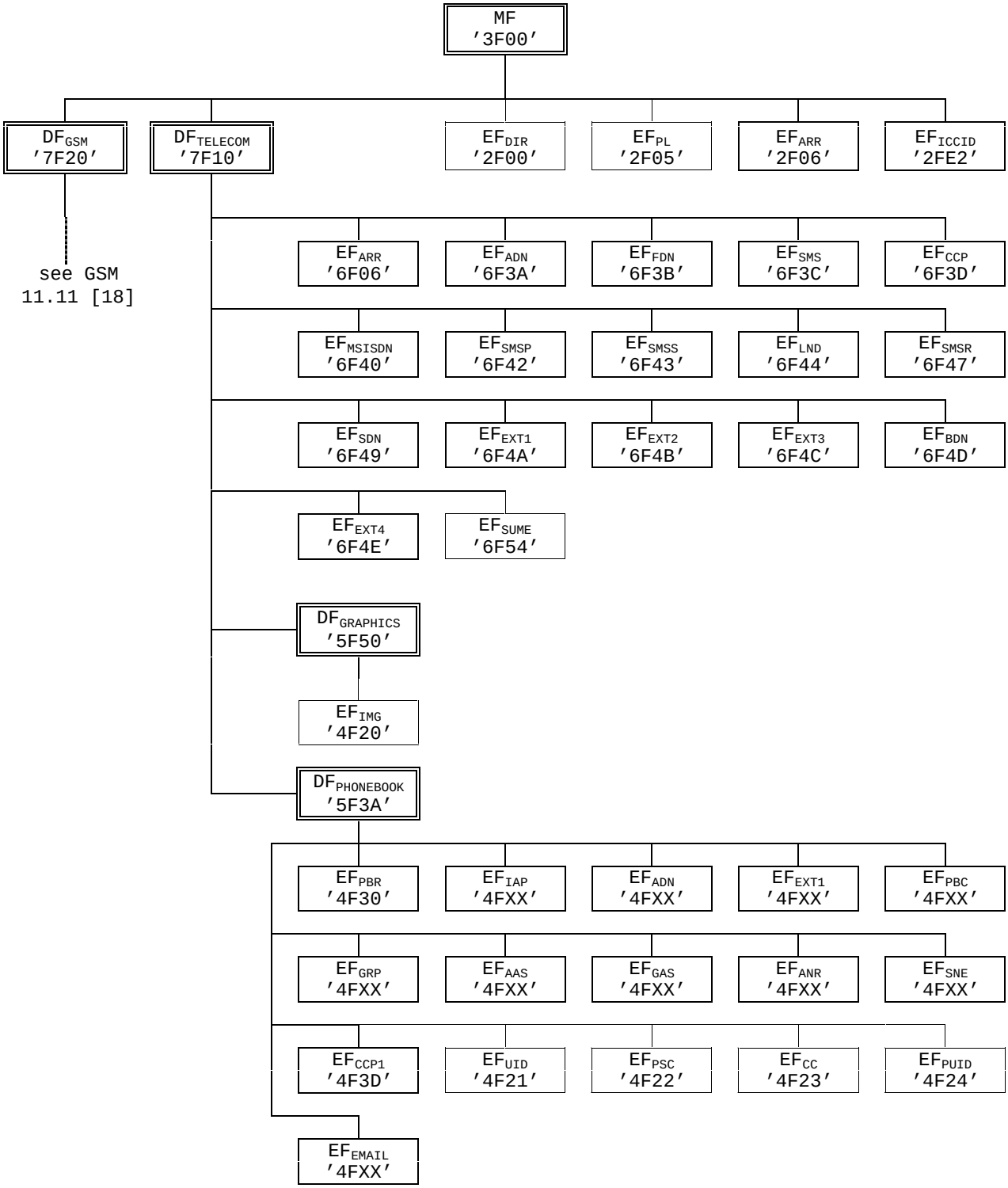



**Figure 4.1: File identifiers and directory structures of UICC**

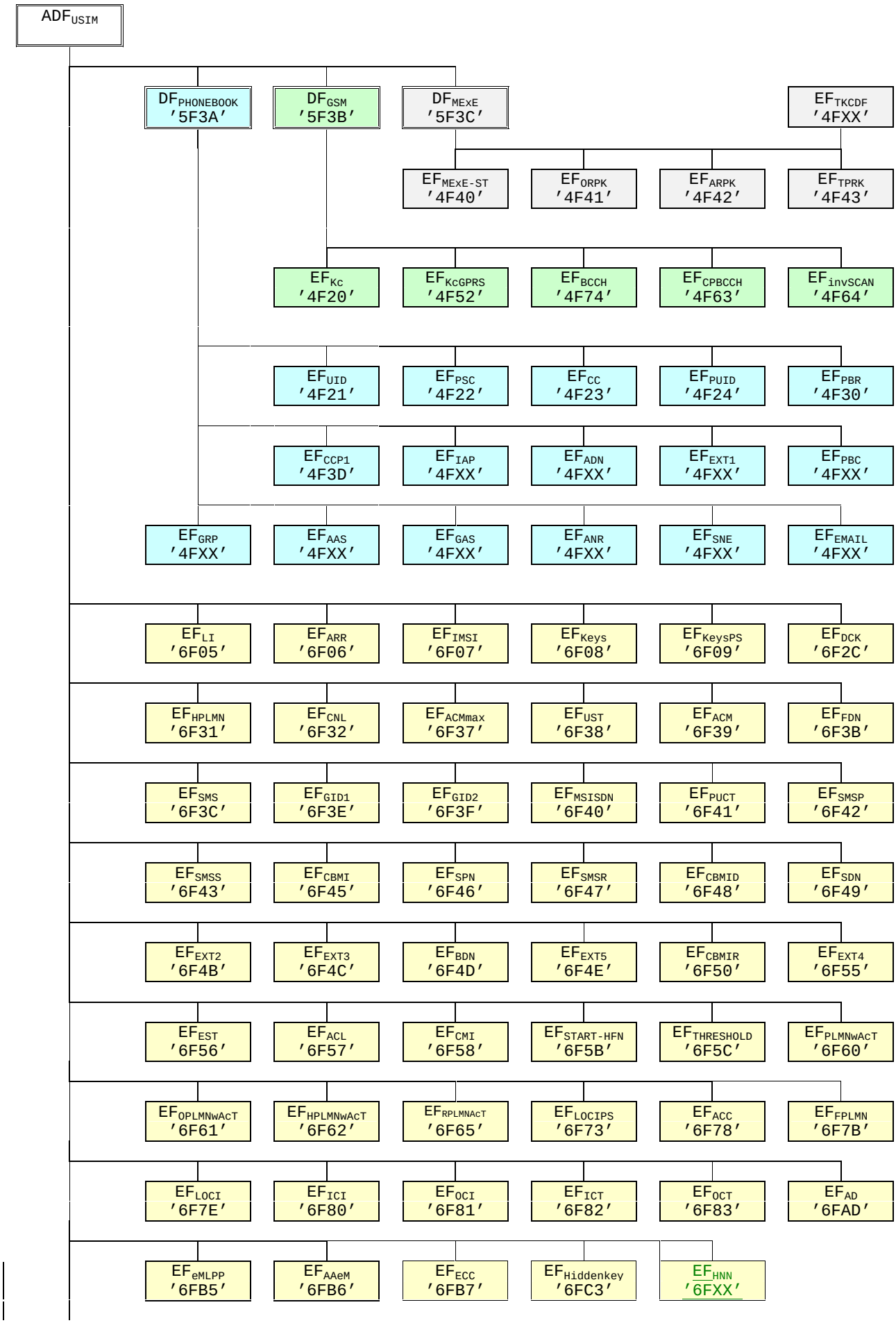

ADF USIM
DF PHONEBOOK '5F3A'
DF GSM '5F3B'
DF MExE '5F3C'
EF TKCDF '4FXX'
EF MExE-ST '4F40'
EF ORPK '4F41'
EF ARPK '4F42'
EF TPRK '4F43'
EF Kc '4F20'
EF KcGPRS '4F52'
EF BCCH '4F74'
EF CPBCCH '4F63'
EF invSCAN '4F64'
EF UID '4F21'
EF PSC '4F22'
EF CC '4F23'
EF PUID '4F24'
EF PBR '4F30'
EF CCP1 '4F3D'
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 LOCIPS '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 HNN '6FXX'

**Figure 4.2: File identifiers and directory structures of USIM**

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

**Tdoc T3-010098**

CR-Form-v3

# CHANGE REQUEST

⌘ **31.102** **CR** **CR-Num** ⌘ rev **-** ⌘ Current version: **3.4.0** ⌘

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

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

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Introduction of the Operator PLMN List |
| ***Source:*** | ⌘ | One 2 One, Orange, VoiceStream and Cingular |
| ***Work item code:*** | ⌘ | ***Date:*** ⌘ 16th January 2001 |
| ***Category:*** | ⌘ **B** | ***Release:*** ⌘ *REL-4 (Release 4)* |

*Use one 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 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)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | To provide the USIM with enhanced operator name display functionality |
| ***Summary of change:*** | ⌘ | The following changes are proposed:<br><br>Addition of a Service to indicate support for the $EF_{OPL}$ (Operator PLMN List)<br><br>File $EF_{OPL}$ (Operator PLMN List) is added to indicate for which Location Area Identities a required network name is to be displayed |
| ***Consequences if not approved:*** | ⌘ | The displayed operator name may not accurately reflect the desired operator name i.e. due to mergers, aquistitions or service agreements. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 4.2.8, 4.2.xx (new), 4.7 | | |
| ***Other specs Affected:*** | ⌘ | [ ] Other core specifications<br>[ ] Test specifications<br>[ ] O&M Specifications | ⌘ | |
| ***Other comments:*** | ⌘ | | | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 4.2.8 $EF_{UST}$ (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: | Packet Switched Domain |
| | 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°XX: | Operator PLMN List |

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:

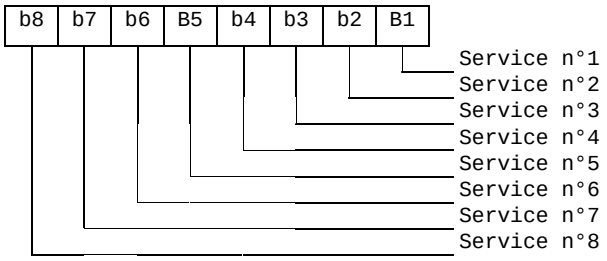
1 bit is used to code each service:

bit = 1: service available;

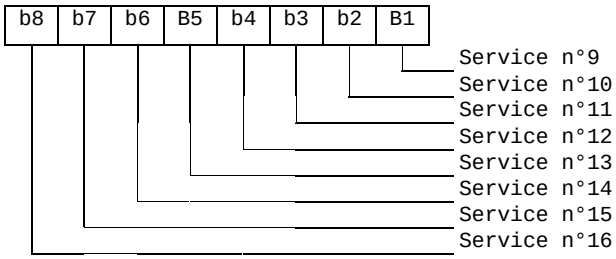
bit = 0: service not available.

- 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 $EF_{OPL}$ (Operator PLMN List)

This EF contains a list of Location Area Information (LAI) identities and other related parameters that are used to associate a specific operator name contained in $EF_{PNN}$ for the LAI of the registered PLMN.

| Identifier: '6FXX' | Structure: linear fixed | Optional |
|---|---|---|
| Record length:7 bytes | Update activity: low | |

Access Conditions:

| | |
|---|---|
| READ | PIN |
| UPDATE | ADM |
| DEACTIVATE | ADM |
| ACTIVATE | ADM |

| Bytes | Description | M/O | Length |
|---|---|---|---|
| 1 to 5 | Location Area Identity | M | 5 bytes |
| 6 | PLMN Network Name Record Identifier | M | 1 byte |
| 7 | RFU | O | 1 byte |

- Location Area Identity

Contents:

Location Area Information, this comprises of the MCC, MNC and LAC

Coding: according to 3G TS 24.008 [9]

A BCD value of 'D' in any of the MCC and/or MNC digits shall be used to indicate a "wild" value for that corresponding MCC/MNC digit

A value of 'FFFF' in the LAC shall be used to indicate a "wild" value for the LAC

- PLMN Network Name Record Identifier

Contents:

identifier of operator name to be displayed

Coding:

A value of '00' indicates that the name is to be taken from the ME based operator names list as per GSMA SE.13

A value in the range '01' to 'FF' indicates the record number in $EF_{PNN}$ that shall be displayed as the registered PLMN name

# 4.7 Files of USIM

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

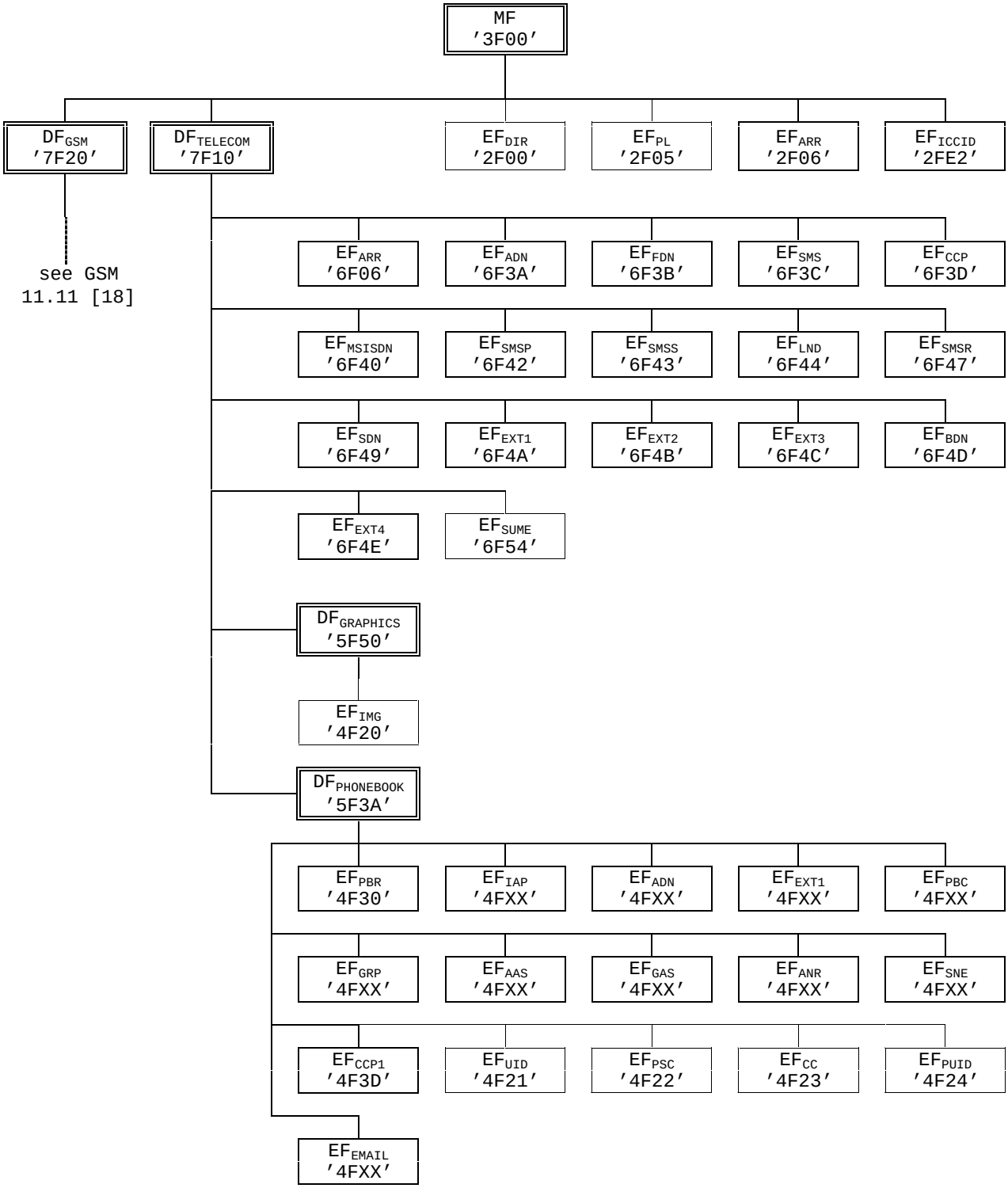



**Figure 4.1: File identifiers and directory structures of UICC**

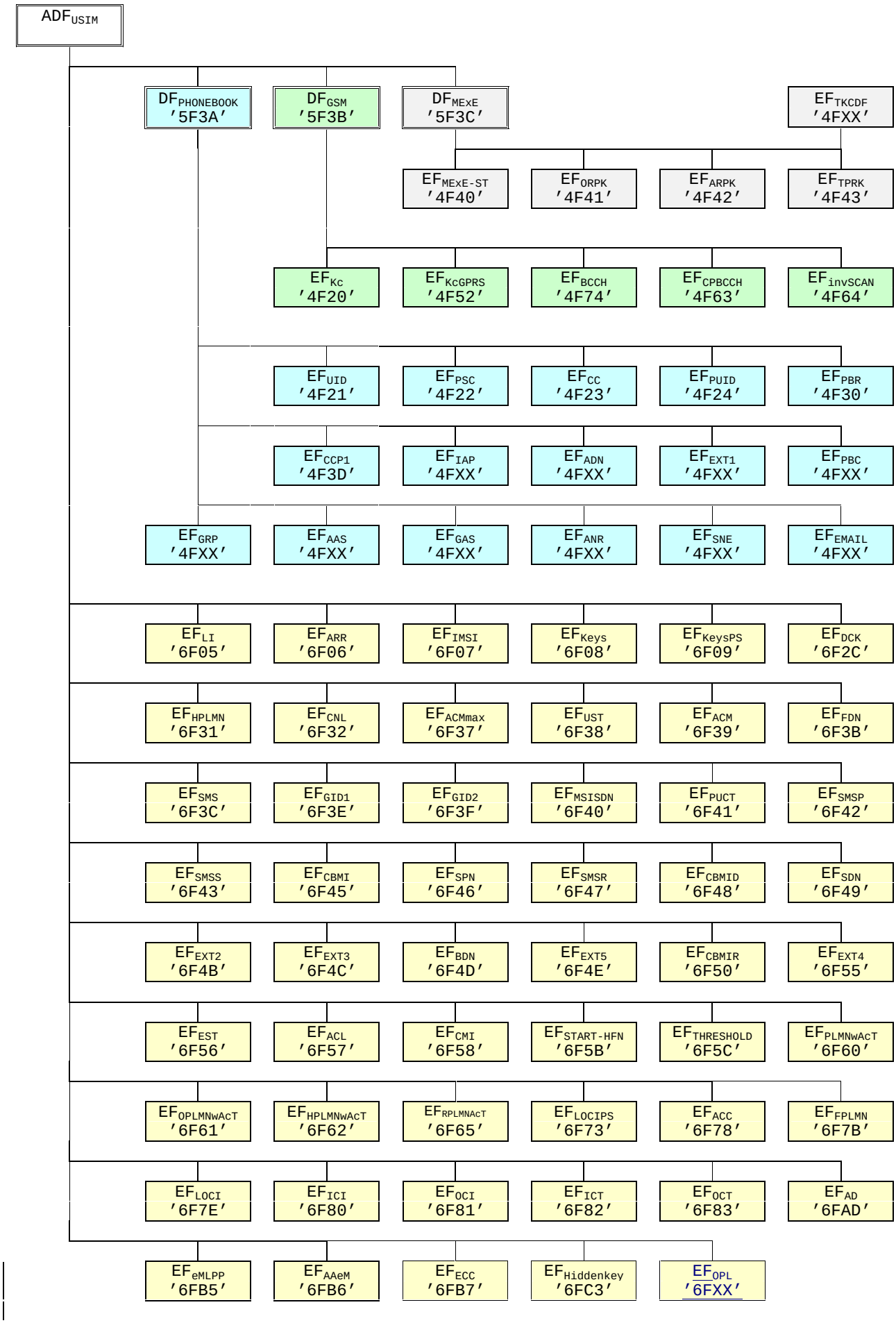

ADF USIM
DF PHONEBOOK '5F3A'
DF GSM '5F3B'
DF MExE '5F3C'
EF TKCDF '4FXX'
EF MExE-ST '4F40'
EF ORPK '4F41'
EF ARPK '4F42'
EF TPRK '4F43'
EF Kc '4F20'
EF KcGPRS '4F52'
EF BCCH '4F74'
EF CPBCCH '4F63'
EF invSCAN '4F64'
EF UID '4F21'
EF PSC '4F22'
EF CC '4F23'
EF PUID '4F24'
EF PBR '4F30'
EF CCP1 '4F3D'
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 LOCIPS '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 OPL '6FXX'

**Figure 4.2: File identifiers and directory structures of USIM**

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