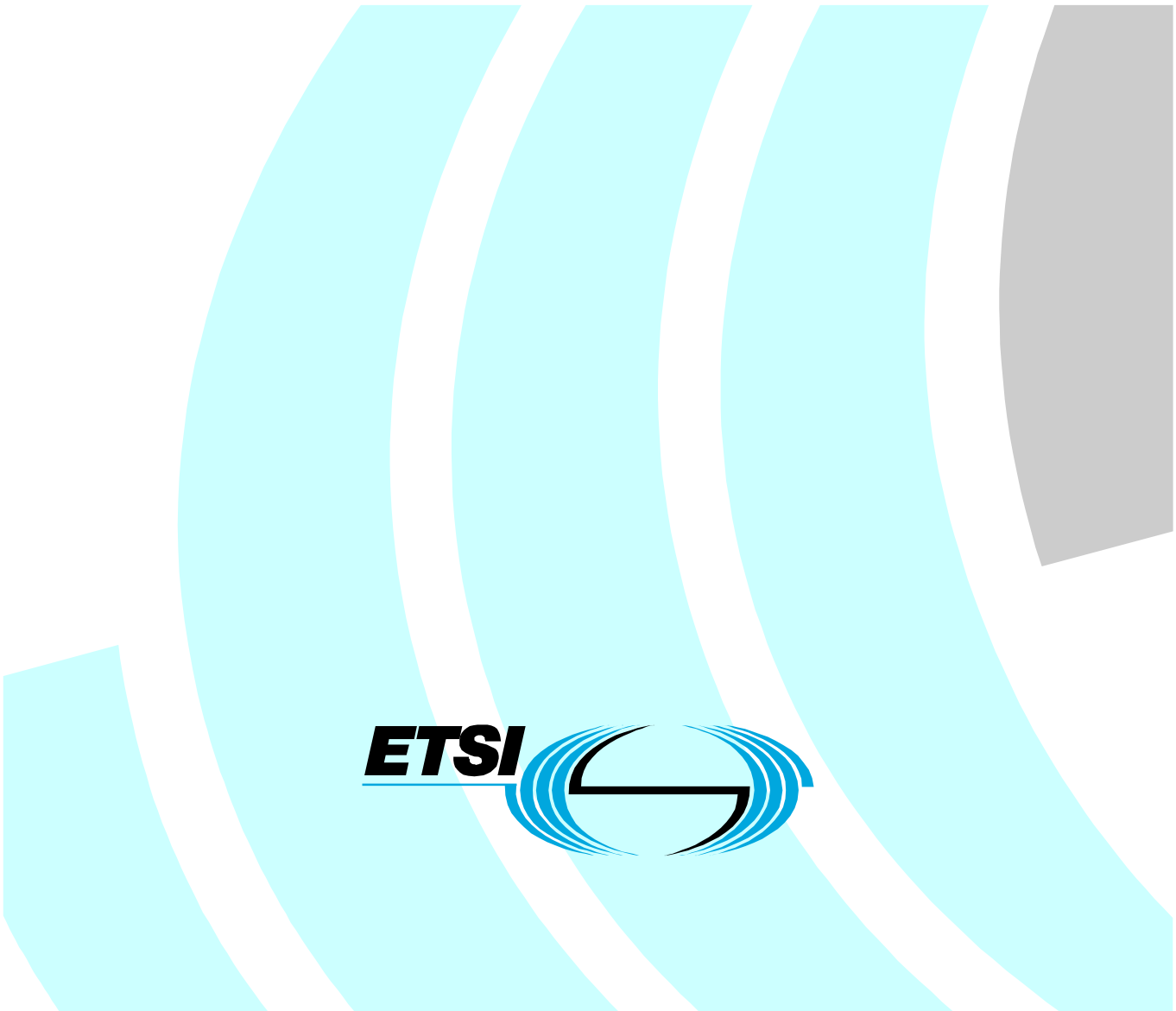
ETSI TS 101 220 V6.5.0 (2004-09)

Technical Specification

Smart cards;
ETSI numbering system
for telecommunication application providers
(Release 6)



Reference
RTS/SCP-T004r9

Keywords
GSM, ID, smart card, UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://webapp.etsi.org/IPR/home.asp).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Project Smart Card Platform (SCP).

The contents of the present document are subject to continuing work within EP SCP and may change following formal EP SCP approval. If EP SCP modifies the contents of the present document, it will then be republished by ETSI with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

- 0 early working draft;
- 1 presented to EP SCP for information;
- 2 presented to EP SCP for approval;
- 3 or greater indicates EP SCP approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document provides for the administration of shared name spaces in use by applications on the UICC including the managed allocation of identifiers from these name spaces.

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 7816-5 (1994): "Identification cards - Integrated circuit(s) cards with contacts - Part 5: Numbering system and registration procedure for application identifiers".

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

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

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

[5] Void.

[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)".

[7] ETSI TS 101 267: "Digital cellular telecommunications system (Phase 2+); Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM-ME) interface (3GPP TS 11.14)".

[8] ETSI TS 143 019: "Digital cellular telecommunications system (Phase 2+); Subscriber Identity Module Application Programming Interface (SIM API) for Java Card; Stage 2 (3GPP TS 43.019)".

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

[10] ETSI TS 131 101: "Universal Mobile Telecommunications System (UMTS); UICC-terminal interface; Physical and logical characteristics (3GPP TS 31.101)".

[11] ETSI TS 131 102: "Universal Mobile Telecommunications System (UMTS); Characteristics of the USIM application (3GPP TS 31.102)".

[12] ETSI TS 131 111: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Universal Subscriber Identity Module Application Toolkit (USAT) (3GPP TS 31.111)".

[13] ETSI TS 131 114: "Universal Mobile Telecommunications System (UMTS); USAT interpreter protocol and administration (3GPP TS 31.114)".

[14] ETSI TS 131 103: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Characteristics of the IP Multimedia Services Identity Module (ISIM) application (3GPP TS 31.103)".

[15] ISO/IEC 8825-1 (1998): "Information technology - ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)".

[16] ISO/IEC 7816-6: "Identification cards - Integrated circuit cards - Part 6: Interindustry data elements for interchange".

[17] ETSI TS 102 241: "Smart cards; UICC Application Programming Interface (UICC API) for Java Card (TM)".

[18] 3GPP TS 31.130: "3rd Generation Partnership Project; Technical Specification Group Terminals; (U)SIM Application Programming Interface (API); (U)SIM API for Java Card™".

[19] ETSI TS 102 226: "Smart cards; Remote APDU structure for UICC based applications".

[20] 3GPP TS 31.116: "3rd Generation Partnership Project; Technical Specification Group Terminals; Remote APDU Structure for (Universal) Subscriber Identity Module (U)SIM Toolkit applications".

3 Definitions and abbreviations

3.1 Definitions

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

Application IDentifier (AID): data element, which identifies an application in a card

NOTE: An AID may contain a Registered application provider IDentifier (RID). If it contains either a RID or an issuer identification number, then this identification is unambiguous (see ISO/IEC 7816-5 [1]).

Application Provider (AP): entity, which provides those components of an application on a card, required to perform the respective application

NOTE: See ISO/IEC 7816-5 [1].

data object: structured data seen on an interface consisting of the concatenation of a mandatory tag field, a mandatory length field and an optional value field

tag: nominal datum that encodes the name of a data object

telecommunication IC card application: application described by an ETSI document

template: definition of a set of TLV data objects forming the value field of a constructed BER-TLV data object and a data object that realizes this definition

Toolkit Application Reference (TAR): data element, which identifies an application in the toolkit mechanisms (e.g. SMS Data Download)

3.2 Abbreviations

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

AID	Application IDentifier
AP	Application Provider
BER	Basic Encoding Rules
CR	Comprehension Required
DECT	Digital Enhanced Cordless Telecommunications
GSM	Global System for Mobile communication
IC	Integrated Circuit(s)
ICC	Integrated Circuit Card
ID	IDentifier

PIX	Proprietary application Identifier eXtension
RFU	Reserved for Future Use
RID	Registered application provider IDentifier
SIM	Subscriber Identity Module
TAR	Toolkit Application Reference
TETRA	TErrestrial Trunked RAdio
TLV	Tag-Length-Value
UPT	Universal Personal Telecommunications
URL	Uniform Resource Locator
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module

4 Structure of the Application IDentifier (AID)

In accordance with ISO/IEC 7816-5 [1], the AID has the following structure:

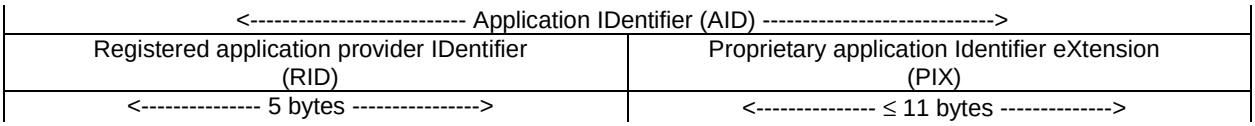


Figure 4.1: AID structure

The AID consists of a Registered application provider IDentifier (RID) of 5 bytes and a Proprietary application Identifier eXtension (PIX) of up to 11 bytes.

4.1 Registered application provider IDentifier (RID)

The RIDs dealt with in the present document, as registered by ISO/IEC according to ISO/IEC 7816-5 [1], are:

- 'A000000009' for ETSI;
- 'A000000087' for the 3GPP.

4.2 Proprietary application Identifier eXtension (PIX)

The PIX is used at the discretion of ETSI and can contain between 7 and 11 bytes of information. The PIX is coded in hexadecimal. Hexadecimal digit 1 is the most significant digit.

Digit 1 to 4 **Application code**

Purpose: To be used for identification of the standardized ETSI or 3G card application (e.g. GSM, DECT, UPT, pre-paid application). Different versions of an application may have individual codings.

Management: Assigned by ETSI on request from the ETSI or 3G technical body responsible for the document in question.

Coding: Hexadecimal. The coding indicates the ETSI or 3G document that specifies the standardized ETSI or 3G card application and the PIX number.
The correspondence between digits 1 to 4 and the ETSI or 3G document in question can be seen in a list maintained by the ETSI Secretariat (see annex A). Escape value '0000' is reserved for use by the ETSI Secretariat for proprietary ETSI or 3G applications.

Digits 5 to 8 **Country code**

Purpose: To indicate the country of the application provider of the ETSI or 3G standardized application.

Coding: According to ITU-T Recommendation E.164 [2]. The coding is right justified and padded with 'F' on the left.

NOTE: List of actual country codes is published by ITU.

Digits 9 to 14 **Application provider code**

Purpose: Individual code for the application provider of the ETSI or 3G standardized application.

Coding: According to ITU-T Recommendation E.118 [4]. Hexadecimal. The coding is right justified and padded with 'F' on the left.

Digits 15 up to 22 **Application provider field. Optional. Up to 8 digits**

Purpose: The use of this field is entirely up to the application provider. It may, for instance, be used to indicate "local" versions, revisions, etc. of the ETSI or 3G standardized application. According to ISO/IEC 7816-5 [1], if the AID is 16 bytes long, then the value 'FF' for the least significant byte (digits 21 and 22) is reserved for future use.

Management: Application provider.

Coding: Hexadecimal.

Digits 1 to 14 are assigned and registered by the ETSI Secretariat upon request by the responsible ETSI technical body.

5 Use of the Application IDentifier (AID)

The use of the AID is specified in ISO/IEC 7816-4 [3] and ISO/IEC 7816-5 [1].

6 Toolkit Application Reference (TAR)

The Toolkit Application Reference (TAR) is used to uniquely identify a second level application (e.g. Toolkit Application).

To be addressed, the Toolkit Application needs a first level application (e.g. GSM, USIM application) running.

A second level application may have several TAR values assigned.

The TAR values in the range '00 00 00' to 'AF FF FF' and 'C0 00 00' to 'FF FF FF' are under the responsibility of the first level application issuer.

The TAR values in the range 'B0 00 00' to 'BF FF FF' are reserved for allocation (by the ETSI Technical Body responsible for the present document) to generic second level application independent of the first level application issuer.

It is not mandatory for a second level application to have a TAR value assigned. If a TAR value is assigned to a second level application it is not mandatory for this value to be included in the AID. As a consequence, the AID coding of the second level application might not always comply with the present document (see annex B).

Table 6.1 lists the TAR values or range and their associated Application Categories.

Table 6.1: TAR and application categories

Toolkit application reference	Application category
'00 00 00'	Issuer security domain
'00 00 01' to 'AF FF FF'	Allocated by the 1st level application issuer
'B0 00 00' to 'B0 FF FF'	Remote File Management (see annex D)
'B1 00 00' to 'B1 FF FF'	Payment application (see annex D)
'B2 00 00' to 'BF FE FF'	RFU
'BF FF 00' to 'BF FF FF'	Proprietary toolkit application
'C0 00 00' to 'FF FF FF'	Allocated by the 1st level application issuer

7 Tag-Length-Value (TLV) data objects

7.1 TLV data object forms

The encoding of data objects shall consist of three components that appear in the following order:

1. Tag (T).
2. Length (L).
3. Value (V).

The encoding of these components for each of the recognized forms of TLV is given in the following table.

Name of TLV	Encoding of tag field	Encoding of length field	Encoding of value field
BER-TLV	see ISO/IEC 8825-1 [15]	see ISO/IEC 8825-1 [15]	see ISO/IEC 8825-1 [15]
COMPACT-TLV	see ISO/IEC 7816-4 [3]	see ISO/IEC 7816-4 [3]	see ISO/IEC 7816-4 [3]
COMPREHENSION-TLV	see clause 7.1.1	see ISO/IEC 8825-1 [15]	see ISO/IEC 7816-4 [3]

7.1.1 COMPREHENSION-TLV tag coding

COMPREHENSION-TLV tags can be in one of two formats: single byte and three-byte format.

The value of the first byte identifies the format used.

First byte value	Format
'00'	Not used
'01' to '7E'	Single byte
'7F'	Three-byte
'80'	Reserved for future use
'81' to 'FE'	Single byte
'FF'	Not used

The same value in the different formats represents the same data object.

Unless otherwise stated, for COMPREHENSION-TLV it is the responsibility of the UICC application and the terminal to decide the value of the Comprehension Required (CR) flag for each data object in a given command.

Handling of the CR flag is the responsibility of the receiving entity.

CR	Value
Comprehension required	1
Comprehension not required	0

7.1.1.1 Single byte format

The tag is coded over one byte.

8	7	6	5	4	3	2	1
CR	Tag value						

CR: Comprehension required for this object.

7.1.1.2 Three-byte format

The tag is coded over three bytes.

Byte 1	Byte 2								Byte 3
	8	7	6	5	4	3	2	1	
Tag value format = '7F'	CR	Tag value							

Tag value format: Byte 1 equal to '7F' indicates that the tag is in the three-byte format.

- **CR:** Comprehension required for this object. Use and coding is the same as in single byte format.
- **Tag value:** Coded over 15 bits, with bit 7 of byte 2 as the most significant bit. Range is from '00 01' to '7F FF'.

7.2 Assigned TLV Tag Values

The assigned tag values given in the following tables are the tag values used by specifications referencing the present document. All unassigned tag values are reserved for future use.

BER-TLV tag	Templates
'61'	Application Template
'62'	FCP Template
'7B'	Security Environment Template

COMPACT-TLV tag	ATR data objects
'31'	Card Service Data
'73'	Card Capabilities

BER-TLV tag	FCP template ('62')
'80'	File Size - Data
'81'	File Size - Total
'82'	File Descriptor
'83'	File Identifier
'84'	DF Name (AID)
'85'	Proprietary - Primitive
'88'	SFI Support
'8A'	Life Cycle Status
'8B'	Security Attribute Template - Reference Format
'8C'	Security Attribute Template - Compact Format
'A5'	Proprietary Template
'AB'	Security Attribute Template - Expanded Format
'C6'	PIN Status Template

BER-TLV tag	Security attribute template ('AB')
'81' - '8F'	Access Mode - Command Description
'80'	Access Mode - Generic Command
'83'	Key Reference
'95'	Usage Qualifier
'9C'	Proprietary State Machine
'90'	Security Condition - ALWAYS
'97'	Security Condition - NEVER
'9E'	Security Condition - Security Condition Byte
'A4'	Security Condition - External Authentication
'A0'	Security Condition - OR Template
'AF'	Security Condition - AND Template

BER-TLV tag	PIN Status template ('C6')
'83'	Key Reference
'90'	PIN Enabled/Disabled
'95'	Usage Qualifier

BER-TLV Tag	Proprietary template ('A5')
'80'	UICC Characteristics
'81'	Application Power Consumption
'82'	Minimum Application Clock Freq.
'83'	Amount of Available Memory
'84'	File details
'85'	Reserved file size
'86'	Maximum file size
'C0'	Special File Information
'C1'	Filling Pattern
'C2'	Repeat Pattern

BER-TLV tag	Application template ('61')
'4F'	Application Identifier (AID)
'50'	Application Label
'51'	Path
'52	Command to Perform
'53'	Discretionary Data
'73'	Discretionary Template
'61'	Application Template
'5F50'	Uniform Resource Locator (URL)

BER-TLV tag	Discretionary Template ('73') in EF DIR
'A0'	EAP Application service specific data content tag

BER-TLV tag	Card application toolkit templates
'D0'	Proactive Command
'D1'	GSM/3G/3GPP2 - SMS-PP Download
'D2'	GSM/3G/3GPP2 - SMS-CB Download
'D3'	Menu Selection
'D4'	Call Control
'D5'	GSM/3G - SMS Control
'D6'	Event Download
'D7'	Timer Expiration
'D8'	Reserved for intra-UICC communication and not visible on the card interface

COMPREHENSION-TLV tag (CR and Tag value)	Card application toolkit data objects	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')
'01' or '81'	Command details tag	1	'01'
'02' or '82'	Device identity tag	1	'02'
'03' or '83'	Result tag	1	'03'
'04' or '84'	Duration tag	1	'04'
'05' or '85'	Alpha identifier tag	1	'05'
'06' or '86'	Address tag	1	'06'
'07' or '87'	Capability configuration parameters tag	1	'07'
'08' or '88'	Subaddress tag	1	'08'
'09' or '89'	Reserved for GSM/3G (SS string tag)	1	'09'
'0A' or '8A'	Reserved for GSM/3G (USSD string tag)	1	'0A'
'0B' or '8B'	Reserved for GSM/3G (SMS TPDU tag)	1	'0B'
'0C' or '8C'	Reserved for GSM/3G (Cell Broadcast page tag)	1	'0C'
'0D' or '8D'	Text string tag	1	'0D'
'0E' or '8E'	Tone tag	1	'0E'
'0F' or '8F'	Item tag	1	'0F'
'10' or '90'	Item identifier tag	1	'10'
'11' or '91'	Response length tag	1	'11'
'12' or '92'	File List tag	1	'12'
'13' or '93'	Location Information tag	1	'13'
'14' or '94'	Reserved for GSM/3G (IMEI tag)	1	'14'
'15' or '95'	Help request tag	1	'15'
'16' or '96'	Network Measurement Results tag	1	'16'
'17' or '97'	Default Text tag	1	'17'
'18' only	Items Next Action Indicator tag	1	'18'
'19' or '99'	Event list tag	1	'19'
'1A' or '9A'	Reserved for GSM/3G (Cause tag)	1	'1A'
'1B' or '9B'	Location status tag	1	'1B'
'1C' or '9C'	Transaction identifier tag	1	'1C'
'1D' or '9D'	Reserved for GSM/3G (BCCH channel list tag)	1	'1D'
'1E' or '9E'	Icon identifier tag	1	'1E'
'1F' or '9F'	Item Icon identifier list tag	1	'1F'
'20' or 'A0'	Card reader status tag	1	'20'
'21' or 'A1'	Card ATR tag	1	'21'
'22' or 'A2'	C-APDU tag	1	'22'
'23' or 'A3'	R-APDU tag	1	'23'
'24' or 'A4'	Timer identifier tag	1	'24'
'25' or 'A5'	Timer value tag	1	'25'
'26' or 'A6'	Date-Time and Time zone tag	1	'26'
'27' or 'A7'	Call control requested action tag	1	'27'
'28' or 'A8'	AT Command tag	1	'28'
'29' or 'A9'	AT Response tag	1	'29'
'2A' or 'AA'	Reserved for GSM/3G (BC Repeat Indicator tag)	1	'2A'
'2B' or 'AB'	Immediate response tag	1	'2B'
'2C' or 'AC'	DTMF string tag	1	'2C'
'2D' or 'AD'	Language tag	1	'2D'
'2E' or 'AE'	Reserved for GSM/3G (Timing Advance tag)	1	'2E'
'2F' or 'AF'	AID tag	1	'2F'
'30' or 'B0'	Browser Identity tag	1	'30'
'31' or 'B1'	URL tag	1	'31'
'32' or 'B2'	Bearer tag	1	'32'
'33' or 'B3'	Provisioning Reference File tag	1	'33'
'34' or 'B4'	Browser Termination Cause tag	1	'34'
'35' or 'B5'	Bearer description tag	1	'35'
'36' or 'B6'	Channel data tag	1	'36'
'37' or 'B7'	Channel data length tag	1	'37'
'38' or 'B8'	Channel status tag	1	'38'
'39' or 'B9'	Buffer size tag	1	'39'
'3A' or 'BA'	Card reader identifier tag	1	'3A'
'3B' or 'BB'	Not used	1	'3B'
'3C' or 'BC'	UICC/terminal interface transport level tag	1	'3C'
'3D' or 'BD'	Not used	1	'3D'
'3E' or 'BE'	Other address (data destination address) tag	1	'3E'

COMPREHENSION-TLV tag (CR and Tag value)	Card application toolkit data objects	Length of tag	Tag value, bits 1-7 (Range: '01' - '7E')
'3F' or 'BF'	Access Technology tag	1	'3F'
'40' or 'C0'	Display parameters tag	1	'40'
'41' or 'C1'	Service Record tag	1	'41'
'42' or 'C2'	Device Filter tag	1	'42'
'43' or 'C3'	Service Search tag	1	'43'
'44' or 'C4'	Attribute information tag	1	'44'
'45' or 'C5'	Service Availability tag	1	'45'
'46' or 'C6'	Reserved for 3GPP2 (ESN tag)	1	'46'
'47' or 'C7'	Network Access Name tag	1	'47'
'48' or 'C8'	Reserved for 3GPP2 (CDMA-SMS-TPDU)	1	'48'
"49" or "C9"	Remote Entity Address tag	1	"49"
	RFU		"4A" to "4F"
"50" or "D0"	Text attribute tag	1	"50"
"51" or "D1"	Item text attribute list tag	1	"51"
"52" or "D2"	Reserved for 3GPP (PDP context Activation par. Tag)	1	"52"
"	RFU		"60" to "61"
'62' or 'E2'	Reserved for GSM/3G (IMEISV tag)	1	'62'
"63" or "E3"	Battery state tag	1	"63"
'64' or 'E4'	Browsing status tag	1	'64'
'65' or 'E5'	Network Search Mode tag	1	'65'
"66" or "E6"	Frame Layout tag	1	"66"
"67" or "E7"	Frames Information tag	1	"67"
"68" or "E8"	Frame identifier tag	1	"68"
"69" or "E9"	Reserved for 3GPP (UTRAN Measurement Qualifier tag)	1	'69'

BER-TLV tag	Remote Management Application Data templates
'AA'	Command Scripting template tag
'AB'	Response Scripting template tag

BER-TLV tag	Response Scripting template ('AB')
'80'	Number of executed C-APDUs tag

Annex A (normative): Allocated ETSI PIX numbers

Table A.1: Allocation of ETSI PIX

Application	AID			Document
		PIX		
	RID (see note 1)	ETSI app code	Additional PIX coding	(see note 2)
GSM	'A000000009'	'0001'	see annex B for further coding details	TS 151 011 [6]
GSM SIM toolkit	'A000000009'	'0002'	see annex B for further coding details	TS 101 267 [7]
GSM SIM API for Java™ Card	'A000000009'	'0003'	see annex C for further coding details	TS 143 019 [8]
TETRA	'A000000009'	'0004'	see annex B for further coding details	EN 300 812 [9]
UICC API for Java Card™	'A000000009'	"0005"	see annex Y for further coding details	TS 102 241 [17]
	'A000000009'			
	'A000000009'			
	'A000000009'			
	'A000000009'			
	'A000000009'			
	'A000000009'			

AID Application IDentifier.
PIX Proprietary application Identifier eXtension.
RID Registered application provider IDentifier.

NOTE 1: The ETSI RID, as registered by ISO according to ISO/IEC 7816-5 [1], is 'A000000009'.
NOTE 2: It is the responsibility of the ETSI technical body, in charge of the application standardization, to inform the ETSI Secretariat when the respective ETSI document is withdrawn or renumbered.

Annex B (normative): Coding of the PIX for GSM and TETRA applications

The following codings apply for the structure of the PIX when the application is either:

- the GSM application (i.e. ETSI application code = '0001' as shown in annex A); or
- a GSM SIM Toolkit Application (i.e. ETSI application code = '0002' as shown in annex A); or
- the TETRA application (i.e. ETSI application code = '0004' as shown in annex A).

Digit 1 to 4 **ETSI application code**

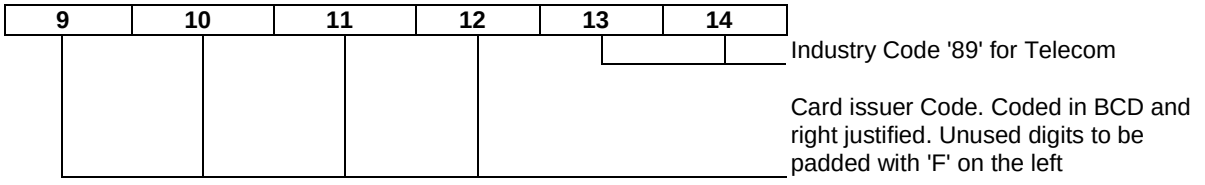
Coding: '0001', '0002' or '0004' as specified in clause 4.2.

Digits 5 to 8 **Country code**

Coding: As specified in clause 4.2.

Digits 9 to 14 **Application provider code**

Coding: As defined below.

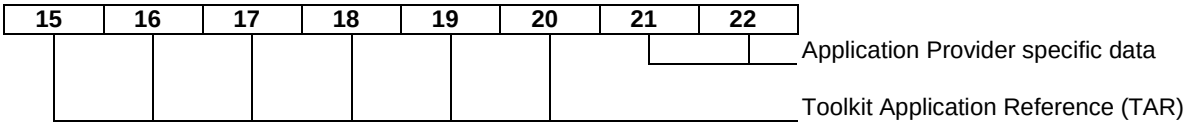


Card issuer code and Industry code are coded in line with ITU-T Recommendation E.118 [4].

Digits 15 up to 22 **Application provider field. 8 digits**

Digits 15 to 22 shall be used only if the ETSI application code is '0002' (i.e. GSM SIM toolkit).

Coding: Hexadecimal. If the application is a SIM Toolkit application (as defined in TS 101 267 [7]), the coding is as defined below.



Toolkit Application Reference (TAR) as specified in TS 102 226 [19], is managed by the application provider.

Application Provider specific data: For application administration purposes.

Annex C (normative): Coding of the PIX for SIM toolkit API packages

The following coding apply for the structure of the PIX when the application is a SIM Toolkit API package (i.e. ETSI application code = '0003' - as defined in annex A):

Digit 1 to 4 **ETSI application code**

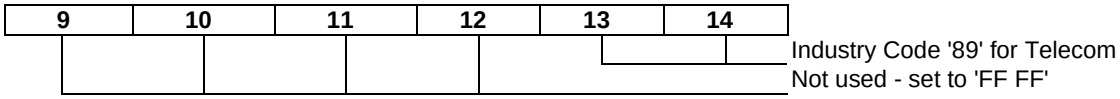
Coding: '0003' as specified in clause 4.2.

Digits 5 to 8 **Not used**

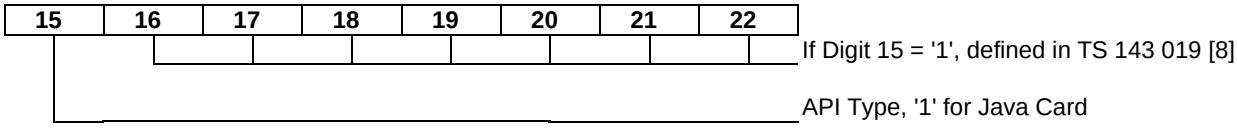
Coding: Set to 'FF FF'.

Digits 9 to 14 **Industry code**

Coding: As defined below.



Digits 15 up to 22 **Application provider field. 8 digits**



Annex D (normative): Allocated TAR values

Table D.1: Allocation of TAR values

Application	TAR	Document (see note 1)
Issuer Security Domain		
Issuer Security Domain	'00 00 00'	TS 102 226 [19]
1st level application issuer specific values		
Allocated by the 1st level application issuer	'00 00 01' to 'AF FF FF'	
Allocated by the 1st level application issuer	'C0 00 00' to 'FF FF FF'	
Remote File Management Applications		
UICC Shared File System	'B0 00 00' and 'B0 00 02' to 'B0 00 0F'	TS 102 226 [19]
SIM File System	'B0 00 10' to 'B0 00 1F'	TS 31.116 [20]
USIM File Systems (see note 2)	'B0 00 01' and 'B0 00 20 to 'B0 01 1F'	TS 31.116 [20]
RFU	'B0 01 20' to 'B0 FF FF'	
Payment Applications		
RFU	'B1 00 00' to 'B1 FF FF'	
	USAT Interpreter Application	
USAT Interpreter Application	'B2 00 00' to 'B2 00 FF'	TS 131 114 [13]
Reserved for future categories		
RFU	'B2 01 00' to 'BF FE FF'	
Proprietary toolkit application		
Proprietary toolkit application	'BF FF 00' to 'BF FF FF'	

NOTE 1: It is the responsibility of the technical body, in charge of the toolkit application standardization, to inform the ETSI Secretariat when the respective document is withdrawn or renumbered.
NOTE 2: The USIM file system may include the UICC Shared file system.

Annex E (normative): Allocated 3GPP PIX numbers

Table E.1: Allocated 3GPP PIX numbers

3G Application Identifiers				
Application	**AID**			**Document (see note 2)**
	RID (see note 1)	**PIX**		
		3G App Code	**Additional PIX coding**	
3GPP UICC	'A000000087'	'1001'	see annex F for further coding details	TS 131 101 [10]
3GPP USIM	'A000000087'	'1002'	see annex F for further coding details	TS 131 102 [11]
3GPP USIM toolkit	'A000000087'	'1003'	see annex G for further coding details	TS 131 111 [12]
3GPP ISIM	'A000000087'	'1004'	see annex F for further coding details	TS 131 103 [14]
3GPP (U)SIM API for Java Card™	'A000000087'	'1005'	See annex J for further coding details	TS 31.130 [18]
NOTE 1: The 3GPP RID, as registered by ISO/IEC according to ISO/IEC 7816-5 [1], is 'A000000087'. NOTE 2: It is the responsibility of the 3GPP technical body, in charge of the application standardization, to inform the ETSI Secretariat when the respective 3G document is withdrawn or renumbered.				

Annex F (normative): Coding of the PIX for 3G UICC applications

The following codings apply for the structure of the PIX when the application is a 3G telecommunication Integrated Circuits (IC) card application.

Digit 1 to 4 **3G application code**

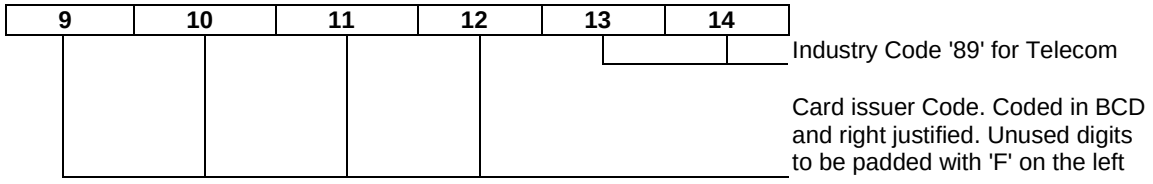
Coding: As specified in clause 4.2 and as shown in annex A.

Digits 5 to 8 **Country code**

Coding: As specified in clause 4.2.

Digits 9 to 14 **Application provider code**

Coding: As defined below.



Card issuer code and Industry code are coded in line with ITU-T Recommendation E.118 [4].

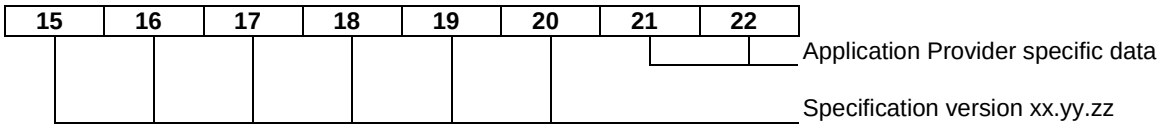
Digits 15 up to 22 **Application provider field. 8 digits**

Coding: Digit 15 to 20, coded in BCD, refer to the specification version xx.yy.zz. The coding of xx, yy, and zz is right justified and padded with '0' on the left.

EXAMPLE: If the version is 3.5.0 then specification version is '03 05 00'.

Digit 21 to 22 are coded in hexadecimal

The application provider field format is as defined below:



Application Provider specific data: for application administration purposes.

Annex G (normative): Coding of the PIX for 3G USIM toolkit applications

The following codings apply for the structure of the PIX when the application is a 3G USIM Toolkit Application.

Digit 1 to 4: **3G application code**

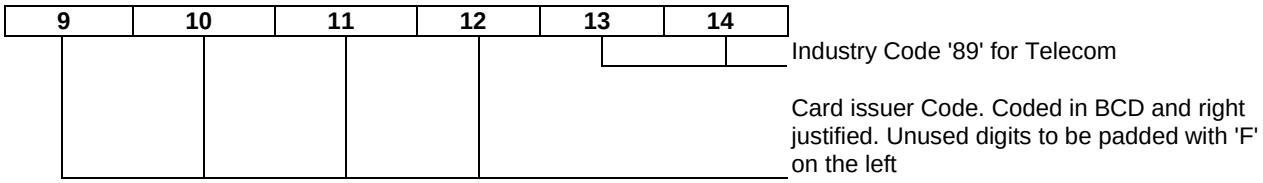
Coding: As specified in clause 4.2 and as shown in annex A.

Digits 5 to 8: **Country code**

Coding: As specified in clause 4.2.

Digits 9 to 14: **Application provider code**

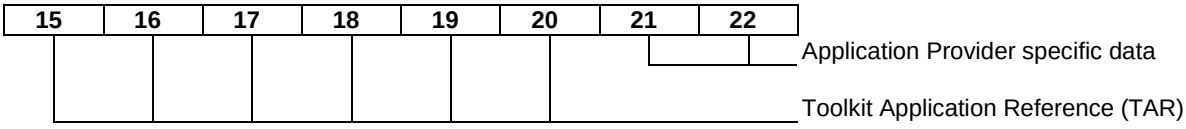
Coding: As defined below.



Card issuer code and Industry code are coded in line with ITU-T Recommendation E.118 [4].

Digits 15 up to 22: **Application provider field. 8 digits**

Coding: Hexadecimal, as defined below.



Toolkit Application Reference (TAR) as specified in TS 102 226 [19], is managed by the application provider (i.e. operator in that case) except for TAR values beginning with hexadecimal value 'B' (most significant bits of digit 15) which are reserved for future use by the 3GPP and the TAR value '000000' which is reserved for the Issuer Security Domain (see TS 102 226 [19]).

Application Provider specific data: for application administration purposes.

Annex H (informative): Tag allocation guidelines

This clause defines some guidelines that shall be followed when requesting tag values for the TLV forms listed in table 7.1. The present document shall be the repository for application domain dependent and independent tag values.

An existing tag value either from the above tables or from ISO/IEC 7816-6 [16] shall be reused in the following cases:

- if an object is common across all application domains and it has the same coding;
- if an object is common across application domains but the coding of the data is both application domain specific and only valid for the currently employed application domain. The application shall use domain indication procedures to determine the interpretation of the object.

A new tag value shall be allocated in the following cases:

- if the object is unique to one particular application domain;
- if an object is common across application domain but the coding of the data is both application domain specific and always available irrespective of the current application domain.

Annex I (normative): Coding of the PIX for UICC toolkit API packages

The following coding applies for the structure of the PIX when the application is a UICC Toolkit API package (i.e. ETSI application code = '0005' - as defined in annex A):

Digit 1 to 4 **ETSI application code**

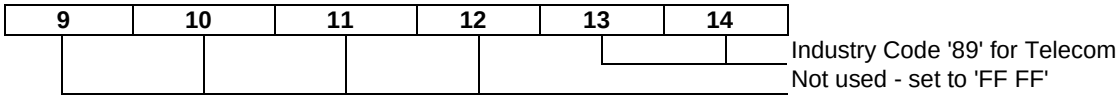
Coding: '0005' as specified in clause 4.2.

Digits 5 to 8 **Not used**

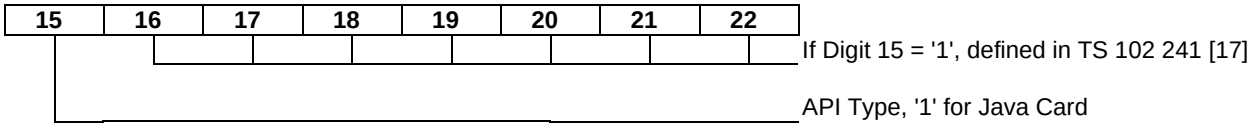
Coding: Set to 'FF FF'.

Digits 9 to 14 **Industry code**

Coding: As defined below.



Digits 15 up to 22 **Application provider field. 8 digits**



Annex J (normative): Coding of the PIX for (U)SIM API for Java Card™ packages

The following coding applies for the structure of the PIX when the application is a (U)SIM Toolkit API package (i.e. 3GPP application code = '1005' - as defined in annex E):

Digit 1 to 4 **3GPP application code**

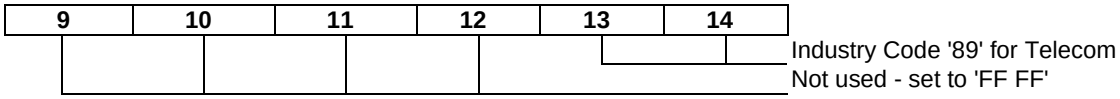
Coding: '1005' as specified in clause 4.2.

Digits 5 to 8 **Not used**

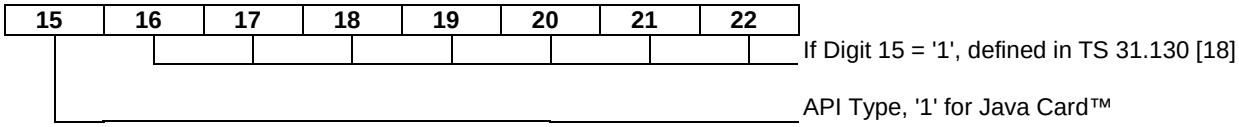
Coding: Set to 'FF FF'.

Digits 9 to 14 **Industry code**

Coding: As defined below.



Digits 15 up to 22 **Application provider field. 8 digits**



Annex K (informative): Change history

The table below indicates all changes that have been incorporated into the present document since it was placed under change control.

Change history								
Date	**Meeting**	**Plenary Doc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**Old**	**New**
1997-10						TC ICC published version 1.2.1. The on-going maintenance of this deliverable was subsequently transferred from TC ICC to TC SMG when TC ICC was closed in early 1998.		1.2.1
1998-10	SMG #27	98-0673			B	Addition of Normative Annex C, introducing AID coding for GSM and Toolkit applications.	1.2.1	1.3.0
1999-09	SMG #29	P-99-415			B	Addition of Normative Annex D, introducing AID coding for SIM Toolkit packages.	1.3.0	1.4.0
2000-05	SMG #31	P-00-142			F	Alignment of the AID allocation procedure.	1.4.0	3.0.0
		P-00-142			B	Definition of an AID for TETRA.		
						NOTE: At SMG #31, it was agreed it would be more appropriate for the present document to be classified as an "ETSI Technical Specification" rather than an "ETSI Guide". This resulted in the deliverable number being changed from EG 201 220 to TS 101 220. Furthermore, to align the specification version numbering system with that of the 3GPP, the new version number became 3.0.0.		
2000-12	SCP-03	9-00-0443			F	Correction of the AID coding for the SIM API packages.	3.0.0	3.1.0
2001-03	SCP-05	SCP-010137	007		B	Toolkit Application Reference (TAR) management.	3.1.0	3.2.0
		SCP-010138	008		B	Incorporation of 3GPP AID specification.		
2001-07	SCP-06	SCP-010174	009		F	Clarification of the specification number of the application provider code in annex F.	3.2.0	3.3.0
2001-10	SCP-07	SCP-010308	010		C	Allocation of new TAR values for Remote File Management.	3.3.0	4.0.0
2001-12	SCP-08	SCP-010387	011		F	Correction to allocation of TAR values for "Remote File Management Applications" clause.	4.0.0	4.1.0
2002-06	SCP-10	SCP-020156	012		B	Allocation of TAR values for the USAT Interpreter	4.1.0	5.0.0
			013		B	Addition of ISIM AID		
2003-01	SCP-12	SCP-030060	016		D	Remove UICC as an abbreviation to align with 3GPP TR 21.905	5.0.0	6.0.0
		SCP-030077	014	2	B	Definition of TLV Forms and TLV Tag Value Tables		
		SCP-030081	015		B	Update of Statement of Scope		
2003-05	SCP-13	SCP-030160	017		B	BER-TLV Tag Reservation for card application communication	6.0.0	6.1.0
		SCP-030112	018		B	Allocation of AID for the uicc.* packages		
2003-12		SCP-030410	019		D	Corrections on PIX and Application codes	6.1.0	6.2.0
			020		F	Modifying Annex A from informative to normative		
			021		B	Allocation of AID for the uicc.usim.* packages		
			022		D	Correction of reference to TS 102 241		
			024		F	Alignment of TS 101 220 with TS 102 226 and TS 31.116 Release 6 specifications		
		SCP-030479	025		B	New Comprehension TLV Tag for IMEISV		
			026		F	Alignments regarding tag 86	6.2.0	6.3.0
			029		F	Tag allocation for new comprehension TLV: Battery State		
			030		B	Tag reservation for Browsing status event in CAT		
		SCP-040033	032		B	Allocation of tags for Fill and Repeat Pattern		
		SCP-040088	033		C	Removal of EIA/TIA-136 Tags		

Change history								
Date	**Meeting**	**Plenary Doc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**Old**	**New**
2004-05	SCP#17	SCP-040235	034		D	Transfer of the COMPREHENSION-TLV Tags from TS 102 223	6.3.0	6.4.0
			035		B	Allocation of new tag values for Expanded Remote Application data format		
2004-09	SCP#18	SCP-040315	027	1	B	Introduction of new tags for the frames in CAT	6.4.0	6.5.0
			036		B	New Tags for BER-TLV EFs		
		SCP-040371	037		B	Allocation of new tag values for EAP		
		SCP-040352	039		F	Tag reservation for 3GPP features		

History

Document history		
V6.0.0	February 2003	Publication
V6.1.0	June 2003	Publication
V6.2.0	January 2004	Publication
V6.3.0	March 2004	Publication
V6.4.0	June 2004	Publication
V6.5.0	September 2004	Publication