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

Tdoc TP-030248

Source: T3

Title: CRs to TS 51.011: Specification of the SIM ME Interface

Document for: Approval

This document contains the following change requests:

Spec	CR	Rev	Phase	Subject	Cat	new ver.	Doc-2nd-Level
51.011	027	-	Rel-4	Correction to procedures for service no 21, 22 and 23	F	4.10.0	T3-030949
51.011	028	-	Rel-4	Alignment of EF-HPLMN Search Period with 22.011 and 23.122	A	4.10.0	T3-031018
51.011	029	-	Rel-4	Removal of references to TS 02.07	F	4.10.0	T3-031031
51.011	030	-	Rel-4	Removal of references to TS 04.08	F	4.10.0	T3-031032

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

Tdoc ⌘T3-030949

CR-Form-v7

CHANGE REQUEST

⌘ **51.011** **CR** **027** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	Correction to procedures for service no 21, 22 and 23
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	19/11/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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:	⌘	Three procedrues are referred to wrong service no.
Summary of change:	⌘	The wrong service no.s are corrected.
Consequences if not approved:	⌘	The wrong references remain on the specification. It leads to wrong implementation.
Clauses affected:	⌘	11.5.10, 11.5.11, 11.5.12

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

⌘

Other comments: ⌘

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

10.3.7 EF_{SST} (SIM service table)

This EF indicates which services are allocated, and whether, if allocated, the service is activated. If a service is not allocated or not activated in the SIM, the ME shall not select this service.

Identifier: '6F38'	Structure: transparent	Mandatory
File size: X bytes, X ≥ 2	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	Services n°1 to n°4	M	1 byte
2	Services n°5 to n°8	M	1 byte
3	Services n°9 to n°12	O	1 byte
4	Services n°13 to n°16	O	1 byte
5	Services n°17 to n°20	O	1 byte
6	Services n°21 to n°24	O	1 byte
7	Services n°25 to n°28	O	1 byte
8	Services n°29 to n°32	O	1 byte
etc.			
X	Services (4X-3) to (4X)	O	1 byte

-Services

Contents:

Service n°1 : CHV1 disable function
Service n°2 : Abbreviated Dialling Numbers (ADN)
Service n°3 : Fixed Dialling Numbers (FDN)
Service n°4 : Short Message Storage (SMS)
Service n°5 : Advice of Charge (AoC)
Service n°6 : Capability Configuration Parameters (CCP)
Service n°7 : PLMN selector
Service n°8 : RFU
Service n°9 : MSISDN
Service n°10: Extension1
Service n°11: Extension2
Service n°12: SMS Parameters
Service n°13: Last Number Dialled (LND)
Service n°14: Cell Broadcast Message Identifier
Service n°15: Group Identifier Level 1
Service n°16: Group Identifier Level 2
Service n°17: Service Provider Name
Service n°18: Service Dialling Numbers (SDN)
Service n°19: Extension3
Service n°20: RFU
Service n°21: VGCS Group Identifier List (EF_{VGCS} and EF_{VGCSS})
Service n°22: VBS Group Identifier List (EF_{VBS} and EF_{VBSS})
Service n°23: enhanced Multi-Level Precedence and Pre-emption Service
Service n°24: Automatic Answer for eMLPP
Service n°25: Data download via SMS-CB
Service n°26: Data download via SMS-PP
Service n°27: Menu selection
Service n°28: Call control
Service n°29: Proactive SIM
Service n°30: Cell Broadcast Message Identifier Ranges
Service n°31: Barred Dialling Numbers (BDN)
Service n°32: Extension4
Service n°33: De-personalization Control Keys
Service n°34: Co-operative Network List
Service n°35: Short Message Status Reports
Service n°36: Network's indication of alerting in the MS
Service n°37: Mobile Originated Short Message control by SIM
Service n°38: GPRS
Service n°39: Image (IMG)
Service n°40: SoLSA (Support of Local Service Area)
Service n°41: USSD string data object supported in Call Control

…

11.5.10 Voice Group Call Services

Requirement: Service n°21~~18~~ "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}.

11.5.11 Voice Broadcast Services

Requirement: Service n°22~~19~~ "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}.

11.5.12 Enhanced Multi Level Pre-emption and Priority Service

Requirement: Service n°23~~18~~ "allocated and activated".

Enhanced Multi Level Pre-emption and Priority

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

Automatic Answer on eMLPP service

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

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

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Dallas, USA, 18-21 November 2003

Tdoc ⌘T3-031018

CR-Form-v7

CHANGE REQUEST

⌘ **51.011** **CR** **028** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	Alignment of EF-HPLMN Search Period with 22.011 and 23.122
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	20/11/03
Category:	⌘	**A**
Release:	⌘	Rel-4

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

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:	⌘	To align the periodic search procedure with a change made to R99 versions of 22.011 and 23.122
Summary of change:	⌘	The CN and SA specifications were changed so that a periodic search also included any higher priority PLMNs and not just the HPLMN. At present, the T3 specifications still refer to the HPLMN only.
Consequences if not approved:	⌘	Mis-alignment between the T3, CN and SA specifications
Clauses affected:	⌘	10.3.5, 10.7, 11, 11.2.1, 11.4.4, Annex D, Annex I

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

Other comments: ⌘

How to create CRs using this form:
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Below is a brief summary:

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

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downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

10.3.5 EF_{HPPLMN} (Highest Priority PLMN search period)

This EF contains the interval of time between searches for the highest priority ~~H~~PLMN (see TS 22.011 [5]).

Identifier: '6F31'	Structure: transparent	Mandatory
File size: 1 byte	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	Time interval	M	1 byte

- Time interval

  Contents:

  The time interval between two searches.

  Coding:

  The time interval is coded in integer multiples of n minutes. The range is from n minutes to a maximum value. The value '00' indicates that no attempts shall be made to search for any higher priority ~~the~~ ~~H~~PLMN. The encoding is:

  - '00': No higher priority ~~H~~PLMN search attempts
  - '01': n minutes
  - '02': 2n minutes
  - : :
  - 'YZ': (16Y+Z)n minutes (maximum value)

  All other values shall be interpreted by the ME as a default period.

For specification of the integer timer interval n, the maximum value and the default period refer to TS 22.011 [5].

10.7 Files of GSM

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

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

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

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

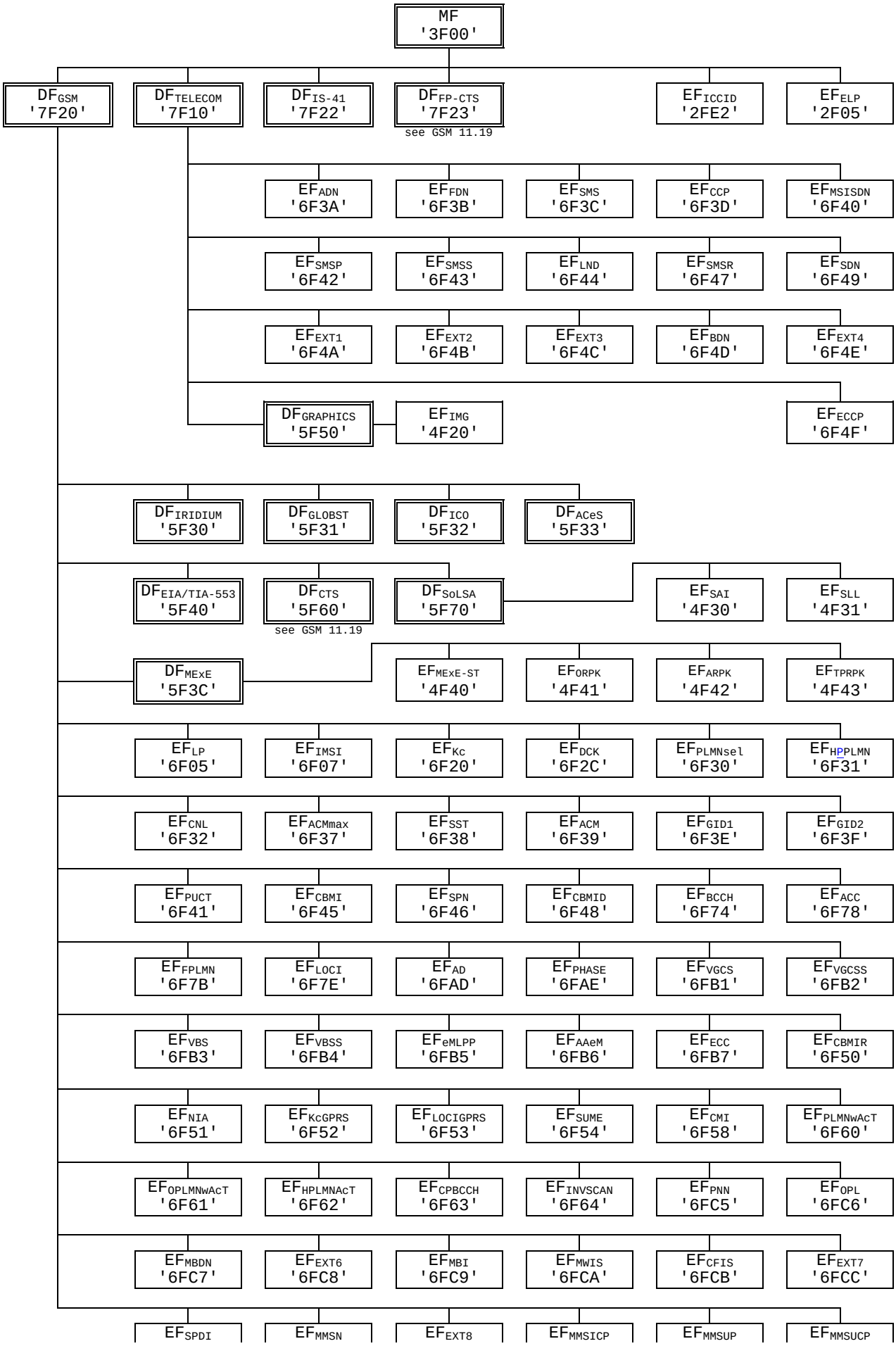

MF '3F00'
DFGSM '7F20'
DFTELECOM '7F10'
DFIS-41 '7F22'
DFFP-CTS '7F23'
see GSM 11.19
EFICCID '2FE2'
EFELP '2F05'
EFADN '6F3A'
EFFDN '6F3B'
EFSMS '6F3C'
EFCCP '6F3D'
EFMSISDN '6F40'
EFSMSP '6F42'
EFSMSS '6F43'
EFLND '6F44'
EFSMSR '6F47'
EFSDN '6F49'
EFEXT1 '6F4A'
EFEXT2 '6F4B'
EFEXT3 '6F4C'
EFBDN '6F4D'
EFEXT4 '6F4E'
DFGRAPHICS '5F50'
EFIMG '4F20'
EFECCP '6F4F'
DFIRIDIUM '5F30'
DFGLOBST '5F31'
DFICO '5F32'
DFACeS '5F33'
DFEIA/TIA-553 '5F40'
DFCTS '5F60'
see GSM 11.19
DFSoLSA '5F70'
EFSAI '4F30'
EFSLL '4F31'
DFMExE '5F3C'
EFMExE-ST '4F40'
EFORPK '4F41'
EFARPK '4F42'
EFTPRPK '4F43'
EFLP '6F05'
EFIMSI '6F07'
EFKc '6F20'
EFDCK '6F2C'
EFPLMNsel '6F30'
EFHPPLMN '6F31'
EFCNL '6F32'
EFACMmax '6F37'
EFSST '6F38'
EFACM '6F39'
EFGID1 '6F3E'
EFGID2 '6F3F'
EFPUCT '6F41'
EFCBMI '6F45'
EFSPN '6F46'
EFCBMID '6F48'
EFBCCH '6F74'
EFACC '6F78'
EFFPLMN '6F7B'
EFLOCI '6F7E'
EFAD '6FAD'
EFPHASE '6FAE'
EFVGCS '6FB1'
EFVGCSS '6FB2'
EFVBS '6FB3'
EFVBSS '6FB4'
EFeMLPP '6FB5'
EFAAeM '6FB6'
EFECC '6FB7'
EFCBMIR '6F50'
EFNIA '6F51'
EFKcGPRS '6F52'
EFLOCIGPRS '6F53'
EFSUME '6F54'
EFCMI '6F58'
EFPLMNwAcT '6F60'
EFOPLMNwAcT '6F61'
EFHPLMNAcT '6F62'
EFCPBCCH '6F63'
EFINVSCAN '6F64'
EFPNN '6FC5'
EFOPL '6FC6'
EFMBDN '6FC7'
EFEXT6 '6FC8'
EFMBI '6FC9'
EFMWIS '6FCA'
EFCFIS '6FCB'
EFEXT7 '6FCC'
EFSPDI
EFMMSN
EFEXT8
EFMMSICP
EFMMSUP
EFMMSUCP

Figure 8: File identifiers and directory structures of GSM

11 Application protocol

When involved in GSM administrative management operations, the SIM interfaces with appropriate terminal equipment. These operations are outside the scope of the present document.

When involved in GSM network operations the SIM interfaces with an ME with which messages are exchanged. A message can be a command or a response.

- A GSM command/response pair is a sequence consisting of a command and the associated response.
- A GSM procedure consists of one or more GSM command/response pairs which are used to perform all or part of an application-oriented task. A procedure shall be considered as a whole, that is to say that the corresponding task is achieved if and only if the procedure is completed. The ME shall ensure that, when operated according to the manufacturer's manual, any unspecified interruption of the sequence of command/response pairs which realize the procedure, leads to the abortion of the procedure itself.
- A GSM session of the SIM in the GSM application is the interval of time starting at the completion of the SIM initialization procedure and ending either with the start of the GSM session termination procedure, or at the first instant the link between the SIM and the ME is interrupted.

During the GSM network operation phase, the ME plays the role of the master and the SIM plays the role of the slave.

The SIM shall execute all GSM and SIM Application Toolkit commands or procedures in such a way as not to jeopardise, or cause suspension, of service provisioning to the user. This could occur if, for example, execution of the RUN GSM ALGORITHM is delayed in such a way which would result in the network denying or suspending service to the user.

Some procedures at the SIM/ME interface require MMI interactions. The descriptions hereafter do not intend to infer any specific implementation of the corresponding MMI. When MMI interaction is required, it is marked "MMI" in the list given below.

Some procedures are not clearly user dependent. They are directly caused by the interaction of the MS and the network. Such procedures are marked "NET" in the list given below.

Some procedures are automatically initiated by the ME. They are marked "ME" in the list given below.

The list of procedures at the SIM/ME interface in GSM network operation is as follows:

General Procedures:

- Reading an EF ME
- Updating an EF ME
- Increasing an EF ME

SIM management procedures:

- SIM initialization ME
- GSM session termination ME
- Emergency call codes request ME
- Extended language preference request ME
- Language preference request ME
- Administrative information request ME
- SIM service table request ME

- SIM phase request ME

CHV related procedures:

- CHV verification MMI
- CHV value substitution MMI
- CHV disabling MMI
- CHV enabling MMI
- CHV unblocking MMI

GSM security related procedures:

- GSM algorithms computation NET
- IMSI request NET
- Access control information request NET
- Highest Priority PLMN search period request NET
- Location Information NET
- GPRS Location Information NET
- Cipher key NET
- GPRS Cipher key NET
- BCCH information NET
- Forbidden PLMN information NET
- LSA information NET

11.2.1 SIM initialization

After SIM activation (see clause 4.3.2), the ME selects the Dedicated File DF_{GSM} and optionally attempts to select EF_{ECC} If EF_{ECC} is available, the ME requests the emergency call codes.

The ME requests the Extended Language Preference. The ME only requests the Language Preference (EF_{LP}) if at least one of the following conditions holds:

- EF_{PL} is not available;
- EF_{PL} does not contain an entry corresponding to a language specified in ISO 639[30];
- the ME does not support any of the languages in EF_{PL}.

If both EFs are not available or none of the languages in the EFs is supported then the ME selects a default language. It then runs the CHV1 verification procedure.

If the CHV1 verification procedure is performed successfully, the ME then runs the SIM Phase request procedure.

For a SIM requiring PROFILE DOWNLOAD, then the ME shall perform the PROFILE DOWNLOAD procedure in accordance with TS 51.014 [27]. When BDN is enabled on a SIM, the PROFILE DOWNLOAD procedure is used to indicate to the SIM whether the ME supports the "Call Control by SIM" facility. If so, then the SIM is able to allow the REHABILITATE command to rehabilitate EF_{IMSI} and EF_{LOCI}.

If the ME detects a SIM of Phase 1, it shall omit the following procedures relating to FDN and continue with the Administrative Information request. The ME may omit procedures not defined in Phase 1 such as Highest Priority PLMN Search Period request.

For a SIM of Phase 2 or greater, GSM operation shall only start if one of the two following conditions is fulfilled:

- if EF_{IMSI} and EF_{LOCI} are not invalidated, the GSM operation shall start immediately;
- if EF_{IMSI} and EF_{LOCI} are invalidated, the ME rehabilitates these two EFs.

  MEs without FDN capability but with Call control by SIM facility shall not rehabilitate EF_{IMSI} and/or EF_{LOCI} if FDN is enabled in the SIM and therefore have no access to these EFs. GSM operation will therefore be prohibited;

  MEs without FDN capability and without Call control by SIM facility shall not rehabilitate EF_{IMSI} and/or EF_{LOCI} and therefore have no access to these EFs. GSM operation will therefore be prohibited.

  It is these mechanisms which are used for control of services n°3 and n°31 by the use of SIMs for these services which always invalidate these two EFs at least before the next command following selection of either EF.

NOTE: When FDN and BDN are both enabled, and if the ME supports FDN but does not support the Call control by SIM facility, the rehabilitation of EF_{IMSI} and EF_{LOCI} will not be successful because of a restriction mechanism of the REHABILITATE command linked to the BDN feature.

When EF_{IMSI} and EF_{LOCI} are successfully rehabilitated, if the FDN capability procedure indicates that:

i) FDN is allocated and activated in the SIM; and FDN is set "enabled", i.e. ADN "invalidated" or not activated; and the ME supports FDN; or

ii) FDN is allocated and activated in the SIM; and FDN is set "disabled", i.e. ADN "not invalidated"; or

iii) FDN is not allocated or not activated;

then GSM operation shall start.

In all other cases GSM operation shall not start.

Afterwards, the ME runs the following procedures, subject to the service being supported both by the ME and the SIM:

- Administrative Information request;
- SIM Service Table request;

- IMSI request;
- Access Control request;
- Highest Priority PLMN Search Period request;
- Investigation scan request;
- PLMN selector request;
- HPLMN Selector with Access Technology request;
- User controlled PLMN Selector with Access Technology request;
- Operator controlled PLMN Selector with Access Technology request;
- Location Information request;
- GPRS Location Information request;
- Cipher Key request;
- GPRS Cipher Key request;
- BCCH information request;
- CPBCCH information request;
- Forbidden PLMN request;
- LSA information request;
- CBMID request;
- Depersonalisation Control Keys request;
- Network's indication of alerting request.

If the SIM service table indicates that the proactive SIM service is active, then from this point onwards, the ME, if it supports the proactive SIM service, shall send STATUS commands at least every 30s during idle mode as well as during calls, in order to enable the proactive SIM to respond with a command. The SIM may send proactive commands (see TS 51.014 [27]), including a command to change the interval between STATUS commands from the ME, when in idle mode. In-call requirements for STATUS for SIM Presence Detection are unchanged by this command.

After the SIM initialization has been completed successfully, the MS is ready for a GSM session.

11.4.4 Highest Priority PLMN search period request

The ME performs the reading procedure with EF_{HPPLMN}.

Annex D (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
'2FE2'	ICC identification	operator dependant (see 10.1.1)
'2F05'	Extended Language preference	'FF…FF'
'6F05'	Language preference	'FF'
'6F07'	IMSI	operator dependant (see 10.3.2)
'6F20'	Ciphering key Kc	'FF...FF07'
'6F30'	PLMN selector	'FF...FF'
'6F31'	Highest Priority PLMN search period	'FF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	SIM service table	operator dependant (see 10.3.7)
'6F39'	Accumulated call meter	'000000'
'6F3E'	Group identifier level 1	operator dependant
'6F3F'	Group identifier level 2	operator dependant
'6F41'	PUCT	'FFFFFF0000'
'6F45'	CBMI	'FF...FF'
'6F46'	Service provider name	'FF...FF'
'6F48'	CBMID	'FF...FF'
'6F49'	Service Dialling Numbers	'FF...FF'
'6F74'	BCCH information	'FF...FF'
'6F78'	Access control class	operator dependant (see 10.3.15)
'6F7B'	Forbidden PLMNs	'FF...FF'
'6F7E	Location information	'FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6FAD'	Administrative data	operator dependant (see 10.3.18)
'6FAE'	Phase identification	see 10.3.16
'6F3A'	Abbreviated dialling numbers	'FF...FF'
'6F3B'	Fixed dialling numbers	'FF...FF'
'6F3C'	Short messages	'00FF...FF'
'6F3D'	Capability configuration parameters	'FF...FF'
'6F40'	MSISDN storage	'FF...FF'
'6F42'	SMS parameters	'FF...FF'
'6F43'	SMS status	'FF...FF'
'6F44'	Last number dialled	'FF...FF'
'6F47'	Short message status reports	'00 FF…FF'
'6F4A'	Extension 1	'00 FF...FF'
'6F4B'	Extension 2	'00 FF...FF'
'6F4C'	Extension 3	'00 FF...FF'
'6F4D'	Barred dialling numbers	'FF...FF'
'6F4E'	Extension 4	'00 FF...FF'
'6F4F'	Extended capability configuration parameters	'FF...FF'
'6F51'	Network's indication of alerting	'FF...FF'
'6F52'	GPRS Ciphering key KcGPRS	'FF...FF07'
'6F53'	GPRS Location Information	'FFFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F54'	SetUpMenu Elements	operator dependant (see 10.3.34)
'6F58'	Comparison method information	'FF…FF'
'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'
'6F63'	CPBCCH information	'FF..FF'
'6F64'	Investigation Scan	'00'

Continued

Annex I (informative): EF changes via Data Download or SIM Toolkit applications

This annex defines if changing the content of an EF by the network (e.g. by sending an SMS), or by SIM Toolkit Application (e.g. by using the SIM API), is advisable. Updating of certain EFs, "over the air" such as EF_{ACC} could result in unpredictable behaviour of the MS; 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
'2F05'	Extended Language preference	Yes
'2FE2'	ICC identification	No
'4F20'	Image data	Yes
'4Fxx'	Image Instance data Files	Yes
'6F05'	Language preference	Yes
'6F07'	IMSI	Caution (note)
'6F20'	Ciphering key Kc	No
'6F2C'	De-personalization Control Keys	Caution
'6F30'	PLMN selector	Caution
'6F31'	Highest Priority PLMN search period	Caution
'6F32'	Co-operative network	Caution
'6F37'	ACM maximum value	Yes
'6F38'	SIM service table	Caution
'6F39'	Accumulated call meter	Yes
'6F3A'	Abbreviated dialling numbers	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
'6F4A'	Extension 1	Yes
'6F4B'	Extension 2	Yes
'6F4C'	Extension 3	Yes
'6F4D'	Barred dialling numbers	Yes
'6F4E'	Extension 4	Yes
'6F4F'	Extended Capability configuration parameters	Yes
'6F50'	CBMIR	Yes
'6F51'	Network's indication of alerting	Caution
'6F52'	GPRS Ciphering key KcGPRS	No
'6F53'	GPRS Location Information	Caution
'6F58'	Comparison method information	
'6F60'	User controlled PLMN Selector with Access Technology	see 3GPP TS 22.011
'6F61'	Operator controlled PLMN Selector with Access Technology	Caution
'6F62'	HPLMN Selector with Access Technology	Caution
'6F63'	CPBCCH information	No
'6F64'	Investigation scan	Caution
'6F74'	BCCH information	No
'6F78'	Access control class	Caution
'6F7B'	Forbidden PLMNs	Caution
'6F7E'	Location information	No (note)

Continued.....

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

Tdoc T3-031031⌘

CR-Form-v7

CHANGE REQUEST

⌘ **51.011** **CR** 029 ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	Removal of references to TS 02.07
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	21/11/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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:	⌘	TS 02.07 does not exist in Rel-4 and has been replaced by TS 22.101.
Summary of change:	⌘	Removed TS 02.07 in the list of references. Replaced references to TS 02.07 by references to TS 22.101.
Consequences if not approved:	⌘	Inconsistency of the specification.

Clauses affected:	⌘	2, 10.3.11, 10.3.18, 10.3.31, 10.5.1, 11.5.1

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] Void.

[2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[3] ~~3GPP TS 02.07: "Mobile Stations (MS) features".~~Not used

[4] 3GPP TS 02.09: "Security aspects".

[5] 3GPP TS 22.011: "Service accessibility".

[6] 3GPP TS 42.017: "Subscriber Identity Modules (SIM); Functional characteristics".

[7] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)".

[8] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".

[9] 3GPP TS 22.086: "Advice of Charge (AoC) Supplementary Services - Stage 1".

[10] 3GPP TS 23.003: "Numbering, addressing and identification".

[11] 3GPP TS 43.020: "Security related network functions".

[12] 3GPP TS 23.038: "Alphabets and language-specific information".

[13] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[14] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[15] 3GPP TS 04.08: "Mobile radio interface layer 3 specification".

[16] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[17] GSM 09.91: "Digital cellular telecommunications system (Phase 2); Interworking aspects of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface between Phase 1 and Phase 2".

[18] ITU-T Recommendation E.118: "The international telecommunication charge card".

[19] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[20] ITU-T Recommendation T.50: "International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) - Information technology - 7-bit coded character set for information interchange".

[21] ISO/IEC 7810 (1995): "Identification cards - Physical characteristics".

[22] ISO/IEC 7811-1 (1995): "Identification cards - Recording technique - Part 1: Embossing".

[23] ISO/IEC 7811-3 (1995): "Identification cards - Recording technique - Part 3: Location of embossed characters on ID-1 cards".

[24] ISO/IEC 7816-1 (1998): "Identification cards - Integrated circuit(s) cards with contacts - Part 1: Physical characteristics".

[25] ISO/IEC 7816-2 (1988): "Identification cards - Integrated circuit(s) cards with contacts - Part 2: Dimensions and locations of the contacts".

[26] ISO/IEC 7816-3 (1997): "Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols".

[27] 3GPP TS 51.014: "Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

[28] GSM 11.12: "Digital cellular telecommunications system (Phase 2); Specification of the 3 Volt Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

[29] 3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".

[30] ISO 639 (1988): "Code for the representation of names of languages".

[31] ISO/IEC 10646-1 (1993): "Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane".

[32] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".

[33] 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".

[34] GSM 11.19: "Specification of the Cordless Telephony System Subscriber Identity Module for both Fixed Part and Mobile Station".

[35] ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".

[36] TIA/EIA-136-005: "Introduction, Identification, and Semi-Permanent Memory, November 1998".

[37] TIA/EIA-136-123-A: "Digital Control Channel Layer 3, November 1998".

[38] TIA/EIA-136-140-A: "Analogue Control Channel, November 1998".

[39] TIA/EIA-136-510-A: "Authentication, Encryption of Signaling Information/User Data and Privacy, November 1998".

[40] ANSI TIA/EIA-41: "Cellular Radio Telecommunications Intersystem Operations".

[41] EIA/TIA-553: "Mobile Station - Land Station Compatibility Specification".

[42] 3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1".

[43] TR45 AHAG "Common Cryptographic Algorithms, Revision C," October 27, 1998.

[44] ETS 300 812: "Terrestrial Trunked Radio (TETRA); Security aspects; Subscriber Identity Module to Mobile Equipment (SIM - ME) interface".

[45] 3GPP TS 03.22: "Functions related to Mobile Station (MS) in idle mode and group receive mode".

[46] 3GPP TS 05.05: "Radio transmission and reception".

[47] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".

[48] 3GPP TS 04.18: "Mobile radio interface layer 3 specification; Radio Resource Control Protocol".

[49] 3GPP TS 04.60: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol".

[50] 3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".

[51] 3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode".

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

[53] 3GPP TS 22.101: "Service aspects; Service principles".

[54] 3GPP TS 23.097: "Multiple Subscriber Profile (MSP) (Phase 2) - Stage 2".

[55] 3GPP TS 31.101: "UICC-Terminal interface; Physical and logical characteristics"

[56] ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"

[57] ETSI TS 102 221: "UICC-Terminal interface; Physical and logical characteristics"

[58] 3GPP TS 23.140: “Multimedia Messaging Service (MMS); Functional description; stage 2”.

10.3.11 EF_{SPN} (Service Provider Name)

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

Identifier: '6F46'	Structure: transparent	Optional
File Size: 17 bytes	Update activity: low	

Access Conditions:

READ	ALWAYS
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

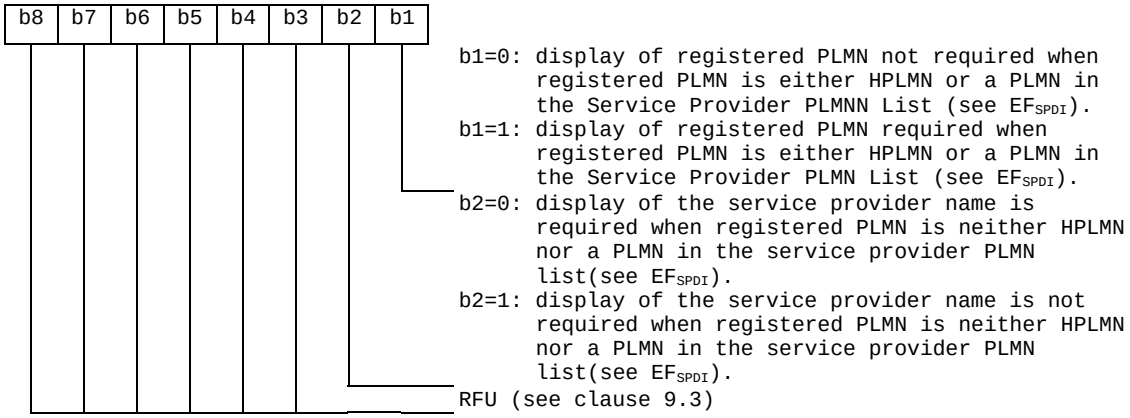
Bytes	Description	M/O	Length
1	Display Condition	M	1 byte
2 to 17	Service Provider Name	M	16 bytes

- Display Condition

  Contents: display condition for the service provider name in respect to the registered PLMN (see TS ~~02.07~~22.101 [53]).

  Coding: see below

  Byte 1:



- Service Provider Name

  Contents: service provider string

  Coding: the string shall use either

  - the SMS default 7-bit coded alphabet as defined in TS 23.038 [12] with bit 8 set to 0. The string shall be left justified. Unused bytes shall be set to 'FF'; or

  - one of the UCS2 code options defined in annex B.

10.3.18 EF_{AD} (Administrative data)

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

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

Identifier: '6FAD'	Structure: transparent	Mandatory
File size: 3+X bytes	Update activity: low	

Access Conditions:

READ	ALW
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	MS operation mode	M	1 byte
2 to 3	Additional information	M	2 bytes
4	length of MNC in the IMSI	O	1 byte
5 to 3+X	RFU	O	(X-1) bytes

NOTE: If X=0 no optional field is present;
If X=1 byte 4 is present but no RFU field is present;
When the RFU field is present (X ≥2) then byte 4 shall be present.

- MS operation mode

  Contents: mode of operation for the MS

  Coding:

  Initial value

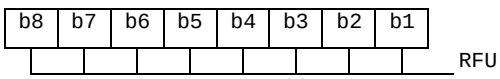
  - normal operation '00'
  - type approval operations '80'
  - normal operation + specific facilities '01'
  - type approval operations + specific facilities '81'
  - maintenance (off line) '02'
  - cell test operation '04'

- Additional information

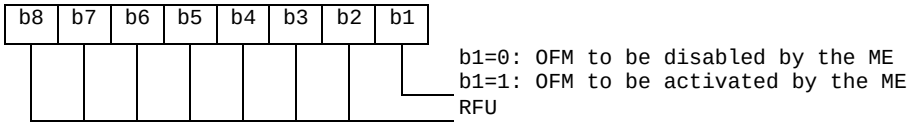
  Coding:

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

  Byte 2 (first byte of additional information):



Byte 3:



The OFM bit is used to control the Ciphering Indicator as specified in TS ~~02.07 [3]~~22.101 [53]

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

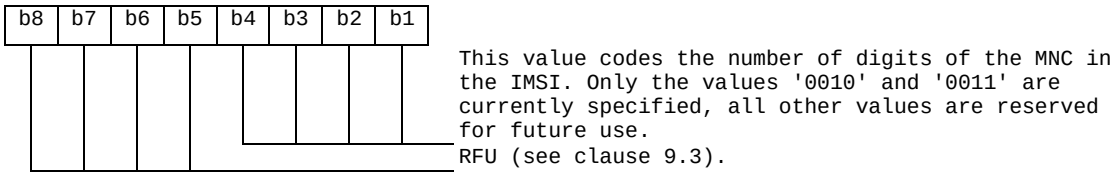
- Length of MNC in the IMSI :

Contents:

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

Coding:

Byte 4:



10.3.31 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 ~~02.07 [3]~~22.101 [53].

Identifier: '6F51'	Structure: linear fixed	Optional
Record length : X+1 bytes	Update activity: low	
Access Conditions: READ CHV1 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 04.08 [15]. 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} (clause 10.5.1). The maximum number of characters for this informative text is indicated in TS ~~02.07 [3]~~22.101[53].

10.5.1 EF_{ADN} (Abbreviated dialling numbers)

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

Identifier: '6F3A'	Structure: linear fixed	Optional
Record length: X+14 bytes	Update activity: low	
Access Conditions: READ CHV1 UPDATE CHV1 INVALIDATE CHV2 REHABILITATE CHV2		

Bytes	Description	M/O	Length
1 to X	Alpha Identifier	O	X bytes
X+1	Length of BCD number/SSC contents	M	1 byte
X+2	TON and NPI	M	1 byte
X+3 to X+12	Dialling Number/SSC String	M	10 bytes
X+13	Capability/Configuration Identifier	M	1 byte
X+14	Extension1 Record Identifier	M	1 byte

- Alpha Identifier

  Contents:

  Alpha-tagging of the associated dialling number.

  Coding:

  this alpha-tagging shall use either

  - the SMS default 7-bit coded alphabet as defined in TS 23.038 [12] 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.

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

- Length of BCD number/SSC contents

  Contents:

  this byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself (see clause 10.5.10).

  Coding:

  according to TS 04.08 [15].

- TON and NPI

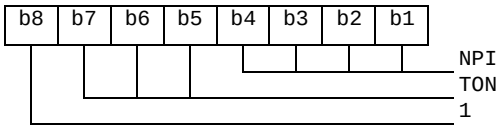
  Contents:

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

  Coding:

  according to TS 04.08 [15]. If the Dialling Number/SSC String does not contain a dialling number, e.g. a control string deactivating a service, the TON/NPI byte shall be set to 'FF' by the ME (see note 2).

NOTE 2: If a dialling number is absent, no TON/NPI byte is transmitted over the radio interface (see TS 04.08 [15]). Accordingly, the ME should not interpret the value 'FF' and not send it over the radio interface.



- Dialling Number/SSC String

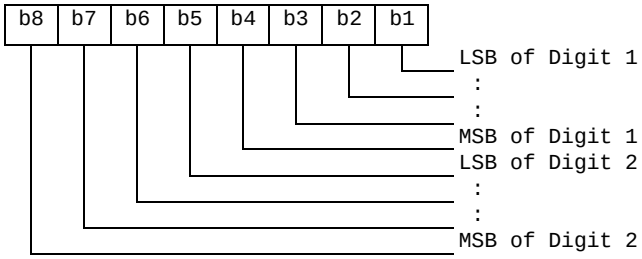
  Contents:

  up to 20 digits of the telephone number and/or SSC information.

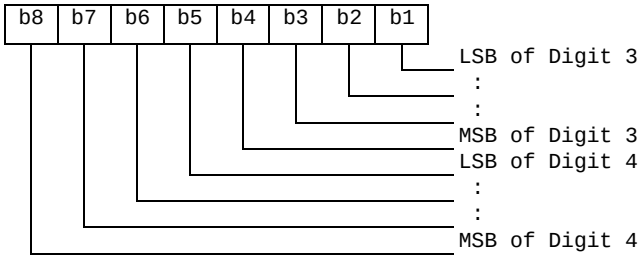
  Coding:

  according to TS 04.08 [15] , TS 22.030 [8] and the extended BCD-coding (see table 12). If the telephone number or SSC is longer than 20 digits, the first 20 digits are stored in this data item and the remainder is stored in an associated record in the EF_{EXT1}. The record is identified by the Extension1 Record Identifier. If ADN/SSC require less than 20 digits, excess nibbles at the end of the data item shall be set to 'F'. Where individual dialled numbers, in one or more records, of less than 20 digits share a common appended digit string the first digits are stored in this data item and the common digits stored in an associated record in the EF_{EXT1}. The record is identified by the Extension 1 Record Identifier. Excess nibbles at the end of the data item shall be set to 'F'.

  Byte X+3



  Byte X+4:



  etc.

- Capability/Configuration Identifier

  Contents:

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

  Coding:

  binary.

- Extension1 Record Identifier

  Contents:

extension1 record identification byte. This byte identifies the number of a record in the EF_{EXT1} containing an associated called party subaddress or additional data. The use of this byte is optional. If it is not used it shall be set to 'FF'.

If the ADN/SSC requires both additional data and called party subaddress, this byte identifies the additional record. A chaining mechanism inside EF_{EXT1} identifies the record of the appropriate called party subaddress (see clause 10.5.10).

Coding:

binary.

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

EXAMPLE: SIM storage of an International Number using E.164 [19] numbering plan.

	TON	NPI	Digit field
GSM application	001	0001	abc...
Other application compatible with GSM	000	0000	xxx...abc...

where "abc..." denotes the subscriber number digits (including its country code), and "xxx..." denotes escape digits or a national prefix replacing TON and NPI.

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

Table 12: Extended BCD coding

BCD Value	Character/Meaning
'0'	"0"
...	...
'9'	"9"
'A'	"*"
'B'	"#"
'C'	DTMF Control digit separator (TS ~~02.07 [3]~~22.101[53])
'D'	"Wild" value This will cause the MMI to prompt the user for a single digit (see TS ~~02.07 [3]~~22.101[53]).
'E'	Expansion digit ("Shift Key"). It has the effect of adding '10' to the following digit. The following BCD digit will hence be interpreted in the range of '10'-'1E'. The purpose of digits in this range is for further study.
'F'	Endmark e.g. in case of an odd number of digits

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

NOTE 5: The interpretation of values 'D', 'E' and 'F' as DTMF digits is for further study.

NOTE 6: A second or subsequent 'C' BCD value will be interpreted as a 3 second PAUSE (see TS ~~02.07 [3]~~22.101[53]).

11.5.1 Dialling numbers

The following procedures may not only be applied to EF_{ADN} and its associated extension files EF_{CCP} and EF_{EXT1} as described in the procedures below, but also to EF_{FDN}, EF_{MSISDN}, EF_{LND}, EF_{BDN}, EF_{SDN}, EF_{MBDN} and their associated extension files. If these files are not allocated and activated, as denoted in the SIM service table, the current procedure shall be aborted and the appropriate EFs shall remain unchanged.

As an example, the following procedures are described as applied to ADN.

Requirement: Service n°2 "allocated and activated"

(Service n°3 for FDN,

Service n°9 for MSISDN,

Service n°13 for LND,

Service n°18 for SDN,

Service n°31 for BDN,

Service n°53 for MBDN)

Update: The ME analyses and assembles the information to be stored as follows (the byte identifiers used below correspond to those in the description of the EFs in clauses 10.5.1, 10.5.4 and 10.5.10):

i) The ME identifies the Alpha-tagging, Capability/Configuration Identifier and Extension1 Record Identifier.

ii) The dialling number/SSC string shall be analysed and allocated to the bytes of the EF as follows:

- if a "+" is found, the TON identifier is set to "International";
- if 20 or less "digits" remain, they shall form the dialling number/SSC string;
- if more than 20 "digits" remain, the procedure shall be as follows:

  Requirement:

  Service n°10 "allocated and activated";

  (Service n°10 applies also for MSISDN and LND;

  Service n°11 for FDN;

  Service n°19 for SDN;

  Service n°32 for BDN;

  Service n°53 for MBDN).

  The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.

  The first 20 "digits" are stored in the dialling number/SSC string. The value of the length of BCD number/SSC contents is set to the maximum value, which is 11. The Extension1 record identifier is coded with the associated record number in the EF_{EXT1}. The remaining digits are stored in the selected Extension1 record where the type of the record is set to "additional data". The first byte of the Extension1 record is set with the number of bytes of the remaining additional data. The number of bytes containing digit information is the sum of the length of BCD number/SSC contents of EF_{ADN} and byte 2 of all associated chained Extension1 records containing additional data (see clauses 10.5.1 and 10.5.10).

iii) If a called party subaddress is associated to the ADN/SSC the procedure shall proceed as follows:

Requirement:

Service n°10 "allocated and activated"
(Service n°10 applies also for MSISDN and LND;
Service n°11 for FDN;
Service n°19 for SDN;
Service n°32 for BDN;
Service n°53 for MBDN).

If the length of the called party subaddress is less than or equal to 11 bytes (see TS 04.08 [15] for coding):

- the ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted;

- the ME stores the called party subaddress in the Extension1 record, and sets the Extension1 record type to "called party subaddress".

If the length of the called party subaddress is greater than 11 bytes (see TS 04.08 [15] for coding):

- the ME seeks for two free records in EF_{EXT1}. If no such two records are found, the ME runs the Purge procedure. If two Extension1 records are still unavailable, the procedure is aborted;

- the ME stores the called party subaddress in the two Extension1 records. The identifier field in the Extension1 record containing the first part of the subaddress data is coded with the associated EF_{EXT1} record number containing the second part of the subaddress data. Both Extension1 record types are set to "called party subaddress".

Once i), ii), and iii) have been considered the ME performs the updating procedure with EF_{ADN}. If the SIM has no available empty space to store the received ADN/SSC, or if the procedure has been aborted, the ME advises the user.

NOTE 1: For reasons of memory efficiency the ME is allowed to analyse all Extension1 records to recognize if the additional or subaddress data to be stored is already existing in EF_{EXT1}. In this case the ME may use the existing chain or the last part of the existing chain from more than one ADN (LND, MSISDN). The ME is only allowed to store extension data in unused records. If existing records are used for multiple access, the ME shall not change any data in those records to prevent corruption of existing chains.

Erasure: The ME sends the identification of the information to be erased. The content of the identified record in EF_{ADN} is marked as "free".

Request: The ME sends the identification of the information to be read. The ME shall analyse the data of EF_{ADN} (subclause 10.5.1) to ascertain, whether additional data is associated in EF_{EXT1} or EF_{CCP}. If necessary, then the ME performs the reading procedure on these EFs to assemble the complete ADN/SSC.

Purge: The ME shall access each EF which references EF_{EXT1} ($EF_{EXT2,}$ EF_{EXT6}) for storage and shall identify records in these files using extension data (additional data or called party subaddress). Note that existing chains have to be followed to the end. All referred Extension1 (Extension2, Extension6) records are noted by the ME. All Extension1 (Extension2, Extension6) records not noted are then marked by the ME as "free" by setting the whole record to 'FF'.

NOTE 2: Dependent upon the implementation of the ME, and in particular the possibility of erasure of ADN/SSC records by Phase 1 MEs, which have no knowledge of the EF_{EXT1}, it is possible for Extension1 records to be marked as "used space" (not equal to 'FF'), although in fact they are no longer associated with an ADN/SSC record.

The following three procedures are only applicable to service n°3 (FDN).

FDN capability request. The ME has to check the state of service n°3, i.e. if FDN is "enabled" or "disabled". In case of enabled FDN, the ME has to switch to a restrictive terminal mode (see TS ~~02.07~~22.101 [53]). To ascertain the state of FDN, the ME checks in EF_{SST} whether or not ADN is activated. If ADN is not activated, service n°3 is enabled. If ADN is activated, the ME checks the response data of EF_{ADN}. If EF_{ADN} is invalidated, service n°3 is enabled. In all other cases service n°3 is disabled.

FDN disabling. The FDN disabling procedure requires that CHV2 verification procedure has been performed successfully and that ADN is activated. If not, FDN disabling procedure will not be executed successfully. To disable FDN capability, the ME rehabilitates EF_{ADN}. The invalidate/rehabilitate flag of EF_{ADN}, which is implicitly set by the REHABILITATE command, is at the same time the indicator for the state of the service n°3. If ADN is not activated, disabling of FDN is not possible and thus service n°3 is always enabled (see FDN capability request).

NOTE 3: If FDN is disabled (by rehabilitating EF_{ADN}) using an administrative terminal then the FDN disabling procedure of this administrative terminal need also to rehabilitate EF_{IMSI} and EF_{LOCI} to ensure normal operation of the SIM in a phase 1 ME or a phase 2 ME which does not support FDN.

FDN enabling. The FDN enabling procedure requires that CHV2 verification procedure has been performed successfully. If not, FDN enabling procedure will not be executed successfully. To enable FDN capability, the ME invalidates EF_{ADN}. The invalidate/rehabilitate flag of EF_{ADN}, which is implicitly cleared by the INVALIDATE command, is at the same time the indicator for the state of the service n°3 (see FDN capability request). If ADN is not activated, service n°3 is always enabled.

Invalidated ADNs may optionally still be readable and updatable depending on the file status (see clause 9.3)

The following three procedures are only applicable to service n°31 (BDN).

BDN capability request. The ME has to check the state of service n°31, i.e. if BDN is "enabled" or "disabled". BDN service is "enabled" only if service n°31 is allocated and activated, and EF_{BDN} is not invalidated. In all other cases, the BDN service is "disabled".

BDN disabling. The BDN disabling procedure requires that CHV2 verification procedure has been performed successfully. If not, BDN disabling procedure will not be executed successfully. To disable BDN capability, the ME invalidates EF_{BDN}. The invalidate/rehabilitate flag of EF_{BDN}, which is implicitly cleared by the INVALIDATE command, is at the same time the indicator for the state of the service n°31 (see BDN capability request).

BDN enabling. The BDN enabling procedure requires that CHV2 verification procedure has been performed successfully. If not, BDN enabling procedure will not be executed successfully. To enable BDN capability, the ME rehabilitates EF_{BDN}. The invalidate/rehabilitate flag of EF_{BDN}, which is implicitly set by the REHABILITATE command, is at the same time the indicator for the state of the service n°31 (see BDN capability request).

Invalidated BDNs (when BDN capability is disabled) may optionally still be readable and updatable depending on the file status (see clause 9.3).

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

Tdoc T3-031032⌘

CR-Form-v7

CHANGE REQUEST

⌘ **51.011** **CR** **030** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	Removal of references to TS 04.08
Source:	⌘	T3
Work item code:	⌘	TEI
Date:	⌘	21/11/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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:	⌘	TS 04.08 does not exist in Rel-4 and has been replaced by TS 24.008 and TS 44.018.
Summary of change:	⌘	Removed TS 04.08 in the list of references and added TS 44.018. Replaced references to TS 04.08 by references to TS 24.008 or TS 44.018.
Consequences if not approved:	⌘	Inconsistency of the specification.

Clauses affected:	⌘	2, 10, 10.3.2, 10.3.3, 10.3.4, 10.3.14, 10.3.16, 10.3.17, 10.3.30, 10.3.31, 10.3.32, 10.3.33, 10.4.1.2, 10.4.1.3, 10.5.1, 10.5.4.1, 10.5.10, 11.5.1, Annex D

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] Void.

[2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[3] 3GPP TS 02.07: "Mobile Stations (MS) features".

[4] 3GPP TS 02.09: "Security aspects".

[5] 3GPP TS 22.011: "Service accessibility".

[6] 3GPP TS 42.017: "Subscriber Identity Modules (SIM); Functional characteristics".

[7] 3GPP TS 22.024: "Description of Charge Advice Information (CAI)".

[8] 3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)".

[9] 3GPP TS 22.086: "Advice of Charge (AoC) Supplementary Services - Stage 1".

[10] 3GPP TS 23.003: "Numbering, addressing and identification".

[11] 3GPP TS 43.020: "Security related network functions".

[12] 3GPP TS 23.038: "Alphabets and language-specific information".

[13] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[14] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[15] ~~3GPP TS 04.08: "Mobile radio interface layer 3 specification".~~ Void

[16] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[17] GSM 09.91: "Digital cellular telecommunications system (Phase 2); Interworking aspects of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface between Phase 1 and Phase 2".

[18] ITU-T Recommendation E.118: "The international telecommunication charge card".

[19] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[20] ITU-T Recommendation T.50: "International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) - Information technology - 7-bit coded character set for information interchange".

[21] ISO/IEC 7810 (1995): "Identification cards - Physical characteristics".

[22] ISO/IEC 7811-1 (1995): "Identification cards - Recording technique - Part 1: Embossing".

[23] ISO/IEC 7811-3 (1995): "Identification cards - Recording technique - Part 3: Location of embossed characters on ID-1 cards".

[24] ISO/IEC 7816-1 (1998): "Identification cards - Integrated circuit(s) cards with contacts - Part 1: Physical characteristics".

[25] ISO/IEC 7816-2 (1988): "Identification cards - Integrated circuit(s) cards with contacts - Part 2: Dimensions and locations of the contacts".

[26] ISO/IEC 7816-3 (1997): "Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols".

[27] 3GPP TS 51.014: "Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

[28] GSM 11.12: "Digital cellular telecommunications system (Phase 2); Specification of the 3 Volt Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".

[29] 3GPP TS 22.022: "Personalization of Mobile Equipment (ME); Mobile functionality specification".

[30] ISO 639 (1988): "Code for the representation of names of languages".

[31] ISO/IEC 10646-1 (1993): "Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane".

[32] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".

[33] 3GPP TS 23.073: "Support of Localised Service Area (SoLSA); Stage 2".

[34] GSM 11.19: "Specification of the Cordless Telephony System Subscriber Identity Module for both Fixed Part and Mobile Station".

[35] ISO/IEC 7816-4 (1995): "Identification cards - Integrated circuit(s) cards with contacts - Part 4: Interindustry commands for interchange".

[36] TIA/EIA-136-005: "Introduction, Identification, and Semi-Permanent Memory, November 1998".

[37] TIA/EIA-136-123-A: "Digital Control Channel Layer 3, November 1998".

[38] TIA/EIA-136-140-A: "Analogue Control Channel, November 1998".

[39] TIA/EIA-136-510-A: "Authentication, Encryption of Signaling Information/User Data and Privacy, November 1998".

[40] ANSI TIA/EIA-41: "Cellular Radio Telecommunications Intersystem Operations".

[41] EIA/TIA-553: "Mobile Station - Land Station Compatibility Specification".

[42] 3GPP TS 22.067: "enhanced Multi Level Precedence and Pre-emption service (eMLPP) - Stage 1".

[43] TR45 AHAG "Common Cryptographic Algorithms, Revision C," October 27, 1998.

[44] ETS 300 812: "Terrestrial Trunked Radio (TETRA); Security aspects; Subscriber Identity Module to Mobile Equipment (SIM - ME) interface".

[45] 3GPP TS 03.22: "Functions related to Mobile Station (MS) in idle mode and group receive mode".

[46] 3GPP TS 05.05: "Radio transmission and reception".

[47] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".

[48] 3GPP TS 04.18: "Mobile radio interface layer 3 specification; Radio Resource Control Protocol".

[49] 3GPP TS 04.60: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/ Medium Access Control (RLC/MAC) protocol".

[50] 3GPP TS 23.057: "Mobile Execution Environment (MExE); Functional description; Stage 2".

[51] 3GPP TS 23.122: "NAS Functions related to Mobile Station (MS) in idle mode".

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

[53] 3GPP TS 22.101: "Service aspects; Service principles".

[54] 3GPP TS 23.097: "Multiple Subscriber Profile (MSP) (Phase 2) - Stage 2".

[55] 3GPP TS 31.101: "UICC-Terminal interface; Physical and logical characteristics"

[56] ISO/IEC 8825 (1990): "Information technology; Open Systems Interconnection; Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)"

[57] ETSI TS 102 221: "UICC-Terminal interface; Physical and logical characteristics"

[58] 3GPP TS 23.140: “Multimedia Messaging Service (MMS); Functional description; stage 2”.

[x] 3GPP TS 44.018: "Mobile Radio Interface Layer 3 Specification; Radio Resource Control Protocol".

10 Contents of the Elementary Files (EF)

This clause specifies the EFs for the GSM session defining access conditions, data items and coding. A data item is a part of an EF which represents a complete logical entity, e.g. the alpha tag in a EF_{ADN} record.

EFs or data items having an unassigned value, or, which during the GSM session, are cleared by the ME, shall have their bytes set to 'FF'. After the administrative phase all data items shall have a defined value or have their bytes set to 'FF'. If a data item is 'deleted' during a GSM session by the allocation of a value specified in another GSM TS, then this value shall be used, and the data item is not unassigned; e.g. for a deleted LAI in EF_{LOCI} the last byte takes the value 'FE' (TS ~~04.08~~24.008 ~~[15]~~[47] refers).

EFs are mandatory (M) or optional (O). The file size of an optional EF may be zero. All implemented EFs with a file size greater than zero shall contain all mandatory data items. Optional data items may either be filled with 'F', or, if located at the end of an EF, need not exist.

When the coding is according to ITU-T T.50 [20], bit 8 of every byte shall be set to 0.

For an overview containing all files see figure 8.

10.3.2 EF_{IMSI} (IMSI)

This EF contains the International Mobile Subscriber Identity (IMSI).

Identifier: '6F07'	Structure: transparent	Mandatory
File size: 9 bytes	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	CHV1

Bytes	Description	M/O	Length
1	length of IMSI	M	1 byte
2 to 9	IMSI	M	8 bytes

- length of IMSI

  Contents:

  The length indicator refers to the number of significant bytes, not including this length byte, required for the IMSI.

  Coding: according to TS ~~04.08~~24.008 ~~[15]~~[47].

- IMSI

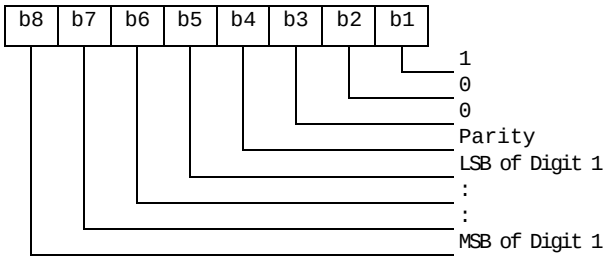
  Contents:

  International Mobile Subscriber Identity.

  Coding:

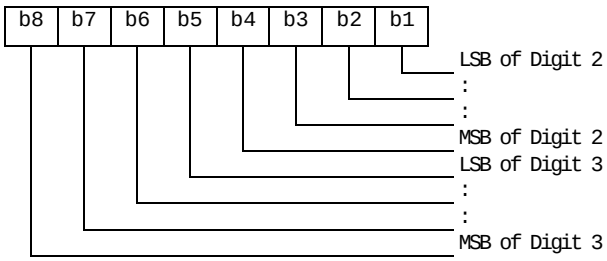
  This information element is of variable length. If a network operator chooses an IMSI of less than 15 digits, unused nibbles shall be set to 'F'.

  Byte 2:



  For the parity bit, see TS ~~04.08~~24.008 ~~[15]~~[47].

  Byte 3:



  etc.

10.3.3 EF_{Kc} (Ciphering key Kc)

This EF contains the ciphering key Kc and the ciphering key sequence number n.

Identifier: '6F20'	Structure: transparent	Mandatory
File size: 9 bytes	Update activity: high	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 8	Ciphering key Kc	M	8 bytes
9	Ciphering key sequence number n	M	1 byte

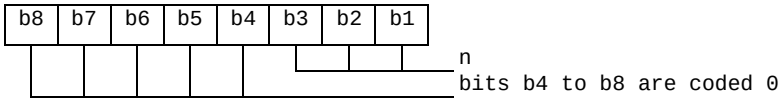
- Ciphering key Kc

  Coding:

  The least significant bit of Kc is the least significant bit of the eighth byte. The most significant bit of Kc is the most significant bit of the first byte.

- Ciphering key sequence number n

  Coding:



NOTE: TS ~~04.08~~24.008 ~~[15]~~[47] defines the value of n=111 as "key not available". Therefore the value '07' and not 'FF' should be present following the administrative phase.

10.3.4 $EF_{PLMNsel}$ (PLMN selector)

This EF contains the coding for n PLMNs, where n is at least eight. This information determined by the user/operator defines the preferred PLMNs of the user in priority order.

Identifier: '6F30'	Structure: transparent	Optional
File size: 3n (n ≥ 8) bytes	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 3	1st PLMN (highest priority)	M	3 bytes
22 to 24	8th PLMN	M	3 bytes
25 to 27	9th PLMN	O	3 bytes
(3n-2) to 3n	nth PLMN (lowest priority)	O	3 bytes

- PLMN

  Contents:

  Mobile Country Code (MCC) followed by the Mobile Network Code (MNC).

Coding:

according to TS ~~04.08~~24.008 ~~[15]~~[47].

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

For instance, using 246 for the MCC and 81 for the MNC and if this is the first and only PLMN, the contents reads as follows:

Bytes 1-3: '42' 'F6' '18'

Bytes 4-6: 'FF' 'FF' 'FF'

etc.

10.3.14 EF_{BCCH} (Broadcast control channels)

This EF contains information concerning the BCCH according to TS ~~04.08 [15]~~44.018 [x].

BCCH storage may reduce the extent of a Mobile Station's search of BCCH carriers when selecting a cell. The BCCH carrier lists in an MS shall be in accordance with the procedures specified in TS ~~04.08 [15]~~44.018 [x]. The MS shall only store BCCH information from the System Information 2 message and not the 2bis extension message.

Identifier: '6F74'	Structure: transparent	Mandatory
File size: 16 bytes	Update activity: high	
Access Conditions: READ CHV1 UPDATE CHV1 INVALIDATE ADM REHABILITATE 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 ~~04.08 [15]~~44.018 [x].

10.3.16 EF_{FPLMN} (Forbidden PLMNs)

This EF contains the coding for four Forbidden PLMNs (FPLMN). It is read by the ME as part of the SIM initialization procedure and indicates PLMNs which the MS shall not automatically attempt to access.

A PLMN is written to the EF if a network rejects a Location Update with the cause "PLMN not allowed". The ME shall manage the list as follows.

When four FPLMNs are held in the EF, and rejection of a further PLMN is received by the ME from the network, the ME shall modify the EF using the UPDATE command. This new PLMN shall be stored in the fourth position, and the existing list "shifted" causing the previous contents of the first position to be lost.

When less than four FPLMNs exist in the EF, storage of an additional FPLMN shall not cause any existing FPLMN to be lost.

Dependent upon procedures used to manage storage and deletion of FPLMNs in the EF, it is possible, when less than four FPLMNs exist in the EF, for 'FFFFFF' to occur in any position. The ME shall analyse all the EF for FPLMNs in any position, and not regard 'FFFFFF' as a termination of valid data.

Identifier: '6F7B'	Structure: transparent	Mandatory
File size: 12 bytes	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 3	PLMN 1	M	3 bytes
4 to 6	PLMN 2	M	3 bytes
7 to 9	PLMN 3	M	3 bytes
10 to 12	PLMN 4	M	3 bytes

- PLMN

  Contents:

  Mobile Country Code (MCC) followed by the Mobile Network Code (MNC).

  Coding:

  according to TS ~~04.08~~24.008 ~~[15]~~[47].

  For instance, using 246 for the MCC and 81 for the MNC and if this is stored in PLMN 3 the contents is as follows:

  Bytes 7-9: '42' 'F6' '18'

  If storage for fewer than 4 PLMNs is required, the unused bytes shall be set to 'FF'.

10.3.17 EF_{LOCI} (Location information)

This EF contains the following Location Information:

- Temporary Mobile Subscriber Identity (TMSI);
- Location Area Information (LAI);
- TMSI TIME;
- Location update status.

In the case when updating EF_{LOCI} with data containing the TMSI value and the card reports the error '92 40' (Memory Problem), the ME shall terminate GSM operation.

Identifier: '6F7E'	Structure: transparent	Mandatory
File size: 11 bytes	Update activity: high	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	CHV1

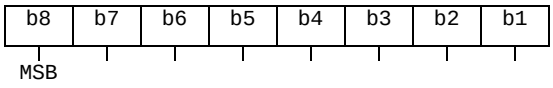
Bytes	Description	M/O	Length
1 to 4	TMSI	M	4 bytes
5 to 9	LAI	M	5 bytes
10	TMSI TIME	M	1 byte
11	Location update status	M	1 byte

- TMSI

  Contents: Temporary Mobile Subscriber Identity

  Coding: according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Byte 1: first byte of TMSI

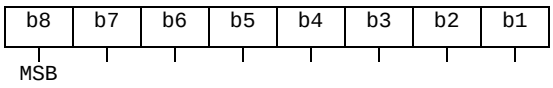


- LAI

  Contents: Location Area Information

  Coding: according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Byte 5: first byte of LAI



- TMSI TIME

  Contents: Current value of Periodic Location Updating Timer (T3212).

  This byte is used by Phase 1 MEs, but it shall not be used by Phase 2 MEs.

- Location update status

  Contents: status of location update according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Coding:

  Byte 11:

Bits:	b3	b2	b1	
0	0	0	:	updated
0	0	1	:	not updated
0	1	0	:	PLMN not allowed
0	1	1	:	Location Area not allowed
1	1	1	:	reserved

  Bits b4 to b8 are RFU (see clause 9.3).

10.3.30 EF_{CNL} (Co-operative Network List)

This EF contains the Co-operative Network List for the multiple network personalization services defined in TS 22.022.

Identifier: '6F32'	Structure: transparent	Optional
File size: 6n bytes	Update activity: low	
Access Conditions: READ CHV1 UPDATE ADM INVALIDATE ADM REHABILITATE ADM		

Bytes	Description	M/O	Length
1 to 6	Element 1 of co-operative net list	O	6 bytes
6n-5 to 6n	Element n of co-operative net list	O	6 bytes

- Co-operative Network List

  Contents:

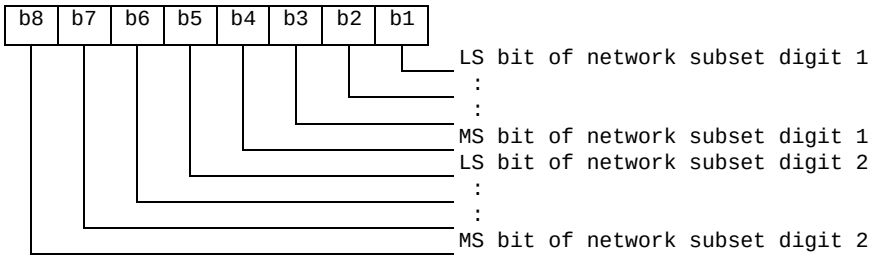
  PLMN network subset, service provider ID and corporate ID of co-operative networks.

  Coding:

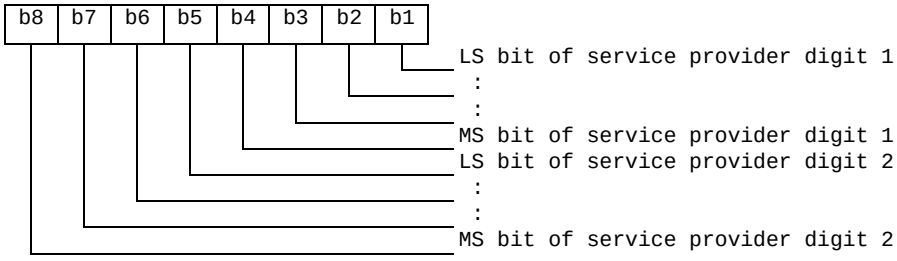
  For each 6 byte list element

  Byte 1 to 3 : PLMN (MCC + MNC) : according to TS ~~04.08~~24.008 ~~[15]~~[47].

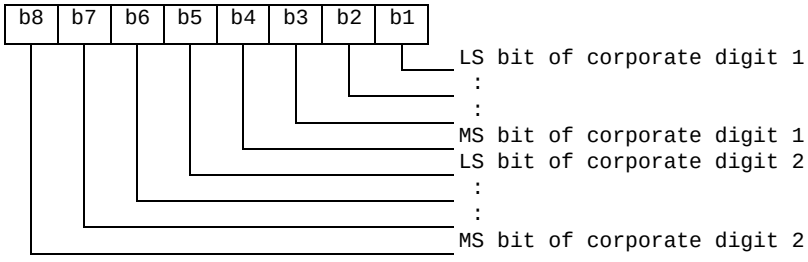
  Byte 4:



  Byte 5:



  Byte 6:



Empty fields shall be coded with 'FF'.

The end of the list is delimited by the first MCC field coded 'FFF'.

10.3.31 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 02.07 [3].

Identifier: '6F51'	Structure: linear fixed	Optional
Record length : X+1 bytes	Update activity: low	

Access Conditions:

READ	CHV1
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 ~~04.08~~24.008 ~~[15]~~[47]. 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} (clause 10.5.1). The maximum number of characters for this informative text is indicated in TS 02.07 [3].

10.3.32 EF_{KcGPRS} (GPRS Ciphering key KcGPRS)

This EF contains the ciphering key KcGPRS and the ciphering key sequence number n for GPRS (see TS 23.060 [32]).

Identifier: '6F52'	Structure: transparent	Optional
File size: 9 bytes	Update activity: high	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 8	Ciphering key KcGPRS	M	8 bytes
9	Ciphering key sequence number n for GPRS	M	1 byte

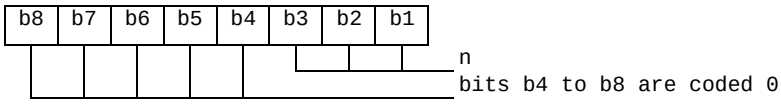
- Ciphering key KcGPRS

  Coding:

The least significant bit of KcGPRS is the least significant bit of the eighth byte. The most significant bit of KcGPRS is the most significant bit of the first byte.

- Ciphering key sequence number n for GPRS

  Coding:



NOTE: TS ~~04.08~~24.008 ~~[15]~~[47] defines the value of n=111 as "key not available". Therefore the value '07' and not 'FF' should be present following the administrative phase.

10.3.33 $EF_{LOCIGPRS}$ (GPRS location information)

This EF contains the following Location Information:

- Packet Temporary Mobile Subscriber Identity (P-TMSI);
- Packet Temporary Mobile Subscriber Identity signature value (P-TMSI signature value);
- Routing Area Information (RAI);
- Routing Area update status.

Identifier: '6F53'	Structure: transparent	Optional
File size: 14 bytes	Update activity: high	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

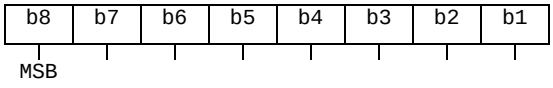
Bytes	Description	M/O	Length
1 to 4	P-TMSI	M	4 bytes
5 to 7	P-TMSI signature value	M	3 bytes
8 to 13	RAI	M	6 bytes
14	Routing Area update status	M	1 byte

- P-TMSI

  Contents: Packet Temporary Mobile Subscriber Identity

  Coding: according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Byte 1: first byte of P-TMSI

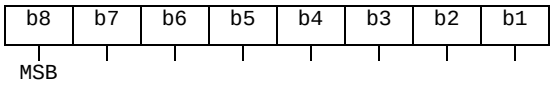


- P-TMSI signature value

  Contents: Packet Temporary Mobile Subscriber Identity signature value

  Coding: according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Byte 5: first byte of P-TMSI signature value

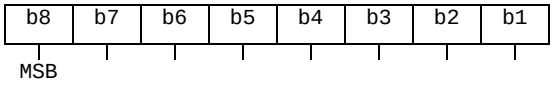


- RAI

  Contents: Routing Area Information

  Coding: according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Byte 8: first byte of RAI



- Routing area update status

  Contents: status of routing area update according to TS ~~04.08~~24.008 ~~[15]~~[47].

  Coding:

  Byte 14:

Bits:	b3	b2	b1	
	0	0	0	: updated
	0	0	1	: not updated
	0	1	0	: PLMN not allowed
	0	1	1	: Routing Area not allowed
	1	1	1	: reserved

  Bits b4 to b8 are RFU (see clause 9.3).

10.4.1.2 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	CHV1
UPDATE	CHV1
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.

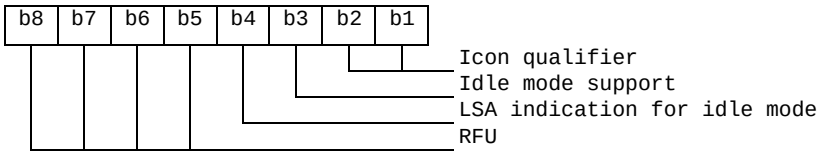
  Coding: the string shall use either

  - the SMS default 7-bit coded alphabet as defined in TS 23.038 [12] 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.

- 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 clause 9.3).

- Icon Identifier

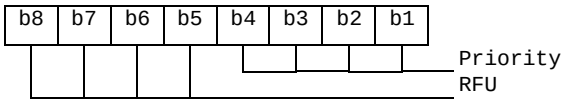
Contents: The icon identifier addresses a record in EF_{IMG}.

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 ~~04.08~~24.008 ~~[15]~~[47] 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.

10.4.1.3 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:

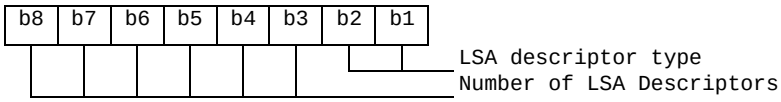
READ	CHV1
UPDATE	ADM
INVALIDATE	ADM
REHABILITATE	ADM

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 ~~04.08~~24.008 ~~[15]~~[47].

- 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 clause 6.6.

10.5.1 EF_{ADN} (Abbreviated dialling numbers)

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

Identifier: '6F3A'	Structure: linear fixed	Optional
Record length: X+14 bytes	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	CHV2
REHABILITATE	CHV2

Bytes	Description	M/O	Length
1 to X	Alpha Identifier	O	X bytes
X+1	Length of BCD number/SSC contents	M	1 byte
X+2	TON and NPI	M	1 byte
X+3 to X+12	Dialling Number/SSC String	M	10 bytes
X+13	Capability/Configuration Identifier	M	1 byte
X+14	Extension1 Record Identifier	M	1 byte

- Alpha Identifier

  Contents:

  Alpha-tagging of the associated dialling number.

  Coding:

  this alpha-tagging shall use either

  - the SMS default 7-bit coded alphabet as defined in TS 23.038 [12] 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.

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

- Length of BCD number/SSC contents

  Contents:

  this byte gives the number of bytes of the following two data items containing actual BCD number/SSC information. This means that the maximum value is 11, even when the actual ADN/SSC information length is greater than 11. When an ADN/SSC has extension, it is indicated by the extension1 identifier being unequal to 'FF'. The remainder is stored in the EF_{EXT1} with the remaining length of the additional data being coded in the appropriate additional record itself (see clause 10.5.10).

  Coding:

  according to TS ~~04.08~~24.008 ~~[15]~~[47].

- TON and NPI

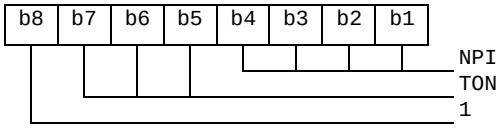
  Contents:

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

  Coding:

according to TS ~~04.08~~24.008 ~~[15]~~[47]. If the Dialling Number/SSC String does not contain a dialling number, e.g. a control string deactivating a service, the TON/NPI byte shall be set to 'FF' by the ME (see note 2).

NOTE 2: If a dialling number is absent, no TON/NPI byte is transmitted over the radio interface (see TS ~~04.08~~24.008 ~~[15]~~[47]). Accordingly, the ME should not interpret the value 'FF' and not send it over the radio interface.



- Dialling Number/SSC String

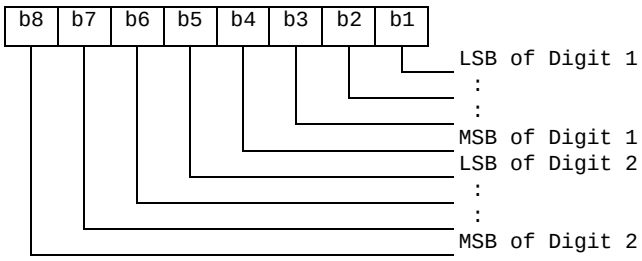
Contents:

up to 20 digits of the telephone number and/or SSC information.

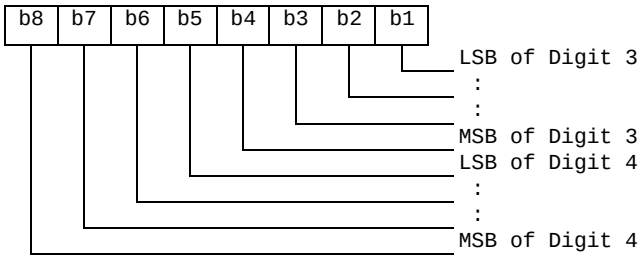
Coding:

according to TS ~~04.08~~24.008 ~~[15]~~[47] , TS 22.030 [8] and the extended BCD-coding (see table 12). If the telephone number or SSC is longer than 20 digits, the first 20 digits are stored in this data item and the remainder is stored in an associated record in the EF_{EXT1}. The record is identified by the Extension1 Record Identifier. If ADN/SSC require less than 20 digits, excess nibbles at the end of the data item shall be set to 'F'. Where individual dialled numbers, in one or more records, of less than 20 digits share a common appended digit string the first digits are stored in this data item and the common digits stored in an associated record in the EF_{EXT1}. The record is identified by the Extension 1 Record Identifier. Excess nibbles at the end of the data item shall be set to 'F'.

Byte X+3



Byte X+4:



etc.

- Capability/Configuration Identifier

Contents:

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

Coding:

binary.

- Extension1 Record Identifier

  Contents:

  extension1 record identification byte. This byte identifies the number of a record in the EF_{EXT1} containing an associated called party subaddress or additional data. The use of this byte is optional. If it is not used it shall be set to 'FF'.

  If the ADN/SSC requires both additional data and called party subaddress, this byte identifies the additional record. A chaining mechanism inside EF_{EXT1} identifies the record of the appropriate called party subaddress (see clause 10.5.10).

  Coding:

  binary.

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

EXAMPLE: SIM storage of an International Number using E.164 [19] numbering plan.

	TON	NPI	Digit field
GSM application	001	0001	abc...
Other application compatible with GSM	000	0000	xxx...abc...

where "abc..." denotes the subscriber number digits (including its country code), and "xxx..." denotes escape digits or a national prefix replacing TON and NPI.

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

Table 12: Extended BCD coding

BCD Value	Character/Meaning
'0'	"0"
...	...
'9'	"9"
'A'	"*"
'B'	"#"
'C'	DTMF Control digit separator (TS 02.07 [3])
'D'	"Wild" value This will cause the MMI to prompt the user for a single digit (see TS 02.07 [3]).
'E'	Expansion digit ("Shift Key"). It has the effect of adding '10' to the following digit. The following BCD digit will hence be interpreted in the range of '10'-'1E'. The purpose of digits in this range is for further study.
'F'	Endmark e.g. in case of an odd number of digits

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

NOTE 5: The interpretation of values 'D', 'E' and 'F' as DTMF digits is for further study.

NOTE 6: A second or subsequent 'C' BCD value will be interpreted as a 3 second PAUSE (see TS 02.07 [3]).

10.5.4.1 EF_{CCP} (Capability configuration parameters)

This EF contains parameters of required network and bearer capabilities and ME configurations associated with a call established using an abbreviated dialling number, a fixed dialling number, an MSISDN, a last number dialled, a service dialling number or a barred dialling number.

For compatibility reasons, this file may be present for release 98 or earlier MEs in order to support Capability Configuration Parameters service.

Identifier: '6F3D'	Structure: linear fixed	Optional
Record length: 14 bytes	Update activity: low	

Access Conditions:

READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1 to 10	Bearer capability information element	M	10 bytes
11 to 14	Bytes reserved - see below	M	4 bytes

- Bearer capability information element

  Contents and Coding:

  - see TS ~~04.08~~24.008 ~~[15]~~[47]. The Information Element Identity (IEI) shall be excluded. i.e. the first byte of the EF_{CCP} record shall be Length of the bearer capability contents.

  - Bytes 11-14 shall be set to 'FF' and shall not be interpreted by the ME.

10.5.10 EF_{EXT1} (Extension1)

This EF contains extension data of an ADN/SSC, an MSISDN, or an LND. Extension data is caused by:

- an ADN/SSC (MSISDN, LND) which is greater than the 20 digit capacity of the ADN/SSC (MSISDN, LND) Elementary File or where common digits are required to follow an ADN/SSC string of less than 20 digits. The remainder is stored in this EF as a record, which is identified by a specified identification byte inside the ADN/SSC (MSISDN, LND) Elementary File. The EXT1 record in this case is specified as additional data;

- an associated called party subaddress. The EXT1 record in this case is specified as subaddress data.

Identifier: '6F4A'	Structure: linear fixed	Optional
Record length: 13 bytes	Update activity: low	

Access Conditions:

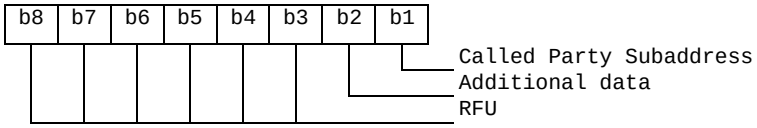
READ	CHV1
UPDATE	CHV1
INVALIDATE	ADM
REHABILITATE	ADM

Bytes	Description	M/O	Length
1	Record type	M	1 byte
2 to 12	Extension data	M	11 bytes
13	Identifier	M	1 byte

- Record type

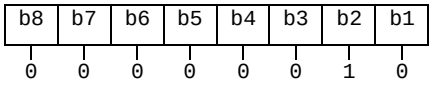
  Contents: type of the record

  Coding:



  b3-b8 are reserved and set to 0;
  a bit set to 1 identifies the type of record;
  only one type can be set;
  '00' indicates the type "unknown".

  The following example of coding means that the type of extension data is "additional data":



- Extension data

  Contents: Additional data or Called Party Subaddress depending on record type.

  Coding:

  Case 1, Extension1 record is additional data:

  The first byte of the extension data gives the number of bytes of the remainder of ADN/SSC (respectively MSISDN, LND). The coding of remaining bytes is BCD, according to the coding of ADN/SSC (MSISDN, LND). Unused nibbles at the end have to be set to 'F'. It is possible if the number of additional digits exceeds the capacity of the additional record to chain another record inside the EXT1 Elementary File by the identifier in byte 13. In this case byte 2 (first byte of the extension data) of all records for additional data within the same chain indicates the number of bytes ('01' to '0A') for ADN/SSC (respectively MSISDN, LND) within the same record unequal to 'FF'.

  Case 2, Extension1 record is Called Party Subaddress:

The subaddress data contains information as defined for this purpose in TS ~~04.08~~24.008 ~~[15]~~[47]. All information defined in TS ~~04.08~~24.008 [47], except the information element identifier, shall be stored in the SIM. The length of this subaddress data can be up to 22 bytes. In those cases where two extension records are needed, these records are chained by the identifier field. The extension record containing the first part of the called party subaddress points to the record which contains the second part of the subaddress.

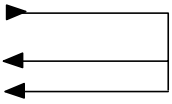
- Identifier

  Contents: identifier of the next extension record to enable storage of information longer than 11 bytes.

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

EXAMPLE: Of a chain of extension records being associated to an ADN/SSC. The extension1 record identifier (Byte 14+X) of EF_{ADN} is set to 3.

No of Record	Type	Extension Data	Next
:	:	:	:
:	:	:	:
Record 3	'02'	xx xx	'06'
Record 4	'xx'	xx xx	'xx'
Record 5	'01'	xx xx	'FF'
Record 6	'01'	xx xx	'05'
:	:	:	:
:	:	:	:



In this example ADN/SSC is associated to additional data (records 3 and 4) which represent the last 27 or 28 digits of the whole ADN/SSC (the first 20 digits are stored in EF_{ADN}) and a called party subaddress whose length is more than 11 bytes (records 6 and 1).

11.5.1 Dialling numbers

The following procedures may not only be applied to EF_{ADN} and its associated extension files EF_{CCP} and EF_{EXT1} as described in the procedures below, but also to EF_{FDN}, EF_{MSISDN}, EF_{LND}, EF_{BDN}, EF_{SDN}, EF_{MBDN} and their associated extension files. If these files are not allocated and activated, as denoted in the SIM service table, the current procedure shall be aborted and the appropriate EFs shall remain unchanged.

As an example, the following procedures are described as applied to ADN.

Requirement: Service n°2 "allocated and activated"

(Service n°3 for FDN,

Service n°9 for MSISDN,

Service n°13 for LND,

Service n°18 for SDN,

Service n°31 for BDN,

Service n°53 for MBDN)

Update: The ME analyses and assembles the information to be stored as follows (the byte identifiers used below correspond to those in the description of the EFs in clauses 10.5.1, 10.5.4 and 10.5.10):

i) The ME identifies the Alpha-tagging, Capability/Configuration Identifier and Extension1 Record Identifier.

ii) The dialling number/SSC string shall be analysed and allocated to the bytes of the EF as follows:

- if a "+" is found, the TON identifier is set to "International";
- if 20 or less "digits" remain, they shall form the dialling number/SSC string;
- if more than 20 "digits" remain, the procedure shall be as follows:

  Requirement:

  Service n°10 "allocated and activated";

  (Service n°10 applies also for MSISDN and LND;

  Service n°11 for FDN;

  Service n°19 for SDN;

  Service n°32 for BDN;

  Service n°53 for MBDN).

  The ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted.

  The first 20 "digits" are stored in the dialling number/SSC string. The value of the length of BCD number/SSC contents is set to the maximum value, which is 11. The Extension1 record identifier is coded with the associated record number in the EF_{EXT1}. The remaining digits are stored in the selected Extension1 record where the type of the record is set to "additional data". The first byte of the Extension1 record is set with the number of bytes of the remaining additional data. The number of bytes containing digit information is the sum of the length of BCD number/SSC contents of EF_{ADN} and byte 2 of all associated chained Extension1 records containing additional data (see clauses 10.5.1 and 10.5.10).

iii) If a called party subaddress is associated to the ADN/SSC the procedure shall proceed as follows:

Requirement:

Service n°10 "allocated and activated"
(Service n°10 applies also for MSISDN and LND;
Service n°11 for FDN;
Service n°19 for SDN;
Service n°32 for BDN;
Service n°53 for MBDN).

If the length of the called party subaddress is less than or equal to 11 bytes (see TS ~~04.08~~24.008 ~~[15]~~[47] for coding):

- the ME seeks for a free record in EF_{EXT1}. If an Extension1 record is not marked as "free", the ME runs the Purge procedure. If an Extension1 record is still unavailable, the procedure is aborted;

- the ME stores the called party subaddress in the Extension1 record, and sets the Extension1 record type to "called party subaddress".

If the length of the called party subaddress is greater than 11 bytes (see TS ~~04.08~~24.008 ~~[15]~~[47] for coding):

- the ME seeks for two free records in EF_{EXT1}. If no such two records are found, the ME runs the Purge procedure. If two Extension1 records are still unavailable, the procedure is aborted;

- the ME stores the called party subaddress in the two Extension1 records. The identifier field in the Extension1 record containing the first part of the subaddress data is coded with the associated EF_{EXT1} record number containing the second part of the subaddress data. Both Extension1 record types are set to "called party subaddress".

Once i), ii), and iii) have been considered the ME performs the updating procedure with EF_{ADN}. If the SIM has no available empty space to store the received ADN/SSC, or if the procedure has been aborted, the ME advises the user.

NOTE 1: For reasons of memory efficiency the ME is allowed to analyse all Extension1 records to recognize if the additional or subaddress data to be stored is already existing in EF_{EXT1}. In this case the ME may use the existing chain or the last part of the existing chain from more than one ADN (LND, MSISDN). The ME is only allowed to store extension data in unused records. If existing records are used for multiple access, the ME shall not change any data in those records to prevent corruption of existing chains.

Annex D (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
'2FE2'	ICC identification	operator dependant (see 10.1.1)
'2F05'	Extended Language preference	'FF…FF'
'6F05'	Language preference	'FF'
'6F07'	IMSI	operator dependant (see 10.3.2)
'6F20'	Ciphering key Kc	'FF...FF07'
'6F30'	PLMN selector	'FF...FF'
'6F31'	HPLMN search period	'FF'
'6F37'	ACM maximum value	'000000' (see note 1)
'6F38'	SIM service table	operator dependant (see 10.3.7)
'6F39'	Accumulated call meter	'000000'
'6F3E'	Group identifier level 1	operator dependant
'6F3F'	Group identifier level 2	operator dependant
'6F41'	PUCT	'FFFFFF0000'
'6F45'	CBMI	'FF...FF'
'6F46'	Service provider name	'FF...FF'
'6F48'	CBMID	'FF...FF'
'6F49'	Service Dialling Numbers	'FF...FF'
'6F74'	BCCH information	'FF...FF'
'6F78'	Access control class	operator dependant (see 10.3.15)
'6F7B'	Forbidden PLMNs	'FF...FF'
'6F7E	Location information	'FFFFFFFF xxxxxx 0000 FF 01' (see note 2)
'6FAD'	Administrative data	operator dependant (see 10.3.18)
'6FAE'	Phase identification	see 10.3.16
'6F3A'	Abbreviated dialling numbers	'FF...FF'
'6F3B'	Fixed dialling numbers	'FF...FF'
'6F3C'	Short messages	'00FF...FF'
'6F3D'	Capability configuration parameters	'FF...FF'
'6F40'	MSISDN storage	'FF...FF'
'6F42'	SMS parameters	'FF...FF'
'6F43'	SMS status	'FF...FF'
'6F44'	Last number dialled	'FF...FF'
'6F47'	Short message status reports	'00 FF…FF'
'6F4A'	Extension 1	'00 FF...FF'
'6F4B'	Extension 2	'00 FF...FF'
'6F4C'	Extension 3	'00 FF...FF'
'6F4D'	Barred dialling numbers	'FF...FF'
'6F4E'	Extension 4	'00 FF...FF'
'6F4F'	Extended capability configuration parameters	'FF...FF'
'6F51'	Network's indication of alerting	'FF...FF'
'6F52'	GPRS Ciphering key KcGPRS	'FF...FF07'
'6F53'	GPRS Location Information	'FFFFFFFF FFFFFF xxxxxx 0000 FF 01' (see note 2)
'6F54'	SetUpMenu Elements	operator dependant (see 10.3.34)
'6F58'	Comparison method information	'FF…FF'
'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'
'6F63'	CPBCCH information	'FF..FF'
'6F64'	Investigation Scan	'00'
	Continued	

File Identification	Description	Value
'4F20'	Image data	'00FF...FF'
'4F30'	SoLSA Access Indicator)	'00FF...FF'
'4F31'	SoLSA LSA List	'FF...FF'
'6FC5'	PLMN Network Name	Operator dependant
'6FC6'	Operator PLMN 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	'FF...FF'
'6FCE'	MMS Notification	'00 00 00 FF…FF'
'6FCF'	Extension 8	'00 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 ~~04.08~~24.008 ~~[15]~~[47].