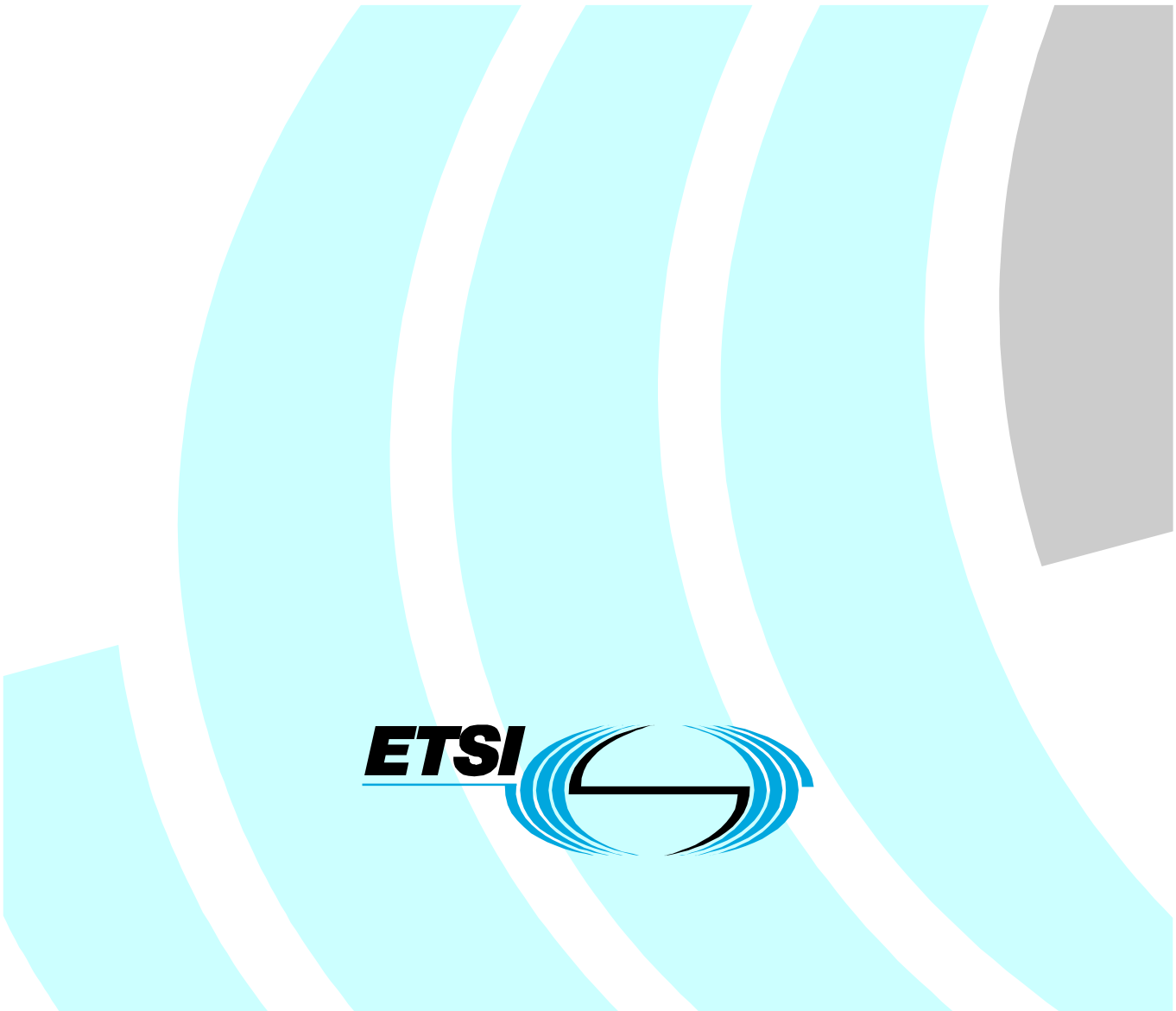
ETSI TS 102 222 V6.0.0 (2003-02)

Technical Specification

Integrated Circuit Cards (ICC);
Administrative commands
for telecommunications applications
(Release 6)



Reference
RTS/SCP-020368

Keywords
GSM, smart card, UMTS

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1 Scope

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

The commands defined in the present document are compliant to the commands defined in the ISO/IEC 7816 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 series. An IC Card 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 IC Card to provide more functionality than described in the present document.

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

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

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

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

[3] ISO/IEC 7816-8 (1999): "Identification cards - Integrated circuit(s) cards with contacts - Part 8: Security related interindustry commands".

[4] ISO/IEC 7816-9 (2000): "Identification cards - Integrated circuit(s) cards with contacts - Part 9: Additional interindustry commands and security attributes".

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

[6] ETSI TS 151 011: "Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM-ME) interface (3GPP TS 51.011 Release 4)".

[7] ETSI TS 101 220: "Smart cards; ETSI numbering system for telecommunication application providers (Release 6)".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions 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 ICC

current directory: latest directory (Dedicated File (DF) or Master File (MF)) selected in the ICC

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

current file: latest file (DF or EF) selected in the ICC

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 or DF

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

NOTE: It cannot be the parent of another file.

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

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.

operating system: required to manage the logical resources of a system, including process scheduling and file management

operating system termination state: ICC in this state shall be permanently unusable for the cardholder

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

record number: is sequential and unique within an EF

NOTE: It is managed by the ICC.

telecommunication card: ICC 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
ADM	ADMinistrative
ALW	ALWays
AM	Access Mode byte
AM_DO	Access Mode Data Object
APDU	Application Protocol Data Unit
ARR	Access Rule References
AT	Authentication Template
ATR	Answer To Reset
CCT	Cryptographic Checksum Template
CLA	CLAss
CRT	Control Reference Template
CT	Confidentiality Template
DF	Dedicated File (abbreviation formerly used for Data Field)
DST	Digital Signature Template
EF	Elementary File
FCP	File Control Parameters
GSM	Global System for Mobile communications
IC	Integrated Circuit
ICC	Integrated Circuit(s) Card
ID	IDentifier
IEC	International Electrotechnical Commission
INS	INStruction
ISO	International Organization for Standardization
Lc	Length of command data sent by the application layer
LCSI	Life Cycle Status Information
Le	Maximum length of data expected by the application layer
LSB	Least Significant Bit
M	Mandatory
MF	Master File
MSB	Most Significant Bit
O	Optional
PIN	Personal Identification Number
PS	PIN Status
PS_DO	PIN Status Data Object
RFU	Reserved for Future Use
SC	Security Condition
SC_DO	Security Condition Data Object
SE	Security Environment
SEID	Security Environment ID
SIM	Subscriber Identity Module
SM	Secure Messaging
SW1/SW2	Status Word 1/Status Word 2
TLV	Tag Length Value

4 Mapping principles

IC Cards compliant to the present document shall follow the rules of 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 TS 102 221 [5].

6 Description of the functions and commands

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	'00'	'E0'
DELETE FILE	'00'	'E4'
DEACTIVATE FILE	'00'	'04'
ACTIVATE FILE	'00'	'44'
TERMINATE DF	'00'	'E6'
TERMINATE EF	'00'	'E8'
TERMINATE CARD USAGE	'00'	'FE'

The coding of the CLA-bytes shall be according to ISO/IEC 7816-4 [2], clause 5.4.1.

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, the Lc and data field must 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] or ISO/IEC 7816-8 [3].

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 ICC.

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, see ISO/IEC 7816-4 [2]) or 'A5' (Proprietary Information Constructed, see ISO/IEC 7816-9 [4]).

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 DF or ADF. The access condition for the CREATE FILE function of the current DF or ADF shall be fulfilled.

When creating an EF with linear fixed or cyclic structure the ICC 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.

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

This command can be performed only if logical channel 0 is selected and no other logical channel is open.

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 provided 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

The CREATE FILE command message is coded according to table 5.

Table 2: CREATE FILE command message

Code	Value
CLA	As defined in ISO/IEC 7816-4 [2], b1and b2 set to 0
INS	'E0'
P1	'00'
P2	'00'
Lc	Length of the subsequent data field
Data field	Data sent to the ICC
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

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

Value	M/O	Description	Length
'62'	M	Tag: FCP Template	1 byte
LL		Length (byte 3 to the end)	1 byte
'82'	M	Tag: File descriptor	1 byte
'02'		Length of file descriptor	1 byte
xx		File descriptor byte indicating DF, see table 7	1 byte
'21'	M	Data Coding Byte	1 byte
'83'	M	Tag: File ID	1 byte
'02'		Length of file ID	1 byte
xx xx		File ID	2 bytes
'84'	O	Tag: DF Name	1 byte
LL		Length of DF Name	1 byte
xx		DF Name	1 - 16 bytes
'8A'	M	Life Cycle Status Information (LCSI)	1 byte
'01'		Length of the LCSI	1 byte
xx		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
xx ... xx	M	Data for the security attributes	
'81'	M	Tag: Total file size	1 byte
X, X ≥2		Length of number	1 byte
xx ... xx		Number of data bytes	X bytes
"C6"	M	Tag: PIN Status Template DO	1 byte
LL		Length of PIN Status Template DO	1 byte
xx ... xx		PIN Status Template DO	X bytes
'85' or 'A5'	O	Tag: Proprietary, application dependent	1 byte
LL		Length of application dependent data	1 byte
		Application dependent data (see below)	
LL: indicates a length of a TLV object coded in one hexadecimal byte. xx: indicates one hexadecimal byte.			

Security attributes:

At least the key references that are used to allow access during the operational phase of the IC card are to 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 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 ICC 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 according to table 7.

Table 4: File descriptor byte

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
0	x	-	-	-	-	-	-	**File accessibility**
0	0	-	-	-	-	-	-	Not shareable file
0	1	-	-	-	-	-	-	Shareable file
0	-	x	x	x	-	-	-	**File type**
0	-	0	0	0	-	-	-	Working EF
0	-	0	0	1	-	-	-	Internal EF
0	-	0	1	0	-	-	-	RFU
0	-	0	1	1	-	-	-	
0	-	1	0	0	-	-	-	
0	-	1	0	1	-	-	-	
0	-	1	1	0	-	-	-	
0	-	1	1	1	-	-	-	DF or ADF
0	-	-	-	-	x	x	x	**EF structure**
0	-	-	-	-	0	0	0	No information given
0	-	-	-	-	0	0	1	Transparent
0	-	-	-	-	0	1	0	Linear fixed
0	-	-	-	-	0	1	1	RFU
0	-	-	-	-	1	0	0	
0	-	-	-	-	1	0	1	
0	-	-	-	-	1	1	0	Cyclic
0	-	-	-	-	1	1	1	RFU
1	x	x	x	x	x	x	x	RFU

The data coding byte can be used differently according to table 86 in ISO/IEC 7816-4 [2]. For the present document, the value '21' (proprietary) shall be used and shall not be interpreted by the ICC.

Tag '84': DF Name:

This TLV shall only be provided if an ADF is created. The DF name is a string of bytes which is used to uniquely identify a dedicated file in the card.

Tag '8A': Life Cycle Status Information LCSI

Table 5: Coding of Life Cycle Status Integer

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
0	0	0	0	0	0	0	0	No information given
0	0	0	0	0	0	0	1	Creation state
0	0	0	0	0	0	1	1	Initialization state
0	0	0	0	0	1	-	1	Operational state - activated
0	0	0	0	0	1	-	0	Operational state - deactivated
0	0	0	0	1	1	-	-	Termination state
≠ 0				x	x	x	x	Proprietary
Any other value								RFU

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 command.

Tag "C6": PIN Status Template DO

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

6.3.2.2.2 Creating an EF

Table 6: Coding of the data field of the CREATE FILE command (in case of the creation of an EF)

Value	M/O	Description	Length
'62'	M	Tag: FCP Template	1 byte
LL		Length (next byte to the end)	1 byte
'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
LL		Length of the data (indicating 2 or 4 bytes)	1 byte
xx	M	File Descriptor Byte, see table 7	1 byte
'21'	M	Data Coding Byte	1 byte
xx xx	O	only available, if a record structured file (i.e. for linear fixed or cyclic file) is created	2 bytes
'83'	M	Tag: File ID	1 byte
'02'		Length of the File ID	1 byte
xx xx		File ID	2 bytes
'8A'	M	Life Cycle Status Information (LCSI)	1 byte
'01'		Length of the LCSI	1 byte
xx		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
xx ... xx	M	Data for the security attributes	
'80'	M	Tag: File size	1 byte
'02'		Length of the number of bytes	1 byte
xx xx		Number of data bytes	2 bytes
'88'	O	Tag: Short File Identifier	1 byte
LL		Length of Short File Identifier	1 byte
xx		Short File Identifier	1 byte
'A5'	O	Tag proprietary, application dependent	1 byte
LL+3		Length of application dependent data	1 byte
		Application dependent data (see below)	
'C0'		Tag: Special file information (file status byte) (within proprietary tag)	1 byte
'01'		Length	1 byte
xx		Special file information (file status byte)	1 byte
xx ... xx		Additional application dependent data (see annex)	LL bytes

Tag '80' File size:

File size indicates the number of bytes allocated for the body of the file (i.e. it does not include structural information). 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.

Tag '82': File Descriptor

The File Descriptor Byte shall be coded according to table 7.

The data coding byte can be used differently according to table 86 in ISO/IEC 7816-4 [2]. For the present document, the value '21' (proprietary) shall be used and shall not be interpreted by the ICC.

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

Tag '8A': Life Cycle Status Information LCSI

Table 7: Coding of Life Cycle Status Integer

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
0	0	0	0	0	0	0	0	No information given
0	0	0	0	0	0	0	1	Creation state
0	0	0	0	0	0	1	1	Initialization state
0	0	0	0	0	1	-	1	Operational state - activated
0	0	0	0	0	1	-	0	Operational state - deactivated
0	0	0	0	1	1	-	-	Termination state
≠ 0				x	x	x	x	Proprietary
Any other value								RFU

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 command.

Tag '88' Short File Identifier:

The short file identifier is coded from bits b8 to b4. Bits b3,b2,b1 = 000.

The following 3 cases shall be supported by the ICC if the ATR indicates that the ICC 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 not supported by the EF;
- Tag '88' is available in the CREATE FILE command, there is a short file identifier value in the TLV: Short file identifier is supported by the EF.

Tag 'C0' Special File Information (file status byte) within the proprietary TLV (tag 'A5').

Table 8: 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

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 ICC.

Table 9: CREATE FILE successful 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'	'82'	- security status not satisfied
'69'	'85'	- Condition of use not satisfied: - more than 1 logical channel open - selected logical channel not channel 0
'6A'	'84'	- not enough memory space
'6A'	'89'	- file ID already exists
'6A'	'8A'	- DF name already exists (only for creation of a DF and if a DF Name TLV is used)
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- command not supported or invalid
'6E'	'00'	- wrong instruction class given in the command
'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.

The access condition for the DELETE FILE function of the current DF shall be fulfilled.

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.

This command can be performed only if logical channel 0 is selected and no other logical channel is open.

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

The DELETE FILE command message is coded according to table 13.

Table 10: DELETE FILE command message

Code	Value
CLA	As defined in ISO/IEC 7816-4 [2], b1 and b2 set to 0
INS	'E4'
P1	'00'
P2	'00'
Lc	Length of the subsequent data field
Data field	Data sent to the ICC
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 11: Coding of the data field of the DELETE FILE command

Bytes	Description	Length
1 – 2	File ID (optional)	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 ICC.

Table 12: 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'	'82'	- security status not satisfied
'69'	'85'	- Condition of use not satisfied: - more than 1 logical channel open - selected logical channel not channel 0
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- command not supported or invalid
'6E'	'00'	- wrong instruction class given in the command
'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 ICC compliant to the present document.

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

6.6 ACTIVATE FILE

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

Refer to 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 into the termination state (coding see LCSI coding in ISO/IEC 7816-9 [4]).

Following a successful completion of the command, the DF is in terminated state and the functionality available from the DF and its subtree is reduced. The DF shall be selectable and if selected the warning status SW1/SW2='6285' (selected file in termination state) shall be returned.

Further possible actions are not defined.

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

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

This command can be performed only if logical channel 0 is selected and no other logical channel is open.

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

6.7.2 Command message

The TERMINATE DF command message is coded according to table 16.

Table 13: TERMINATE DF command message

Code	Value
CLA	As defined in ISO/IEC 7816-4 [2], b1 and b2 set to 0
INS	'E6'
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 ICC.

Table 14: 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'	'85'	- Condition of use not satisfied: - more than 1 logical channel open - selected logical channel not channel 0
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- command not supported or invalid
'6E'	'00'	- wrong instruction class given in the command
'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 7816-9 [4]).

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

This command can be performed only if logical channel 0 is selected and no other logical channel is open.

6.8.2 Command message

The TERMINATE EF command message is coded according to table 18.

Table 15: TERMINATE EF command message

Code	Value
CLA	As defined in ISO/IEC 7816-4 [2], b1 and b2 set to 0
INS	'E8'
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 ICC.

Table 16: 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: - more than 1 logical channel open - selected logical channel not channel 0
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- command not supported or invalid
'6E'	'00'	- wrong instruction class given in the command
'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 ICC 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 table 2 of ISO/IEC 7816-9 [4].

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

The intend of ICC termination is generally to make the ICC 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

The TERMINATE CARD USAGE command message is coded according to table 20.

Table 17: TERMINATE CARD USAGE command message

Code	Value
CLA	As defined in ISO/IEC 7816-4 [2], b1 and b2 set to 0
INS	'FE'
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 ICC.

Table 18: 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
'69'	'85'	- Condition of use not satisfied: - more than 1 logical channel open - selected logical channel not channel 0
'6B'	'00'	- incorrect parameter P1 or P2
'6D'	'00'	- command not supported or invalid
'6E'	'00'	- wrong instruction class given in the command
'6F'	'00'	- technical problem with no diagnostic given
'6F'	'XX'	- technical problem, XX (proprietary) provides diagnostic except for SW2 = '00'

Annex A (informative): Change history

The table below indicates all changes that have been incorporated into the present document since it was created by EP SCP.

Change history								
Date	**Meeting**	**EP 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 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 TS 102 221 regarding access conditions		
		9-00-0439	004		F	Alignments with 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 TS 102 221		
		SCP030079	010	1	D	Reference ETSI TS 101 220 for definition of TLV		

History

Document history		
V6.0.0	February 2003	Publication