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TECHNICAL SPECIFICATION

**Integrated Circuit Cards (ICC);
Administrative commands for
telecommunications applications
(Release 17)**

ETSI

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1 Scope

The present document defines functions and syntax of a set of administrative commands for a telecommunication card.

The commands defined in the present document are compliant to the commands defined in the ISO/IEC 7816 [i.2] series where corresponding commands in ISO/IEC are available. The commands described in the present document are using parts of the functionality of the commands described in the ISO/IEC 7816-3 [i.1].

For a UICC supporting logical secure elements as defined in ETSI TS 102 221 [5], the provisions of the present specification apply to the logical UICC.

The present document does not cover the internal implementation within the UICC and/or the external equipment.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

[1] Void.

[2] ISO/IEC 7816-4: "Identification cards -- Integrated circuit cards -- Part 4: Organization, security and commands for interchange".

[3] Void.

[4] Void.

[5] ETSI TS 102 221: "Smart Cards; UICC-Terminal interface; Physical and logical characteristics".

[6] Void.

[7] ETSI TS 101 220: "Smart Cards; ETSI numbering system for telecommunication application providers".

[8] ETSI TS 102 223: "Smart Cards; Card Application Toolkit (CAT)".

[9] Void.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ISO/IEC 7816-3: "Identification cards -- Integrated circuit cards -- Part 3: Cards with contacts -- Electrical interface and transmission protocols".

[i.2] ISO/IEC 7816 (all parts): "Identification cards -- Integrated circuit cards".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the following terms apply:

Access Conditions (AC): set of security attributes associated to a file

ADMinistrative (ADM): access condition to an EF which is under the control of the authority which creates this file

administrative command: command modifying the internal properties of the file system of an UICC

current directory: latest directory (MF, DF or ADF) selected in the UICC

current EF: latest Elementary File (EF) selected in the UICC

current file: current EF, if an EF is selected, else the current directory

Dedicated File (DF): file containing Access Conditions (AC) and allocable memory

NOTE: It may be the parent of Elementary Files (EF) and/or Dedicated Files (DF).

directory: general name for MF, DF or ADF

Elementary File (EF): file containing Access Conditions (AC) and data

NOTE: It cannot be the parent of another file.

File IDentifier (ID): each file (MF, DF, ADF or EF) has a file identifier consisting of 2 bytes

Lc: length of command data sent by the application layer in a case 3 or 4 Command

Le: maximum length of data expected by the application layer in response to a case 2 or 4 Command

LL: length of data

logical UICC: As defined in ETSI TS 102 221 [5].

Master File (MF): mandatory unique DF representing the root of the file structure and containing Access Conditions (AC) and allocable memory

NOTE: It may be the parent of elementary files and/or dedicated files.

record: string of bytes handled as a whole by the UICC and terminal and referenced by a record number or a record pointer

record number: sequential and unique number within an EF, which identifies a record within an EF

NOTE: It is managed by the UICC.

record pointer: pointer, which addresses one record in an EF

telecommunication card: UICC mainly used for telecommunication applications

3.2 Symbols

For the purposes of the present document, the following symbols apply:

'	Single quotation is used to indicate hexadecimal notation.
'0' to '9' and 'A' to 'F'	The sixteen hexadecimal digits
b8 ... b1	Bits of one byte. b8 is the MSB, b1 the LSB

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AC	Access Condition
ADF	Application Dedicated File
AID	Application IDentifier
AM	Access Mode
AM_DO	Access Mode - Data Object
APDU	Application Protocol Data Unit
ATR	Answer To Reset
BER	Basic Encoding Rule
CLA	CLAss
DF	Dedicated File
DO	Data Object
EF	Elementary File
FCP	File Control Parameters
FID	File IDentifier
ICC	Integrated Circuit Card
ID	IDentifier
IEC	International Electrotechnical Commission
INS	INStruction
ISO	International Organization for Standardization
LCSI	Life Cycle Status Information
LSB	Least Significant Bit
M	Mandatory
MF	Master File
MSB	Most Significant Bit
O	Optional
PIN	Personal Identification Number
RFU	Reserved for Future Use
SFI	Short (elementary) File Identifier
SIM	Subscriber Identity Module
SM	Secure Messaging
SW1/SW2	Status Word 1/Status Word 2
TLV	Tag Length Value

4 Mapping principles

UICC Cards compliant to the present document shall follow the rules of ETSI TS 102 221 [5] in clauses 7 and 10.

5 Security architecture

The general coding of security attributes assigned to files by use of the CREATE FILE command is as described in ETSI TS 102 221 [5].

6 Description of the functions and commands

6.0 Overview

A UICC supporting the command set based on the present document shall support the command as defined in the present document. However, it is up to the UICC to provide more functionality than described in the present document.

This clause gives a functional description of the commands, their respective responses, associated status conditions, error codes and their coding.

6.1 Coding of the commands

Table 1: Coding of the commands

Command	CLA	INS
CREATE FILE	'0X' or '4X'	'E0'
DELETE FILE	'0X' or '4X'	'E4'
DEACTIVATE FILE	'0X' or '4X'	'04'
ACTIVATE FILE	'0X' or '4X'	'44'
TERMINATE DF	'0X' or '4X'	'E6'
TERMINATE EF	'0X' or '4X'	'E8'
TERMINATE CARD USAGE	'0X' or '4X'	'FE'
RESIZE FILE	'8X' or 'CX'	'D4'

The coding of the value X for the CLA-bytes in table 1 shall be according to ETSI TS 102 221 [5].

All bytes specified as RFU shall be set to '00' and all bits specified as RFU shall be set to 0.

These are the basic commands under the assumption of no Secure Messaging (SM). If SM is used:

- Secure Messaging indicators in CLA byte shall be set accordingly; and

- the Lc and data field shall be adopted.

Other commands may be needed in order to execute the commands listed above (e.g. EXTERNAL AUTHENTICATE). If such commands are necessary, they shall be coded according to ISO/IEC 7816-4 [2].

6.2 TLV objects

All TLVs described in the present document are BER-TLVs as described in ETSI TS 101 220 [7] and shall be supported by the UICC.

The sequence of mandatory TLV objects within the data field of any command specified in the present document shall be as in the description of the command.

According to the requirements of the application, the mandatory list of TLVs may be appended by one of the Tags '85' (Proprietary Information Primitive, see ISO/IEC 7816-4 [2]) or 'A5' (Proprietary Information Constructed, see ISO/IEC 7816-4 [2]).

Tag '85' or Tag 'A5' may be appended by other TLVs described in the present document or by any ISO/IEC or application dependent optional TLV object if necessary for a particular application.

6.3 CREATE FILE

6.3.1 Definition and scope

This function allows the creation of a new file under the current directory. The access condition for the CREATE FILE function of the current directory shall be fulfilled.

When creating an EF with linear fixed or cyclic structure the UICC shall directly create as many records as allowed by the requested file size.

After the creation of a DF, the current directory shall be on the newly created file. In case of an EF creation, the current EF shall be on the newly created file and the current directory is unchanged. After creation of an EF with linear fixed structure, the record pointer is not defined. After creation of an EF with cyclic structure, the current record pointer is on the last created record. After creation of an EF with BER TLV structure, the current tag pointer is undefined.

The memory space allocated shall be reserved for the created file.

If an ADF is created, some instance has to take care of the administration of the application, e.g. updating the EF_{DIR} with the application ID. The CREATE FILE command does not take care of this administration by its own. The DF Name tag shall only provide in the command, if an ADF is created.

The CREATE FILE command shall initialize newly created EFs with 'FF'. The content of the whole newly created EF shall consist of bytes of this value. If, for another application, other default values are required, this default behaviour can be overwritten by specifying an appropriate TLV in the application dependent data TLV (tag '85' or 'A5') of the CREATE FILE command.

6.3.2 Command message

6.3.2.0 Command coding

The CREATE FILE command message is coded according to table 2.

Table 2: CREATE FILE command message

Code	Value
CLA	See table 1
INS	See table 1
P1	'00'
P2	'00'
Lc	Length of the subsequent data field
Data field	Data sent to the UICC
Le	Not present

6.3.2.1 Parameters P1 and P2

P1 and P2 are set to '00' indicating: FileID and file parameters encoded in data.

6.3.2.2   Data field sent in the command message

6.3.2.2.1   Creating a DF/ADF

Table 3: Coding of the data field of the CREATE FILE command (in case of creation of a DF/ADF)

Value	M/O/C	Description	Length
'62'	M	Tag: FCP Template	1 byte
LL		Length of FCP Template (next byte to the end)	1 or 2 bytes
'82'	M	Tag: File Descriptor File Descriptor byte followed by Data Coding Byte	1 byte
'02'		Length of File Descriptor	1 byte
		File Descriptor Byte indicating DF or ADF	1 byte
'21'		Data Coding Byte	1 byte
'83'	M	Tag: File ID	1 byte
'02'		Length of File ID	1 byte
		File ID	2 bytes
'84'	C (see note)	Tag: DF Name (AID)	1 byte
LL		Length of DF Name (AID)	1 byte
		DF Name (AID)	1 byte to 16 bytes
'8A'	M	Life Cycle Status Information (LCSI)	1 byte
'01'		Length of the LCSI	1 byte
		Life Cycle Status Information	1 byte
'8C' 'AB' '8B'	M	Tag: Security Attributes: one of the following: Compact Expanded Referenced	1 byte
LL		Length of Security Attributes	1 byte
		Data for the Security Attributes	W bytes
'81'	M	Tag: Total File Size	1 byte
LL, LL ≥ 2		Length of Total File Size	1 byte
		Total File Size	X bytes
'C6'	M	Tag: PIN Status Template DO	1 byte
LL		Length of PIN Status Template DO	1 byte
		PIN Status Template DO	Y bytes
'85' or '0A5'	O	Tag: Proprietary, application dependent	1 byte
LL		Length of application dependent data	1 byte
		Application dependent data	Z bytes
NOTE:	Tag '84' shall only be present for an ADF, otherwise it is not present.		

Tag '8C', Tag 'AB' or Tag '8B': Security Attributes

Exactly one of the tags shall be present.

At least the key references that are used to allow access during the operational phase of the UICC shall be supplied in the Security Attributes.

Tag '81': Total File Size

Amount of physical memory allocated for the DF or ADF. The amount of memory specifies, how much memory will be available within the currently created DF or ADF to create EFs or other DFs. It shall include the memory needed for structural information for these EFs and DFs. The size of the structural information for the created DF/ADF shall not be included.

Some card implementations support dynamic allocation of memory (memory is allocated for the whole UICC), and therefore will ignore this TLV object.

By specifying a value other than '0000' it is possible, to indicate the requested amount of physical memory for the content of a DF or an ADF. This amount is taken from the memory allocated for the current DF.

The behaviour of the UICC for a value equal to '0000' is for further study.

Tag '82': File Descriptor with Data Coding Byte

The File Descriptor Byte shall be coded as defined in ETSI TS 102 221 [5].

The data coding byte can be used differently according to ISO/IEC 7816-4 [2]. For the present document, the value '21' (proprietary) shall be used and shall not be interpreted by the UICC.

Tag '84': DF Name

The DF Name is a string of bytes which is used to uniquely identify an Application Dedicated File (ADF) in the card.

Tag '8A': Life Cycle Status Information (LCSI)

The Life Cycle Status Information shall be coded according to ETSI TS 102 221 [5].

This TLV specifies the status of the file after creation.

The initialization state can be used to set the file into a specific security environment for administrative purposes. See ACTIVATE FILE command.

Tag 'C6': PIN Status Template DO

The PIN Status Template DO shall be coded according to ETSI TS 102 221 [5].

6.3.2.2.2 Creating an EF

Table 4: Coding of the data field of the CREATE FILE command (in case of the creation of an EF)

Value	M/O/C	Description	Length
'62'	M	Tag: FCP Template	1 byte
LL		Length of FCP Template (next byte to the end)	1 byte or 2 bytes
'82'	M	Tag: File Descriptor File Descriptor Byte followed by Data Coding Byte or File Descriptor Byte followed by Data Coding Byte and record length, coded on 2 bytes	1 byte
'02' or '04'		Length of File Descriptor	1 byte
		File Descriptor Byte	1 byte
'21'		Data Coding Byte	1 byte
	C (see note 1)	Record length	2 bytes
'83'	M	Tag: File ID	1 byte
'02'		Length of File ID	1 byte
		File ID	2 bytes
'8A'	M	Life Cycle Status Information (LCSI)	1 byte
'01'		Length of the LCSI	1 byte
		Life Cycle Status Information	1 byte
'8C' 'AB' '8B'	M	Tag: Security Attributes: one of the following: Compact Expanded Referenced	1 byte
LL		Length of Security Attributes related data	1 byte
		Data for the Security Attributes	X bytes
'80'	M	Tag: File Size (Reserved File Size)	1 byte
LL		Length of File Size	1 byte
		File Size	Y bytes
'88'	O	Tag: Short File Identifier	1 byte
'00' or '01'		Length of Short File Identifier	1 byte
		Short File Identifier	0 or 1 byte
'A5' or '85'	C (see note 2)	Tag proprietary, application dependent	1 byte
LL		Length of application dependent data	1 byte or 2 bytes
		Application dependent data (see below for tag 'A5')	Z bytes
NOTE 1: Mandatory for linear fixed and cyclic files, otherwise it is not applicable. NOTE 2: Tag 'A5' is mandatory for BER TLV structured EFs, otherwise it is optional.			

Tag '80': File Size (Reserved File Size)

File Size indicates the number of bytes allocated for the body of the file (i.e. it does not include structural information) and cannot be allocated by any other entity.

In the case of an EF with linear or cyclic structure, it is the record length multiplied by the number of records of the EF.

In case of a BER-TLV structured EF, the File Size indicates the number of bytes allocated for the body of the file. The value shall include administrative overhead (if any) that is required to store TLV objects, but not the structural information for the file itself. This value shall be returned in the FCP information provided in a response to a SELECT APDU command and labelled "Reserved File Size".

Tag '82': File Descriptor

The File Descriptor Byte shall be coded as defined in ETSI TS 102 221 [5].

The data coding byte can be used differently according to ISO/IEC 7816-4 [2]. For the present document, the value '21' (proprietary) shall be used and shall not be interpreted by the UICC.

The record length shall be present if a record structured file (i.e. for linear fixed or cyclic files) is created. In this case it indicates the length of the records coded on 2 bytes. Most significant byte comes first in the value field.

Tag '8A': Life Cycle Status Information (LCSI)

The Life Cycle Status Information shall be coded as defined in ETSI TS 102 221 [5].

This TLV specifies the status of the file after creation.

The initialization state can be used to set the file into a specific security environment for administrative purposes. See ACTIVATE FILE command.

Tag '88': Short File Identifier

The following 3 cases shall be supported by the UICC if the ATR indicates that the UICC supports selection by SFI:

- Tag '88' is missing in the CREATE FILE command: The lower five bits of the file ID are used as the Short File Identifier by the EF.

- Tag '88' is available in the CREATE FILE command, there is no value part in the TLV: Short File Identifier is not supported by the EF.

- Tag '88' is available in the CREATE FILE command, there is a Short File Identifier value in the TLV: The Short File Identifier is coded from bits b8 to b4. Bits b3,b2,b1 = 000.

Tag 'A5': Proprietary, application dependent

This is a constructed TLV object.

The following TLV objects are defined for the proprietary template (tag 'A5'). Additional private TLV objects (bits b7 and b8 of the first byte of the tag set to '1') may be present after the TLV objects defined in this clause.

Table 4a: TLV objects

Value	M/O/C	Description	Length
'C0'	O	Tag: Special File Information (File Status Byte)	1 byte
'01'		Length of Special File Information	1 byte
		Special File Information (File Status Byte)	1 byte
'C1'	O (see note 1)	Tag: Filling Pattern	1 byte
LL		Length of Filling Pattern	1 byte or 2 bytes
		Filling Pattern Value	W bytes
'C2'	O (see note 1)	Tag: Repeat Pattern	1 byte
LL		Length of the Repeat Pattern	1 byte or 2 bytes
		Length of Repeat Pattern Value	X bytes
'86'	O (see note 2)	Tag: Maximum File Size	1 byte
LL		Length of Maximum File Size	1 byte
		Maximum File Size	Y bytes
'84'	C (see note 3)	Tag: File Details	1 byte
'01'		Length of File Details	1 byte
'01'		File Details value as defined for the BER TLV structured EFs in ETSI TS 102 221 [5]	1 byte
		Additional private TLV objects	Z bytes
NOTE 1: Tag 'C1' and Tag 'C2' shall not be both present within the same command. Tag 'C1' and 'C2' are not applicable in case of BER TLV structured EF.			
NOTE 2: Tag '86' shall only be present for BER TLV structured EFs, for which it is optional.			
NOTE 3: Tag '84' shall only be present for BER TLV structured EFs, for which it is mandatory.			

Tag 'C0': Special File Information (File Status Byte) within the proprietary TLV (tag 'A5')

Table 5: Coding of the Special File Information

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
0	x	0	0	0	0	0	0	Low update activity
1	x	0	0	0	0	0	0	High update activity
x	0	0	0	0	0	0	0	Not readable or updatable when deactivated
x	1	0	0	0	0	0	0	Readable and updatable when deactivated
Any other value								RFU

Tag 'C1': Filling Pattern within the proprietary TLV (tag 'A5')

The Filling Pattern may have any length W>0 and shall be used as follows:

The first W-1 bytes of the transparent EF or the first W-1 bytes of each record of a record oriented EF shall be initialized with the first W-1 bytes of the Filling Pattern. All remaining bytes (if any) shall be initialized with the value of the last byte of the Filling Pattern. If the file or record length is shorter than the Filling Pattern, the Filling Pattern shall be truncated accordingly.

Tag 'C2': Repeat Pattern within the proprietary TLV (tag 'A5')

The Repeat Pattern may have any length X and shall be used as follows:

The first X bytes of the transparent EF or the first X bytes of each record of a record oriented EF shall be initialized with the X bytes of the Repeat Pattern. This shall be repeated consecutively for all remaining blocks of X bytes of data in the file or in a record. If necessary, the Repeat Pattern shall be truncated at the end of the file or at the end of each record to initialize the remaining bytes.

Tag '86': Maximum File Size within the proprietary TLV (tag 'A5')

In the case of an EF with transparent, linear or cyclic structure, this TLV shall not be present in the command.

In case of a BER TLV structured EF, the Maximum File Size indicates the maximum number of bytes that may be allocated for the body of the file and shall not be exceeded when new objects are created. The value shall include administrative overhead (if any) that is required to store TLV objects, but not the structural information for the file itself. This value shall be returned in the FCP information provided in a response to a SELECT APDU command and labelled "Maximum file size".

If the TLV is not present, no Maximum File Size is defined for the file and all available memory of the UICC can be allocated to that file.

6.3.3 Response message

6.3.3.1 Data field returned in the response message

The data field of the response message is not present.

6.3.3.2 Status conditions returned in the response message

The following status conditions shall be returned by the UICC.

Table 6: CREATE FILE status conditions

SW1	SW2	Meaning		
		Normal Processing		
'90'	'00'	-	normal ending of the command	
'63'	'0X'	-	command successful but after using an internal update retry routine 'X' times	
		Errors		
'62'	'83'	-	in contradiction with activation status	
'65'	'81'	-	memory problem	
'67'	'00'	-	incorrect length field	
'69'	'00'	-	Command not allowed (no information given)	
'69'	'82'	-	security status not satisfied	
'6A'	'80'	-	incorrect parameters in the data field	
'6A'	'84'	-	not enough memory space	
'6A'	'89'	-	file ID already exists	
'6A'	'8A'	-	DF Name already exists	
'6B'	'00'	-	incorrect parameter P1 or P2	
'6D'	'00'	-	instruction code not supported or invalid	
'6E'	'00'	-	Class not supported	
'6F'	'00'	-	technical problem with no diagnostic given	
'6F'	'XX'	-	technical problem, XX (proprietary) provides diagnostic except for SW2 ='00'	

6.4 DELETE FILE

6.4.1 Definition and scope

This command initiates the deletion of a referenced EF immediately under the current DF, or a DF with its complete subtree.

If a file is indicated as not-shareable as defined in ETSI TS 102 221 [5] and is the current file of one application, then another application cannot delete it.

If a file is indicated as shareable as defined in ETSI TS 102 221 [5], then it can be deleted by one application independently of whether or not the file is the current file of any other application.

NOTE 1: If another application is using concurrently the deleted file, the processing by the application may fail.

NOTE 2: If a DF is shareable and an application, having the appropriate rights, requests to delete it, the whole DF including all EFs can be deleted whatever shareable status they have.

If an EF is to be deleted, the access condition "DELETE FILE" of the EF to be deleted shall be fulfilled. After successful completion the current directory is unchanged and no EF is selected. If the EF that is successfully deleted is the current file of another application, the current directory of this application is unchanged and no EF is selected.

If a DF is to be deleted, the access condition "DELETE FILE (self)" of the DF to be deleted shall be fulfilled. After successful completion the parent directory is selected and no EF is selected.

If an ADF is to be deleted, the access condition "DELETE FILE (self)" of the ADF to be deleted shall be fulfilled and the ADF is not currently selected on another logical channel. After successful completion the MF is selected and no EF is selected.

The access conditions "DELETE FILE" and "DELETE FILE (self)" shall be coded as specified in ISO/IEC 7816-4 [2]. The access condition "DELETE FILE (child)" shall not be used.

After successful completion of this command, the deleted file can no longer be selected. The resources held by the file shall be released and the memory used by this file shall be set to the logical erased state. It shall not be possible to interrupt this process in such a way that the data can become recoverable.

If an ADF is deleted, some instance has to take care of the administration of the application, e.g. deleting the application ID entry in the EF_{DIR}. The DELETE FILE command does not take care of this administration by its own.

6.4.2   Command message

6.4.2.0   Command coding

The DELETE FILE command message is coded according to table 7.

Table 7: DELETE FILE command message

Code	Value
CLA	See table 1
INS	See table 1
P1	'00'
P2	'00'
Lc	Length of the subsequent data field
Data field	Data sent to the UICC
Le	Not present

6.4.2.1   Parameters P1 and P2

P1 and P2 are set to '00', indicating the selection by file identifier as defined in ISO/IEC 7816-4 [2] for SELECT FILE command.

6.4.2.2   Data field sent in the command message

Table 8: Coding of the data field of the DELETE FILE command

Value	BytesM/O	Description	Length
	M	File ID	2 bytes

6.4.3   Response message

6.4.3.1   Data field returned in the response message

The data field of the response message is not present.

6.4.3.2   Status conditions returned in the response message

The following status conditions shall be returned by the UICC.

Table 9: DELETE FILE status conditions

SW1	SW2	Meaning
		Normal Processing
'90'	'00'	- normal ending of the command
		Errors
'63'	'0X'	- command successful but after using an internal update retry routine 'X' times
'65'	'81'	- memory problem
'67'	'00'	- incorrect length field
'69'	'00'	- Command not allowed (no information given)
'69'	'82'	- security status not satisfied
'6A'	'82'	- file not found
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- Instruction code not supported or invalid
'6E'	'00'	- Class not supported
'6F'	'00'	- technical problem with no diagnostic given
'6F'	'XX'	- technical problem, XX (proprietary) provides diagnostic except for SW2 = '00'

6.5   DEACTIVATE FILE

The support of this command is mandatory for an UICC compliant to the present document.

Refer to ETSI TS 102 221 [5] for the specification of the command.

6.6   ACTIVATE FILE

The support of this command is mandatory for an UICC compliant to the present document.

Refer to ETSI TS 102 221 [5] for the specification of the command.

This command initiates the transition of a file from:

*   the initialization state; or

*   the operational state (deactivated).

To the operational state (activated).

6.7   TERMINATE DF

6.7.1   Definition and scope

The TERMINATE DF command initiates the irreversible transition of the currently selected DF/ADF into the termination state (coding see LCSI coding in ISO/IEC 7816-4 [2]).

After a successful completion of the command, the DF/ADF is in terminated state and the DF/ADF shall no longer be available for any command except for the SELECT and the DELETE FILE command. All other commands on the terminated DF/ADF shall return the status code '6900' (command not allowed, no information given). Any files in the subtree of the DF/ADF are no longer accessible for any commands. If a file in the subtree of the DF/ADF is selected by another application, all commands that make a reference to this file shall return the status code '6900' (command not allowed, no information given). If the DF/ADF is selected the warning status SW1/SW2='6285' (selected file in termination state) shall be returned.

The command can be performed only if the security status satisfies the Security Attributes defined for this command.

   NOTE 1:   An appropriate security rule is to be setup and fulfilled in order to execute this command.

If a DF is indicated as not-shareable as defined in ETSI TS 102 221 [5] and is the current DF of one application, then another application cannot terminate it. If a DF is indicated as shareable as defined in ETSI TS 102 221 [5], then it can be terminated by an application independently of whether or not the DF is the current file of any other application.

NOTE 2: If another application is using concurrently the terminated DF, the processing by this application may fail.

6.7.2 Command message

6.7.2.0 Command coding

The TERMINATE DF command message is coded according to table 10.

Table 10: TERMINATE DF command message

Code	Value
CLA	See table 1
INS	See table 1
P1	'00'
P2	'00'
Lc	Not present
Data field	Not present
Le	Not present

6.7.2.1 Parameters P1 and P2

P1 and P2 are set to '00'.

6.7.2.2 Data field sent in the command message

The data field of the command message is not present.

6.7.3 Response message

6.7.3.1 Data field returned in the response message

The data field of the response message is not present.

6.7.3.2 Status conditions returned in the response message

The following status conditions shall be returned by the UICC.

Table 11: TERMINATE DF status conditions

SW1	SW2	Meaning
		Normal Processing
'90'	'00'	- normal ending of the command
		Errors
'65'	'81'	- memory problem
'67'	'00'	- incorrect length field
'69'	'82'	- security status not satisfied
'69'	'00'	- Command not allowed (no information given)
'69'	'85'	- condition of use not satisfied: - not-shareable file selected by another application
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- Instruction code not supported or invalid
'6E'	'00'	- Class not supported
'6F'	'00'	- technical problem with no diagnostic given
'6F'	'XX'	- technical problem, XX (proprietary) provides diagnostic except for SW2 = '00'

6.8 TERMINATE EF

6.8.1 Definition and scope

The TERMINATE EF command initiates the irreversible transition of the currently selected EF into the termination state (coding see LCSI coding in ISO/IEC 7816-4 [2]).

The command can be performed only if the security status satisfies the Security Attributes defined for this command.

After a successful completion of the command, the EF is in terminated state and the EF shall no longer be available for any command except for the SELECT and the DELETE FILE commands. All other commands on the terminated EF shall return the status code '6900' (command not allowed, no information given). If the EF is selected the warning status SW1/SW2='6285' (selected file in termination state) shall be returned.

If an EF is indicated as not-shareable as defined in ETSI TS 102 221 [5] and is the current EF of one application, then another application cannot terminate it. If an EF is indicated as shareable as defined in ETSI TS 102 221 [5], then it can be terminated by an application independently of whether or not the EF is the current file of any other application.

NOTE: If another application is using concurrently the terminated EF, the processing by this application may fail.

6.8.2 Command message

6.8.2.0 Command coding

The TERMINATE EF command message is coded according to table 12.

Table 12: TERMINATE EF command message

Code	Value
CLA	See table 1
INS	See table 1
P1	'00'
P2	'00'
Lc	Not present
Data field	Not present
Le	Not present

6.8.2.1 Parameters P1 and P2

P1 and P2 are set to '00'.

6.8.2.2 Data field sent in the command message

The data field of the command message is not present.

6.8.3 Response message

6.8.3.1 Data field returned in the response message

The data field of the response message is not present.

6.8.3.2 Status conditions returned in the response message

The following status conditions shall be returned by the UICC.

Table 13: TERMINATE EF status conditions

SW1	SW2	Meaning
		Normal Processing
'90'	'00'	- normal ending of the command
		Errors
'65'	'81'	- memory problem
'67'	'00'	- incorrect length field
'69'	'82'	- security status not satisfied
'69'	'85'	- condition of use not satisfied: - not-shareable file selected by another application
'69'	'00'	- Command not allowed (no information given)
'69'	'86'	- command not allowed (no EF selected)
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- Instruction code not supported or invalid
'6E'	'00'	- Class not supported
'6F'	'00'	- technical problem with no diagnostic given
'6F'	'XX'	- technical problem, XX (proprietary) provides diagnostic except for SW2 = '00'

6.9 TERMINATE CARD USAGE

6.9.1 Definition and scope

The TERMINATE CARD USAGE command initiates the irreversible transition of the UICC into the termination state. Use of this command gives an implicit selection of the MF.

The termination state should be indicated in the ATR (see ISO/IEC 7816-4 [2]) using the coding shown in ISO/IEC 7816-4 [2].

Following a successful completion of the command, no other than the STATUS command shall be supported by the UICC.

The intend of UICC termination is generally to make the UICC unusable by the cardholder.

The command can be performed only if the security status satisfies the Security Attributes defined for this command.

NOTE: An appropriate security rule is to be setup and fulfilled in order to execute this command.

6.9.2 Command message

6.9.2.0 Command coding

The TERMINATE CARD USAGE command message is coded according to table 14.

Table 14: TERMINATE CARD USAGE command message

Code	Value
CLA	See table 1
INS	See table 1
P1	'00'
P2	'00'
Lc	Not present
Data field	Not present
Le	Not present

6.9.2.1 Parameters P1 and P2

P1 and P2 are set to '00'.

6.9.2.2 Data field sent in the command message

The data field of the command message is not present.

6.9.3 Response message

6.9.3.1 Data field returned in the response message

The data field of the response message is not present.

6.9.3.2 Status conditions returned in the response message

The following status conditions may be returned by the UICC.

Table 15: TERMINATE CARD USAGE status conditions

SW1	SW2	Meaning
		Normal Processing
'90'	'00'	- normal ending of the command
		Errors
'65'	'81'	- memory problem
'67'	'00'	- incorrect length field
'69'	'82'	- security status not satisfied
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- instruction code not supported or invalid
'6E'	'00'	- Class not supported
'6F'	'00'	- technical problem with no diagnostic given
'6F'	'XX'	- technical problem, XX (proprietary) provides diagnostic except for SW2 = '00'

6.10 RESIZE FILE

6.10.1 Definition and scope

This command allows to modify the memory space allocated to the MF, a DF/ADF, a transparent file or a linear fixed file or a BER TLV structured EF under the current directory (MF, DF/ADF). This command shall not be allowed for a cyclic file.

If the RESIZE FILE command is used for an ADF, this ADF can only be the ADF of the current active application on this logical channel.

If a file is indicated as not-shareable as defined in ETSI TS 102 221 [5] and is the current file of one application, then another application cannot resize it. If a file is indicated as shareable as defined in ETSI TS 102 221 [5], then it can be resized by an application independently of whether or not the file is the current file of any other application.

If the card cannot provide the requested memory, the error status SW1/SW2="6A84" (not enough memory space) shall be returned.

MF or DF/ADF resizing may be not allowed for a card implementing dynamic allocation of memory (memory is allocated for the whole UICC). If not allowed, the error status SW1/SW2="6985" (condition of use not satisfied) shall be returned.

The access condition for the RESIZE FILE command shall be fulfilled for the file to be resized.

The RESIZE FILE access condition is indicated in the access rules using AM_DO tag '84'. Tag '84' indicates that the INS code for the RESIZE FILE command is indicated as the value in the TLV object (instruction code 'D4'). The RESIZE FILE command can only be used on files that refer to an access rule where this INS code is indicated as part of the rule.

In case of successful execution of the command, the EF or directory on which the command was applied is selected.

If the RESIZE FILE command was performed on a linear fixed file the record pointer shall be undefined, if it pointed to a record which no longer exists. Otherwise it shall be unchanged. This applies to all applications having a record pointer set to the resized file.

If the RESIZE FILE command was performed, on a BER TLV structured EF the tag pointer shall be undefined if the data object it pointed to was deleted due to the RESIZE command. Otherwise it shall be unchanged. This applies to all applications having a tag pointer set to the resized file.

NOTE: If another application is using concurrently the resized file, the processing by the application may fail.

After an unsuccessful execution of the command, the current file shall remain the same as prior to the execution. If in this case the RESIZE FILE command was performed on a linear fixed file the record pointer shall not be changed, on a BER TLV structured EF the tag pointer shall not be changed.

After a successful execution of the command, the Total File Size, if applicable, and the File Size TLVs defined in the FCP template of the modified file shall be updated accordingly.

The allocated memory space is updated according to the new data size.

For a linear fixed file, the RESIZE FILE command modifies the number of records but does not change the record length.

In case the size of a linear fixed or transparent EF is increased:

- the extension data shall be appended to the end of the existing data (e.g. if 3 records are added to a linear fixed EF with 2 records, these 2 records remain the record 1 and 2 in the increased file, and the 3 new records will become the records 3, 4 and 5); and

- the data contained in the previously allocated memory space shall not be modified by the RESIZE FILE command (e.g. if 3 records are added to a linear fixed EF with 2 records, the content of the 2 initially allocated records shall be identical before and after the execution of the RESIZE FILE command); and

- the newly allocated memory space shall be initialized with 'FF'. The content of the whole newly allocated memory space shall consist of bytes of this value. If, for some applications, other default values are required, this default behaviour can be overwritten by specifying an appropriate TLV in the application dependent data TLV (tag '85' and 'A5') of the RESIZE FILE command.

In case the size of a linear fixed or transparent EF is decreased:

- the removed data shall be deleted and removed from the end of the existing data (e.g. if 3 bytes are removed from a transparent EF with 5 bytes, the bytes 3, 4 and 5 shall be removed from the file); and

- the remaining data already contained in the previously allocated memory space shall not be modified by the RESIZE FILE command (e.g. if 3 bytes are removed from a transparent EF with 5 bytes, the content of the 2 remaining bytes shall be identical before and after the execution of the RESIZE FILE command).

For a BER TLV structured EF, the Reserved File Size or the Maximum File Size or both can be resized. If the Maximum File Size is decreased and the new size conflicts with the used size, then depending on the mode chosen the command is rejected or all objects in the file are deleted.

If the File Size of the MF or a DF/ADF is increased its content is unchanged.

The size of the MF or a DF/ADF can only be decreased if the current amount of memory (including structural information) allocated to the child EFs and DFs is lower or equal to the new requested size. Otherwise, the command is not allowed and the error status SW1/SW2='6985' (condition of use not satisfied) shall be returned.

6.10.2 Command message

6.10.2.0 Command coding

The RESIZE FILE command message is coded according to table 16.

Table 16: RESIZE command message

Code	Value
CLA	See table 1
INS	See table 1
P1	See table 16A
P2	'00'
Lc	Length of the subsequent data field
Data Field	Data sent to the ICC
Le	Not present

Table 16A: Coding of P1 for a BER TLV structured EF

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
0	0	0	0	0	0	0	0	Mode 0
0	0	0	0	0	0	0	1	Mode 1
Any other value								RFU

For other file types, P1 shall be set to '00'.

6.10.2.1 Data field sent in the command message

Table 17: Coding of the data field of the RESIZE FILE command

Value	M/O/C	Description	Length
'62'	M	Tag: FCP Template	1 byte
LL		Length of FCP Template (next byte to the end)	1 byte or 2 bytes
'83'	M	Tag: File ID	1 byte
'02'		Length of the File ID	1 byte
		File ID	2 bytes
'80'	O	Tag: File Size (Reserved File Size)	1 byte
LL		Length of the File Size	1 byte
		File Size (New File Size)	X bytes
'81'	O	Tag: Total File Size	1 byte
LL		Length of Total File Size	1 byte
		Total File Size (New Total File Size)	Y bytes
'85' or 'A5'	O	Tag proprietary, application dependent data	1 byte
LL		Length of application dependent data	1 byte or 2 bytes
		Application dependent data (see below for tag 'A5')	Z bytes

There is at most one occurrence of the following Tags.

Tag '83': File ID

Contains the FID of the MF, ADF, DF or EF to be resized. In order to specify the ADF of the currently selected application on this logical channel, the FID '7FFF' shall be used.

Tag '80': File Size (Reserved File Size)

This TLV shall only be provided if an EF is resized. It contains the New File Size for this EF.

This size is the new number of bytes allocated for the body of the EF (i.e. it does not include structural information).

In the case of an EF with linear fixed structure, the File Size shall be the record length multiplied by the number of records of the EF; otherwise the command is rejected. The New File Size shall contain at least one record.

For transparent files, if this size is set to '00', all the content of the EF is removed but the EF is not deleted (it is then exactly as if the EF was created with a size set to '00') and the structural information is still available.

For BER TLV structured EF, if File Size is present, it indicates the minimum number of bytes reserved for the body of the file. The value shall include administrative overhead (if any) that is required to store TLV objects, but not the structural information for the file itself. The content of the file shall not be altered whatever is the new reserved file size value.

Tag '81': Total File Size

This TLV shall only be provided if the MF or a DF/ADF is resized. It contains the New Total File Size for the MF or this DF/ADF.

This size is the new amount of physical memory allocated for the MF or a DF/ADF (i.e. it does not include structural information) for card not implementing dynamic allocation of memory.

The amount of EFs or DFs which may be created is implementation dependent.

The MF or DF/ADF can be resized to '00' only if it does not contain any file. In this case, the structural information is still available for the MF or DF/ADF. For an ADF, the resizing to '00' does not affect EF_{DIR} and any other information necessary to administer an application.

Tag 'A5' Proprietary, application dependent

This is a constructed TLV object.

The following TLV objects are defined for the proprietary template (tag 'A5'). Additional private TLV objects (bits b7 and b8 of the first byte of the tag set to '1') may be present after the TLV objects defined in this clause.

Table 18

Value	M/O/C	Description	Length
'C1'	O (see note 1)	Tag: Filling Pattern	1 byte
LL		Length of Filling Pattern	1 byte or 2 bytes
		Filling Pattern Value	W bytes
'C2'	O (see note 1)	Tag: Repeat Pattern	1 byte
LL		Length of the Repeat Pattern	1 byte or 2 bytes
		Repeat Pattern Value	X bytes
'86'	C (see note 2)	Tag: Maximum File Size (New Maximum File Size)	1 byte
LL		Length of Maximum File Size (New Maximum File Size)	1 byte
		Maximum File Size (New Maximum File Size)	Y bytes
		Additional private TLV objects	Z bytes
NOTE 1: Tag 'C1' and Tag 'C2' shall not be both present within the same command. In the case the size of a MF/DF/ADF of EF is decreased these Tags shall be ignored. Tag 'C1' and 'C2' are not applicable in case of a BER-TLV structured EF and in case the command is performed on a MF/DF or ADF.			
NOTE 2: Tag '86' shall only be present for BER TLV structured EFs, for which it is optional.			

Tag 'C1': Filling Pattern within the proprietary TLV (tag 'A5')

The Filling Pattern may have any length W>0 and shall be used as follows:

The first W-1 bytes of the newly allocated memory space of the transparent EF or the first W-1 bytes of each newly created record shall be initialized with the first W-1 bytes of the Filling Pattern. All remaining bytes (if any) shall be initialized with the value of the last byte of the Filling Pattern. If the newly allocated memory space or record length is shorter than the Filling Pattern, the Filling Pattern shall be truncated accordingly.

Tag 'C2': Repeat Pattern within the proprietary TLV (tag 'A5'):

The Repeat Pattern may have any length X and shall be used as follows:

The first X bytes of the newly allocated memory space of the transparent EF or the first X bytes of each newly created record shall be initialized with the X bytes of the Repeat Pattern. This shall be repeated consecutively for all remaining blocks of the new X bytes of data in the file or in the new records. If necessary, the Repeat Pattern shall be truncated at the end of the file or at the end of each new record to initialize the remaining bytes.

Tag '86': Maximum File Size within the proprietary TLV (tag 'A5')

This TLV may only be provided if a BER-TLV structured EF is resized.

Maximum File Size indicates the new maximum number of bytes that can be allocated for the body of the file. The value shall include administrative overhead (if any) that is required to store TLV objects, but not the structural information for the file itself.

In case the New Maximum File Size is decreased and the size used by the existing TLV is greater than the New Maximum File Size:

- If P1 indicates Mode 0, all existing TLV objects shall be deleted. The file itself shall not be deleted. The New Maximum File Size is assigned to the file.

- If P1 indicates Mode 1, no action is performed and the error status SW1/SW2='6985' (condition of use not satisfied) shall be returned.

6.10.3 Response message

6.10.3.1 Data field returned in the response message

The data field of the response message is not present.

6.10.3.2 Status conditions returned in the response message

The following status conditions shall be returned by the ICC.

Table 19: RESIZE FILE status conditions

SW1	SW2	Meaning
		Normal Processing
'90'	'00'	- normal ending of the command
'63'	'0X'	- command successful but after using an internal update retry routine 'X' times
		Errors
'65'	'81'	- memory problem
'67'	'00'	- incorrect length field
'69'	'00'	- Command not allowed (no information given)
'69'	'81'	- command incompatible with file structure
'69'	'82'	- security status not satisfied
'69'	'84'	- referenced data invalidated
'69'	'85'	- condition of use not satisfied: - command not allowed on MF/DF/ADF - new MF/DF/ADF size lower than current MF/DF/ADF content size - new maximum size is lower than current BER-TLV EF content size.
'6A'	'80'	- incorrect parameters in the data field
'6A'	'82'	- file not found
'6A'	'84'	- not enough memory space
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- Instruction code not supported or invalid
'6E'	'00'	- Class not supported
'6F'	'00'	- technical problem with no diagnostic given
'6F'	'XX'	- technical problem, X (proprietary) provides diagnostic

7 Administrative files

7.1 EF_{SUME} (SetUpMenu Elements)

This file is located under DF_{TELECOM} ('7F10').

This EF contains COMPREHENSION TLVs related to the menu title to be used by a UICC when issuing a SET UP MENU proactive command.

Identifier: '6F 54'		Structure: transparent		Optional
File size: X + Y + Z + P bytes		Update activity: low		

Access Conditions:
    READ   ADM
    UPDATE   ADM
    DEACTIVATE   ADM
    ACTIVATE ADM				

Bytes	**Description**		**M/O**	**Length**
1 to X	Title Alpha Identifier		M	X bytes
X + 1 to X + Y	Title Icon Identifier		O	Y bytes
X + Y + 1 to X + Y + Z	Title Text Attribute		O	Z bytes
X + Y + Z + 1 to X + Y + Z + P	'FF' Padding		O	P bytes

- Title Alpha Identifier

  Contents: this field contains the Alpha Identifier COMPREHENSION TLV defining the menu title text.

  Coding: according to ETSI TS 102 223 [8].

- Title Icon Identifier

  Contents: this field contains the Icon Identifier COMPREHENSION TLV defining the menu title icon.

  Coding: according to ETSI TS 102 223 [8].

- Title Text Attribute

  Contents: this field contains the Text Attribute COMPREHENSION TLV defining the menu title text attribute.

  Coding: according to ETSI TS 102 223 [8].

7.2 EF~RMA~ (Remote Management Actions)

This file is located under DF~TELECOM~ ('7F10').

This EF contains records with COMPREHENSION TLVs of proactive commands used in remote management.

Identifier: '6F 53'		Structure: linear fixed		Optional
Record length: R bytes		Update activity: low		

Access Conditions:
    READ   ADM
    UPDATE   ADM
    DEACTIVATE   ADM
    ACTIVATE ADM				

Format of each record that can be referenced by a remote management script:				
Bytes	**Description**		**M/O**	**Length**
1 to X	Length of next field		M	X bytes
X + 1 to X + Y	Set of COMPREHENSION-TLV data objects		M	Y bytes
X + Y + 1 to R	Padding (value undefined)		O	R - X - Y bytes

- Length of next field

  Contents: length of the list of COMPREHENSION-TLV data objects.

  Coding: as defined for BER TLVs in ETSI TS 101 220 [7].

- Set of COMPREHENSION-TLV data objects

  Contents: a set of COMPREHENSION-TLV data objects constituting a proactive command.

  Coding: according to ETSI TS 102 223 [8].

Annex A (informative):
Change history

The table below indicates all changes that have been incorporated into the present document since it was created by TC SET (former TC SCP).

Change history								
Date	Meeting	TC SCP Doc.	CR	Rev	Cat	Subject/Comment	Old	New
2000-05	SCP-01	9-00-0149	-		-	Final draft approved for publication		3.0.0
2000-11	SCP-03	9-00-0437	002		F	Alignments with ETSI TS 102 221 regarding CREATE FILE command. Note that CR 002 includes corrections which had originally been agreed in CR 001 in T3-000347.	3.0.0	3.1.0
		9-00-0438	003		F	Alignments with ETSI TS 102 221 regarding access conditions		
		9-00-0439	004		F	Alignments with ETSI TS 102 221 concerning editorial changes		
		9-00-0436	005		F	Administrative command: proprietary information added		
2001-05	SCP-05	SCP-010120	006		F	Correction of the annex applying to the SIM	3.1.0	3.2.0
		SCP-010144	007		F	Allocation of memory for a file		
2001-10	SCP-07	SCP-010305	008		F	Correction of the CREATE FILE command	3.2.0	3.3.0
2002-09	SCP-11	SCP-020256	009		F	Clarification of the SFI management by the CREATE FILE command	3.3.0	3.4.0
2003-01	SCP-12	SCP-030020	011		F	Correction of return status conditions in case of technical problem.	3.4.0	6.0.0
		SCP-030075	012	1	D	Suppression of duplicated information with ETSI TS 102 221		
		SCP030079	010	1	D	Reference ETSI TS 101 220 for definition of TLV		
2003-05	SCP-13	SCP-030122	014		B	Additional Status Words for CREATE FILE and DELETE FILE command	6.0.0	6.1.0
2003-09	SCP-14	SCP-030224	016		F	Alignment of ETSI TS 102 222 with TC SCP specifications	6.1.0	6.2.0
2003-12	SCP-15	SCP2-030253	015	1	B	Addition of the RESIZE Command	6.2.0	6.3.0
		SCP2-030260	017		C	Clarification of DELETE FILE command		
2004-02	SCP-16	SCP-040091	021	2	B	Addition of a filling pattern TLV in the CREATE FILE command for an EF	6.3.0	6.4.0
		SCP-040042	022		D	Deletion of two empty references		
		SCP-040042	023		C	Description of deletion of a shareable file		
		SCP-040090	024	1	B	Addition of a filling pattern TLV in the RESIZE command in case the size of an EF is increased.		
		SCP-040042	025		B	Add "command not allowed" status condition in TERMINATE EF command		
		SCP-040070	027	1	B	Introduction of EF$_{SUME}$ File		
2004-05	SCP-17	SCP-040218	031		D	Renaming of Resize command to Resize File	6.4.0	6.5.0
		SCP-040218	028		B	Add "incorrect parameters in the data field" status condition in RESIZE command		
		SCP-040218	029		B	Authorize Create File and Resize File on any channel		
		SCP-040218	030		B	Addition of text attribute for the menu title		
2004-09	SCP-18	SCP-040346	032		F	Correction of CLA byte for Create/Delete/Resize/Activate/Deactivate	6.5.0	6.6.0
		SCP-040346	033		F	Alignment with ETSI TS 102 221 terminology in status conditions		
		SCP-040368	034	1	B	Add support for BER-TLV structure EF administration (Create and Resize)		
2004-12	SCP-19	SCP-040415	038		A	Clarification of the interpretation of non-specific references to other specifications	6.6.0	6.7.0
		SCP-040415	039		C	Allow Terminate commands on any logical channels		
		SCP-040415	040		F	Change presence of proprietary tag of CREATE FILE to conditional and clarify presence of Maximum File Size tag of RESIZE command		
		SCP-040415	041		F	Correction of length coding of FCP template		
		SCP-040415	042		F	Correction and clarifications		
		SCP-040415	043		D	Editorial modifications linked to BER TLV file introduction		

Change history								
Date	**Meeting**	**TC SCP Doc.**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**Old**	**New**
2005-01		SCPt040586	045		F	Missing modifications related to TERMINATE on all logical channels	6.7.0	6.8.0
		SCPt040588	046		F	Clarification of DELETE FILE in case of concurrent EF file access		
2005-09	SCP-22	SCP-050245	047		F	Remove DELETE without FID	6.8.0	6.9.0
		SCP-050275	048		F	Clarify definition of "current file"		
		SCP-050228	052		A	Modifications due to revision of ISO/IEC 7816 series		
2005-12	SCP-23	SCP-050461	055		F	Clarification on RESIZE Command for shareable/non-shareable files	6.9.0	6.10.0
2006-03	SCP-25	SCP-060141	056		F	Correction of a reference to a table for RESIZE command	6.10.0	6.11.0
2006-07	SCP-26	SCP-060281	054	3	B	Clarification on TERMINATE EF and TERMINATE DF Commands	6.11.0	7.0.0
2007-01	SCP-29	SCP-070054	056		B	EF for Action Commands	7.0.0	7.1.0
2014-08	SCP-65	SCP(14)000206r1	057	1	B	Support of extended logical channels for Administrative Commands	7.1.0	12.0.0
2018-04	SCP-83	SCP(18)000084	058		D	Alignment of Definitions and Abbreviations in SCP Specifications	12.0.0	15.0.0
2022-07						Automatic Upgrade	15.0.0	16.0.0
2022-07	SET-106	SET(22)000038	059			Introduction of LSEs	16.0.0	17.0.0

History

Document history		
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