ETSI TS 101 220 V17.0.0 (2022-08)

Smart Cards;
ETSI numbering system
for telecommunication application providers
(Release 17)

Reference
RTS/SET-T101220vh00

Keywords
3G, 4G, 5G, GSM, ID, smart card

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 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Contents

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 (https://ipr.etsi.org/).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, 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.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM**® and the GSM logo are trademarks registered and owned by the GSM Association.

Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Secure Element Technologies (SET).

The contents of the present document are subject to continuing work within TC SET and may change following formal TC SET approval. If TC SET 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 TC SET for information;
  - 2 presented to TC SET for approval;
  - 3 or greater indicates TC SET 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.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

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

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.

- In the case of a reference to a TC SET document, a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

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

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

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

[1] Void.

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

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

[4] Recommendation ITU-T 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 (SAT) 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 300 812-3: "Terrestrial Trunked Radio (TETRA); Subscriber Identity Module to Mobile Equipment (SIM-ME) interface; Part 3: Integrated Circuit (IC); Physical, logical and TSIM application characteristics".

[10] ETSI TS 131 101: "Universal Mobile Telecommunications System (UMTS); LTE; 5G; UICC-terminal interface; Physical and logical characteristics (3GPP TS 31.101)".

[11] ETSI TS 131 102: "Universal Mobile Telecommunications System (UMTS); LTE; 5G; Characteristics of the Universal Subscriber Identity Module (USIM) application (3GPP TS 31.102)".

[12] ETSI TS 131 111: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Universal Subscriber Identity Module (USIM) Application Toolkit (USAT) (3GPP TS 31.111)".

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

[14] ETSI TS 131 103: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Characteristics of the IP Multimedia Services Identity Module (ISIM) application (3GPP TS 31.103)".

[15] ISO/IEC 8825-1: "Information technology - ASN.1 encoding rules - Part 1: 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™".

[18] ETSI TS 131 130: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; (U)SIM Application Programming Interface (API); (U)SIM API for Java™ Card (3GPP TS 31.130)".

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

[20] ETSI TS 131 116: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Remote APDU Structure for (U)SIM Toolkit applications (3GPP TS 31.116)".

[21] Void.

[22] ETSI TS 102 474: "Digital Video Broadcasting (DVB); IP Datacast over DVB-H: Service Purchase and Protection".

[23] Void.

[24] ETSI TS 131 133: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Services Identity Module (ISIM) Application Programming Interface (API); ISIM API for Java Card™ (3GPP TS 31.133)".

[25] OMA-TS-Smartcard_Web_Server-V1-0: "Smartcard-Web-Server".

NOTE: See http://www.openmobilealliance.org.

[26] ETSI TS 102 225: "Smart Cards; Secured packet structure for UICC based applications".

[27] ETSI TS 131 221: "Universal Mobile Telecommunications System (UMTS); LTE; Contact Manager Application Programming Interface (API); Contact Manager API for Java Card (3GPP TS 31.221)".

[28] 3GPP2 C.S0065-0: "cdma2000 Application on UICC for Spread Spectrum Systems".

NOTE: Available at https://www.3gpp2.org/Public_html/Specs/C.S0065-0%20v1.0_060630.pdf.

[29] Void.

[30] GlobalPlatform: "Remote Application Management over HTTP - Amendment B v1.2/GPC_SPE_011".

NOTE: See https://globalplatform.org/specs-library/remote-application-management-over-http-amendment-b/.

[31] OMA-TS-BCAST-Services-V1-1: "Mobile Broadcast Services".

NOTE: See http://www.openmobilealliance.org.

[32] ETSI TS 102 921: "Machine-to-Machine communications (M2M); mIa, dIa and mId interfaces".

[33] ISO/IEC 7816-5:2004: "Identification cards - Integrated circuit cards - Part 5: Registration of application providers".

[34] ETSI TS 118 103: "oneM2M; Security solutions (oneM2M TS-0003)".

[35] OMA-TS-LightweightM2M-V1-0: "Lightweight Machine to Machine".

[36] ETSI TS 131 104: "Universal Mobile Telecommunications System (UMTS); LTE; Characteristics of the Hosting Party Subscription Identity Module (HPSIM) application (3GPP TS 31.104)".

[37] GlobalPlatform: "Confidential Card Content Management - Amendment A v1.2/GPC_SPE_007".

NOTE: See https://globalplatform.org/specs-library/confidential-card-content-management-amendment-a-v1-2/.

[38] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

[39] ETSI TS 103 666-2: "Smart Secure Platform (SSP); Part 2: Integrated SSP (iSSP) characteristics (Release 15)".

[40] ETSI TS 102 267: "Smart Cards; Connection Oriented Service API for the Java Card™ platform".

[41] ETSI TS 102 588: "Smart Cards; Application invocation Application Programming Interface (API) by a UICC web server for Java Card™ platform".

[42] ETSI TS 102 705: "Smart Cards; UICC Application Programming Interface for Java Card™ for Contactless Applications".

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

2.2 Informative 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.

- In the case of a reference to a TC SET document, a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

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.

Not applicable.

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the following terms 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 7816-4 [3]).

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

NOTE: See ISO/IEC 7816-4 [3].

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

Logical Secure Element (LSE): secure element functionalities, applications and files grouped together to act like a secure element (e.g. UICC) when multiple logical secure element interfaces are supported as defined in ETSI TS 102 221 [43]

Logical Secure element Interface (LSI): logical connection between an endpoint in the terminal and one logical secure element as defined in ETSI TS 102 221 [43]

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 Symbols

Void.

3.3 Abbreviations

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

AID	Application IDentifier
AP	Application Provider
APDU	Application Protocol Data Unit
API	Application Program Interface
AT	ATtention
BCD	Binary Coded Decimal
BER	Basic Encoding Rules
BSSID	Basic SSID
CBMS	Convergence of Broadcast and Mobile Services
CR	Comprehension Required
DECT	Digital Enhanced Cordless Telecommunications
DM	Device Management
DNS	Domain Name System
DTMF	Dual Tone Multi Frequency
GAD	Geographical Area Description
GSM	Global System for Mobile communication
GSMA	GSM Association
HESSID	Homogeneous Extended SSID
HPSIM	Hosting Party Subscription Identity Module
IC	Integrated Circuit(s)
ICC	Integrated Circuit Card
ID	IDentifier
IP	Internet Protocol
ISIM	IP Multimedia Services Identity Module
ISO	International Organization for Standardization
LSE	Logical Secure Element
LSI	Logical Secure element Interface
MAC	Medium Access Control
MMS	Multimedia Message Service
NMEA	National Maritime Electronic Association

PIX	Proprietary application Identifier eXtension
RFU	Reserved for Future Use
RID	Registered application provider IDentifier
RSP	Remote SIM Provisioning
SA	Security Association
SCP	Smart Card Platform
SE	Secure Element
SIM	Subscriber Identity Module
SM	Session Management
SSID	Service Set Identifier
TAR	Toolkit Application Reference
TC	Technical Committee
TETRA	TErrestrial Trunked RAdio
TLV	Tag-Length-Value
TP	Transport Protocol
UPT	Universal Personal Telecommunications
URL	Uniform Resource Locator
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Services Data
UTRAN	Universal Terrestrial Radio Access Network

4 Structure of the Application IDentifier (AID)

4.0 Introduction

In accordance with ISO/IEC 7816-4 [3], the AID has the following structure.

<---------- Application IDentifier (AID) ---------->	
Registered application provider IDentifier (RID)	**Proprietary application Identifier eXtension (PIX)**
<---------- 5 bytes ---------->	<---------- ≤ 11 bytes ---------->

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 [33], are:

- 'A000000009' for ETSI;
- 'A000000087' for the 3GPP;
- 'A000000343' for the 3GPP2;
- 'A000000645' for the oneM2M.

The following RIDs are for informational purposes only. These RIDs and associated PIXs are maintained by the respective bodies:

- 'A000000412' for the OMA;
- 'A000000424' for the WiMAX Forum.

4.2 Proprietary application Identifier eXtension (PIX)

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

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

NOTE 1: 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 Recommendation ITU-T 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 7816-4 [3], 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.

NOTE 2: 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]. For a UICC supporting LSEs, AID values are unique in the scope of each LSE.

6 Toolkit Application Reference (TAR)

The Toolkit Application Reference (TAR) is used to uniquely identify a second level application (e.g. Toolkit Application). For a UICC supporting LSEs, TAR values are unique in the scope of each LSE.

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 01' 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 '00 00 00' and 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).

Annex D lists the TAR values or range and their associated applications and application categories.

Table 6.1: Void

7 Tag-Length-Value (TLV) data objects

7.1 TLV data object forms

7.1.0 Introduction

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 table 7.1.

Table 7.1

Name of TLV	Encoding of tag field	Encoding of length field	Encoding of value field
BER-TLV	See ISO/IEC 8825-1 [15]	See clause 7.1.2	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 clause 7.1.2	See ISO/IEC 7816-4 [3]

7.1.1 COMPREHENSION-TLV tag coding

7.1.1.0 Introduction

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.

Table 7.2

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.

Table 7.3

CR	Value
Comprehension required	1
Comprehension not required	0

7.1.1.1 Single byte format

The tag is coded over one byte.

Table 7.4

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.

Table 7.5

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'.

7.1.2 Length encoding

The length is coded onto 1, 2, 3 or 4 bytes according to table 7.6.

Table 7.6

Length	Byte 1	Byte 2	Byte 3	Byte 4
0 to 127	Length ('00' to '7F')	Not present	Not present	Not present
128 to 255	'81'	Length ('80' to 'FF')	Not present	Not present
256 to 65 535	'82'	Length ('01 00' to 'FF FF')		Not present
65 536 to 16 777 215	'83'	Length ('01 00 00' to 'FF FF 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.

Table 7.7

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

Table 7.8

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

Table 7.9

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
Security attribute data object	
'8B'	Security Attribute - Reference Format
'8C'	Security Attribute - Compact Format
'AB'	Security Attribute Template - Expanded Format
Proprietary template	
'A5'	Proprietary Template
PIN Status data objects	
'C6'	PIN Status data objects

Table 7.10

BER-TLV tag	Security attribute template ('AB')
Access Mode data objects	
'80'	Access Mode - Generic Command
'81' - '8F'	Access Mode - Command Description
'9C'	Proprietary State Machine
Security Condition data objects	
'90'	Security Condition - ALWAYS
'97'	Security Condition - NEVER
'9E'	Security Condition - Security Condition Byte
'A4'	Control reference Template
'A0'	Security Condition - OR Template
'AF'	Security Condition - AND Template

Table 7.11

BER-TLV tag	Control reference template ('A4')
'83'	Key Reference
'95'	Usage Qualifier

Table 7.12

BER-TLV tag	PIN Status data objects ('C6')
'83'	Key Reference
'90'	PIN Enabled/Disabled status byte(s)
'95'	Usage Qualifier

Table 7.13

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
'87'	Supported system commands
'88'	Specific UICC environmental conditions
'89'	Platform to Platform CAT Secured APDU
'C0'	Special File Information
'C1'	Filling Pattern
'C2'	Repeat Pattern

Table 7.14

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
'5F50'	Uniform Resource Locator (URL)

Table 7.15

BER-TLV tag	Discretionary template ('73') in EF DIR
'A0'	EAP Application service specific data content tag
'A1'	M2M service specific data content tag
'A2'	oneM2M service specific data content tag

Table 7.16

BER-TLV Tag	Terminal capabilities template ('A9')
'80'	Terminal power supply
'81'	Extended logical channels terminal support
'82'	Additional interfaces support
'83'	eUICC-related capabilities

Table 7.17

BER-TLV tag	Card application toolkit templates
'CF'	Reserved for proprietary use (direction terminal to UICC)
'D0'	Proactive Command
'D1'	GSM/3GPP/3GPP2 - SMS-PP Download
'D2'	GSM/3GPP/3GPP2 - Cell Broadcast Download
'D3'	Menu Selection
'D4'	Call Control
'D5'	GSM/3GPP/3GPP2 - MO Short Message control
'D6'	Event Download
'D7'	Timer Expiration
'D8'	Reserved for intra-UICC communication and not visible on the card interface
'D9'	3GPP/3GPP2 - USSD Download
'DA'	MMS Transfer status
'DB'	MMS notification download
'DC'	Terminal application tag
'DD'	3GPP - Geographical Location Reporting tag
'DE'	Envelope Container
'DF'	3GPP - ProSe Report tag
'E0'	Reserved for 3GPP (for future usage)
'E1'	Reserved for 3GPP (for future usage)
'E2'	Reserved for 3GPP (for future usage)
'E3'	Reserved for 3GPP (for future usage)
'E4'	Reserved for GSMA (direction terminal to UICC)

Table 7.18

BER-TLV tag	Remote Management Application Data templates
'01'	reserved for OMA SCWS [25]
'81'	reserved for OMA SCWS [25] and GlobalPlatform Card Specification Amd. B [30]
'A2'	Reserved for GSMA RSP
'AA'	Command Scripting Template for definite length coding
'AB'	Response Scripting Template for definite length coding
'AE'	Command Scripting Template for indefinite length coding
'AF'	Response Scripting Template for indefinite length coding
NOTE: Tag values with b2 and b1 set to 0 shall not be assigned to avoid conflicts with automatic application data format detection defined in ETSI TS 102 226 [19].	

Table 7.19

BER-TLV tag	Command Scripting template ('AA' or 'AE')
'22'	C-APDU tag (see note)
'81'	Immediate Action tag
'82'	Error Action tag
'83'	Script Chaining tag
NOTE: When used in this template, the CR flag for this tag shall be set to 0.	

Table 7.20

BER-TLV tag	Response Scripting template ('AB' or 'AF')
'23'	R-APDU tag (see note)
'80'	Number of executed C-APDUs tag (for Release 6)
'80'	Number of executed command TLV objects tag (for Release 7 onwards)
'81'	Immediate Action Response tag
'83'	Script Chaining Response tag
'90'	Bad format tag
NOTE: When used in this template, the CR flag for this tag shall be set to 0.	

Table 7.21

BER-TLV tag	Manage Secure Channel command
'81'	UICC_ID TLV
'82'	Endpoint information TLV
'83'	Term label - Terminal_ID TLV
'84'	Term label - Terminal_appli_ID TLV
'85'	Term label - UICC_Identifier TLV
'86'	Term label - UICC_appli_ID TLV
'87'	Key Agreement Mechanism TLV
'88'	MSA_ID TLV
'89'	Algorithm and Integrity TLV
'8A'	Tnonce TLV
'8B'	CSA_ID TLV
'8C'	Unonce TLV
'8D'	SSCMAC TLV
'8E'	Endpoint data container size TLV
'8F'	CSAMAC TLV

Table 7.22

BER-TLV tag	Transact Data command
'80'	Secure Channel TLV
'81'	Encrypted Data BER TLV
'82'	Command APDU BER TLV
'83'	Response APDU BER TLV

Table 7.23

COMPREHENSION -TLV tag (CR and Tag value)	Card application toolkit data objects	Length of tag	Tag value, bits 1 - 7 (Range: '01' - '7E')	Reassign
'01' or '81'	Command details tag	1	'01'	No
'02' or '82'	Device identity tag	1	'02'	No
'03' or '83'	Result tag	1	'03'	No
'04' or '84'	Duration tag	1	'04'	No
'05' or '85'	Alpha identifier tag	1	'05'	No
'06' or '86'	Address tag	1	'06'	Yes
'07' or '87'	Capability configuration parameters tag	1	'07'	Yes
'08' or '88'	Subaddress tag	1	'08'	Yes

COMPREHENSION -TLV tag (CR and Tag value)	Card application toolkit data objects	Length of tag	Tag value, bits 1 - 7 (Range: '01' - '7E')	Reassign
'09' or '89'	Reserved for 3GPP (SS string tag)	1	'09'	Yes
	Reserved for 3GPP (BSSID tag)			
	Reserved for 3GPP (PLMN ID tag)			
	Reserved for 3GPP (E-UTRAN Timing Advance tag)			
'0A' or '8A'	Reserved for 3GPP/3GPP2 (USSD string tag)	1	'0A'	Yes
	Reserved for 3GPP (HESSID tag)			
	Reserved for 3GPP (SMS TPDU tag)			
'0B' or '8B'	Reserved for 3GPP (PDP/PDN/PDU type tag)	1	'0B'	Yes
	Reserved for 3GPP (Cell Broadcast page tag)			
'0C' or '8C'	Reserved for 3GPP (PDU session establishment parameters tag)	1	'0C'	Yes
	Text string tag			
'0D' or '8D'	Tone tag	1	'0D'	NR
'0E' or '8E'	eCAT client profile tag	1	'0E'	Yes
	Item tag			
'0F' or '8F'	eCAT client identity tag	1	'0F'	Yes
	Item identifier tag			
'10' or '90'	Encapsulated envelope type tag	1	'10'	Yes
	Response length tag			
'11' or '91'	Call control result tag	1	'11'	Yes
	File List tag			
'12' or '92'	CAT service list tag	1	'12'	Yes
	LSI numbers tag			
	Location Information tag			
'13' or '93'	IMEI tag	1	'13'	Yes
'14' or '94'	Help request tag	1	'14'	Yes
'15' or '95'	Network Measurement Results tag	1	'15'	Yes
'16' or '96'	Default Text tag	1	'16'	Yes
'17' or '97'	Items Next Action Indicator tag	1	'17'	Yes
'18' only	Event list tag	1	'18'	Yes
'19' or '99'	Reserved for 3GPP (Cause tag)	1	'19'	Yes
'1A' or '9A'	Location status tag	1	'1A'	Yes
'1B' or '9B'	Transaction identifier tag	1	'1B'	Yes
'1C' or '9C'	Reserved for 3GPP (BCCH channel list tag)	1	'1C'	Yes
'1D' or '9D'	Reserved for 3GPP (Data connection status tag)	1	'1D'	Yes
	Icon identifier tag			
'1E' or '9E'	Item Icon identifier list tag	1	'1E'	No
'1F' or '9F'	Card reader status tag	1	'1F'	Yes
'20' or 'A0'	Card ATR tag	1	'20'	Yes
'21' or 'A1'	eCAT sequence number tag	1	'21'	Yes
	C-APDU tag			
'22' or 'A2'	Encrypted TLV list tag	1	'22'	Yes
	R-APDU tag			
'23' or 'A3'	SA template tag	1	'23'	Yes
	Timer identifier tag			
'24' or 'A4'	Timer value tag	1	'24'	Yes
'25' or 'A5'	Date-Time and Time zone tag	1	'25'	Yes
'26' or 'A6'	Call control requested action tag	1	'26'	Yes
'27' or 'A7'	AT Command tag	1	'27'	Yes
'28' or 'A8'	AT Response tag	1	'28'	Yes
'29' or 'A9'	Reserved for 3GPP (BC Repeat Indicator tag)	1	'29'	Yes
'2A' or 'AA'	Reserved for 3GPP (Data connection type tag)	1	'2A'	Yes
	Immediate response tag			
'2B' or 'AB'	DTMF string tag	1	'2B'	Yes
'2C' or 'AC'	Language tag	1	'2C'	Yes
'2D' or 'AD'	Reserved for 3GPP (Timing Advance tag)	1	'2D'	Yes
'2E' or 'AE'	Reserved for 3GPP ((E/5G)SM cause tag)	1	'2E'	Yes
	AID tag			
'2F' or 'AF'	Browser Identity tag	1	'2F'	Yes
'30' or 'B0'	URL tag	1	'30'	Yes

COMPREHENSION -TLV tag (CR and Tag value)	Card application toolkit data objects	Length of tag	Tag value, bits 1 - 7 (Range: '01' - '7E')	Reassign
'31' or 'B1'	Reserved for 3GPP (IMS URI tag)	1	'31'	Yes
	Reserved for 3GPP (NG-RAN/Satellite NG-RAN Primary Timing Advance Information)			
	Bearer tag			
'32' or 'B2'	Provisioning Reference File tag	1	'32'	Yes
'33' or 'B3'	Browser Termination Cause tag	1	'33'	Yes
'34' or 'B4'	Supported Radio Access Technologies tag	1	'34'	Yes
	Bearer description tag			
'35' or 'B5'	Channel data tag	1	'35'	Yes
'36' or 'B6'	Channel data length tag	1	'36'	Yes
'37' or 'B7'	Channel status tag	1	'37'	Yes
'38' or 'B8'	Buffer size tag	1	'38'	Yes
'39' or 'B9'	Card reader identifier tag	1	'39'	Yes
'3A' or 'BA'	REFRESH Enforcement Policy tag	1	'3A'	Yes
	File Update Information tag			
'3B' or 'BB'	Application specific refresh data tag	1	'3B'	Yes
	UICC/terminal interface transport level tag			
'3C' or 'BC'	Not used	1	'3C'	Yes
'3D' or 'BD'	Other address (data destination address) tag	1	'3D'	
'3E' or 'BE'	Access Technology tag	1	'3E'	Yes
'3F' or 'BF'	Display parameters tag	1	'3F'	Yes
'40' or 'C0'	DNS server address tag	1	'40'	Yes
	Service Record tag			
'41' or 'C1'	Device Filter tag	1	'41'	Yes
'42' or 'C2'	Service Search tag	1	'42'	Yes
'43' or 'C3'	Attribute information tag	1	'43'	Yes
'44' or 'C4'	Service Availability tag	1	'44'	Yes
'45' or 'C5'	Reserved for 3GPP2 (3GPP2 tag 1)	1	'45'	Yes
'46' or 'C6'	Network Access Name tag	1	'46'	
'47' or 'C7'	Reserved for 3GPP2 (3GPP2 tag 2)	1	'47'	Yes
'48' or 'C8'	Remote Entity Address tag	1	'48'	
'49' or 'C9'	Reserved for 3GPP (I-WLAN Identifier tag)	1	'49'	Yes
'4A' or 'CA'	Reserved for 3GPP (SSID tag)	1	'4A'	Yes
	Reserved for 3GPP ((I-)WLAN Access Status tag)			
'4B' or 'CB'	RFU (only to be assigned if context specific re-use of other values is not possible)	1	'4B'	Yes
	Text attribute tag		'4C' to '4F'	
'50' or 'D0'	Item text attribute list tag	1	'50'	No
'51' or 'D1'	Reserved for 3GPP (PDP context Activation parameters tag)	1	'51'	Yes
'52' or 'D2'	Reserved for 3GPP (Surrounding macrocells tag)	1	'52'	Yes
	Contactless state request tag			
'53' or 'D3'	Contactless functionality state tag	1	'53'	Yes
'54' or 'D4'	Reserved for 3GPP (CSG cell selection status tag)	1	'54'	Yes
'55' or 'D5'	Reserved for 3GPP (IMS call disconnection cause tag)	1	'55'	Yes
	Reserved for 3GPP (CSG ID tag)			
'56' or 'D6'	Reserved for 3GPP (Slice information tag)	1	'56'	Yes
	Reserved for 3GPP (HNB name tag)			
'57' or 'D7'	Reserved for 3GPP (Extended rejection cause code tag)	1	'57'	Yes
	RFU (only to be assigned if context specific re-use of other values is not possible)			
	MAC tag		'58' to '5F'	
'60' or 'E0'	Reserved for 3GPP2 (3GPP2 Tag 3)	1	'60'	No
'61' or 'E1'	IMEISV tag	1	'61'	
'62' or 'E2'	Battery state tag	1	'62'	Yes
'63' or 'E3'	Browsing status tag	1	'63'	Yes
'64' or 'E4'	Network Search Mode tag	1	'64'	Yes
'65' or 'E5'	Frame Layout tag	1	'65'	Yes
'66' or 'E6'	Frames Information tag	1	'66'	Yes
'67' or 'E7'	Profile ID tag	1	'67'	Yes
	Frame identifier tag	1		

COMPREHENSION -TLV tag (CR and Tag value)	Card application toolkit data objects	Length of tag	Tag value, bits 1 - 7 (Range: '01' - '7E')	Reassign
'68' or 'E8'	Reserved for 3GPP (UTRAN/E-UTRAN/NG-RAN/Satellite NG-RAN Measurement Qualifier tag)	1	'68'	No
'69' or 'E9'	Reserved for 3GPP (IP address list tag)	1	'69'	Yes
	Multimedia Message Reference tag			
'6A' or 'EA'	Multimedia Message Identifier tag	1	'6A'	Yes
'6B' or 'EB'	Multimedia Message Transfer Status tag	1	'6B'	Yes
'6C' or 'EC'	Reserved for 3GPP2 (3GPP2 tag 4)	1	'6C'	Yes
'6D' or 'ED'	Multimedia Message Content Identifier tag	1	'6D'	
'6E' or 'EE'	Multimedia Message Notification tag	1	'6E'	Yes
'6F' or 'EF'	Last Envelope tag	1	'6F'	Yes
'70' or 'F0'	Registry application data tag	1	'70'	NR
'71' or 'F1'	Reserved for 3GPP (PLMNwAcT List tag)	1	'71'	Yes
'72' or 'F2'	Reserved for 3GPP (Routing Area Information tag)	1	'72'	Yes
'73' or 'F3'	Reserved for 3GPP (URI truncated tag)	1	'73'	Yes
	Reserved for 3GPP (SOR-CMCI tag)			
	Reserved for 3GPP (Update/Attach Type tag)			
'74' or 'F4'	Reserved for 3GPP (ProSe Report Data tag)	1	'74'	Yes
	Reserved for 3GPP (Rejection Cause Code tag)	1		
'75' or 'F5'	Reserved for 3GPP (Geographical Location Parameters tag)	1	'75'	Yes
'76' or 'F6'	Reserved for 3GPP (IARI tag)	1	'76'	Yes
	Reserved for 3GPP (GAD shapes tag)			
'77' or 'F7'	Reserved for 3GPP (IMPU list tag)	1	'77'	Yes
	Reserved for 3GPP (NMEA sentence tag)			
'78' or 'F8'	Reserved for 3GPP (IMS Status-Code tag)	1	'78'	Yes
	Reserved for 3GPP (PLMN List tag)			
'79' or 'F9'	Reserved for 3GPP (E-UTRAN Inter-frequency Network Measurement Results tag)	1	'79'	Yes
	Broadcast Network Information tag			
'7A' or 'FA'	Extended registry application data tag	1	'7A'	Yes
	ACTIVATE descriptor tag			
'7B' or 'FB'	Reserved for 3GPP (EPS PDN connection activation parameters tag)	1	'7B'	Yes
'7C' or 'FC'	Reserved for 3GPP (Tracking Area Identification tag)	1	'7C'	Yes
'7D' or 'FD'	Reserved for 3GPP (CSG ID list tag)	1	'7D'	Yes
'7E' or 'FE'	Reserved for 3GPP (Media type tag)	1	'7E'	Yes
	Reserved for 3GPP (Media type tag)			

8 UICC Java Card Services

8.1 Service Names

UICC Java Card Services are described in ETSI TS 102 241 [17].

Global services dedicated to UICC belong to the family "UICC Services (service ids assigned by ETSI)" and shall have the service family identifier 'A1'.

Service labels are defined in *uicc.system.servicesConstants* interface.

Table 8.1

Service Name	Service Label	Document
'A101'	`SERVICE_ID_HIGH_UPDATE_ARRAY_BUILDER`	ETSI TS 102 241 [17]

9 Family identifier

9.1 Introduction

The family identifier is used to classify Secondary Platform Bundles into families according to the main use cases addressed, e.g. telecommunication, banking, as defined in ETSI TS 103 666-2 [39].

9.2 Family identifier

A family identifier is a UUID computed from a URN using the version 5 of the UUID with the domain name system namespace as specified in IETF RFC 4122 [38].

Annex P lists the allocated family identifiers.

Annex A (normative): Allocated ETSI PIX numbers

Table A.1: Allocation of ETSI PIX

Application	AID			Document
	RID (see note 1)	PIX		
		ETSI app code	Additional PIX coding	(see note 2)
GSM	'A000000009'	'0001'	See annex B for further coding details	ETSI TS 151 011 [6]
GSM SIM toolkit	'A000000009'	'0002'	See annex B for further coding details	ETSI TS 101 267 [7]
GSM SIM API for Java™ Card	'A000000009'	'0003'	See annex C for further coding details	ETSI TS 143 019 [8]
TETRA	'A000000009'	'0004'	See annex B for further coding details	ETSI EN 300 812-3 [9]
UICC API for Java Card™	'A000000009'	'0005'	See annex I for further coding details	ETSI TS 102 241 [17] ETSI TS 102 267 [40] ETSI TS 102 588 [41] ETSI TS 102 705 [42]
DVB CBMS KMS	'A000000009'	'0101'	See ETSI TS 102 474 [22] for further coding details	ETSI TS 102 474 [22]
M2MSM	'A000000009'	'0201'	See ETSI TS 102 921 [32] for further coding details	ETSI TS 102 921 [32]
	'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 [33], 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);
- 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).

Digits 1 to 4 **ETSI application code**

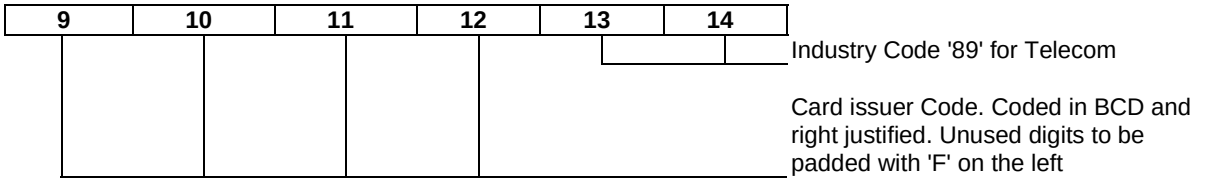
Coding: '0001', '0002' or '0004' as specified in clause 4.2.

Digits 5 to 8 **Country code**

Coding: As specified in clause 4.2.

Digits 9 to 14 **Application provider code**

Coding: As defined below.

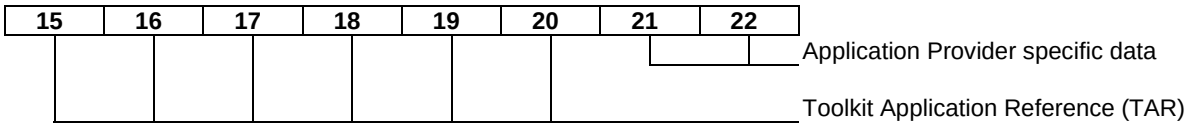


Card issuer code and Industry code are coded in line with Recommendation ITU-T E.118 [4].

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 ETSI TS 101 267 [7]), the coding is as defined below.



Toolkit Application Reference (TAR) as specified in ETSI 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 applies 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):

Digits 1 to 4 **ETSI application code**

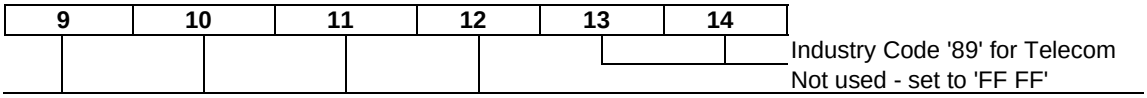
Coding: '0003' as specified in clause 4.2.

Digits 5 to 8 **Not used**

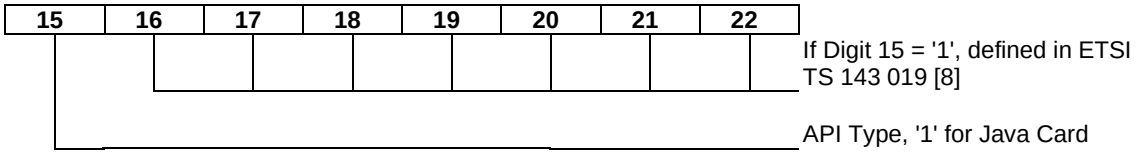
Coding: Set to 'FF FF'.

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'	ETSI TS 102 226 [19]/compact data format
Issuer Security Domain	'B2 01 00'	ETSI TS 102 226 [19]/expanded data format or automatic data format detection
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'	ETSI TS 102 226 [19]/compact data format
SIM File System	'B0 00 10' to 'B0 00 1F'	ETSI TS 131 116 [20]/compact data format
ADF (see note 2)	'B0 00 01' and 'B0 00 20 to 'B0 01 1F'	ETSI TS 131 116 [20]/compact data format
UICC Shared File System	'B0 01 20' to 'B0 01 2F'	ETSI TS 102 226 [19]/expanded data format or automatic data format detection
SIM File System	'B0 01 30' to 'B0 01 3F'	ETSI TS 131 116 [20]/expanded data format or automatic data format detection
ADF (see note 2)	'B0 01 40' to 'B0 01 FF'	ETSI TS 131 116 [20]/expanded data format or automatic data format detection
RFU	'B0 02 00' to 'B0 FF FF'	
Payment Applications		
Visa® Mobile Payment Toolkit Application	'B1 00 00' to 'B1 00 05'	Reserved for Visa® Inc.
RFU	'B1 00 06' to 'B1 FF FF'	
USAT Interpreter Application		
USAT Interpreter Application	'B2 00 00' to 'B2 00 FF'	ETSI TS 131 114 [13]
Smart Card Web Server (SCWS) Applications		
SCWS	'B2 01 01'	OMA-TS-Smartcard-Web-Server-V1.0 [25]
SCWS administrative agent Application	'B2 01 02'	OMA-TS-Smartcard-Web-Server-V1.0 [25]
Multiplexing Application		
Multiplexing Application	'B2 02 00'	ETSI TS 102 225 [26]/automatic data format detection
Controlling Authority Security Domain		
Controlling Authority Security Domain	'B2 02 01'	Global Platform Card Specification, Amendment A [37]/automatic data format detection
Smartcard-Centric Audience Measurement		
OMA BCAST Smartcard-Centric Audience Measurement	'B2 02 02'	OMA "Mobile Broadcast Services" [31]
Lightweight Machine to Machine (LWM2M) SMS Security		
OMA DM LWM2M UICC Application	'B2 02 03'	OMA "Lightweight Machine to Machine" [35]
Other reservations		
Security Domain with Authorized Management privilege	'B2 02 10' to 'B2 02 1F'	Reserved for EMVCo
Security Domain with Delegated Management privilege	'B2 02 20' to 'B2 02 2F'	Reserved for EMVCo
Proprietary Toolkit Application		
Proprietary Toolkit Application	'BF FF 00' to 'BF FF FF'	

Application	TAR	Document (see note 1)
Reserved for future assignments		
RFU	All other values in the range of 'B0 00 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: ADF Remote File Management applications file access is defined in ETSI TS 102 226 [19]. NOTE 3: "CAT TP Multiplexing Application" is part of the "Multiplexing Application" category.		

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 (see note 3)	'A000000087'	'1001'	See annex F for further coding details	ETSI TS 131 101 [10]
3GPP USIM	'A000000087'	'1002'	See annex F for further coding details	ETSI TS 131 102 [11]
3GPP USIM toolkit	'A000000087'	'1003'	See annex G for further coding details	ETSI TS 131 111 [12]
3GPP ISIM	'A000000087'	'1004'	See annex F for further coding details	ETSI TS 131 103 [14]
3GPP (U)SIM API for Java Card™	'A000000087'	'1005'	See annex J for further coding details	ETSI TS 131 130 [18]
3GPP ISIM API for Java Card™	'A000000087'	'1006'	See annex K for further coding details	ETSI TS 131 133 [24]
3GPP Contact Manager API for Java Card™	'A000000087'	'1007'	See annex L for further coding details	ETSI TS 131 221 [27]
3GPP USIM-INI	'A000000087'	'1008'	See annex F for further coding details	ETSI TS 131 102 [11]
3GPP USIM-RN	'A000000087'	'1009'	See annex F for further coding details	ETSI TS 131 102 [11]
3GPP HPSIM	'A000000087'	'100A'	See annex F for further coding details	ETSI TS 131 104 [36]
3GPP USIM (non-IMSI SUPI Type)	'A000000087'	'100B'	See annex F for further coding details	ETSI TS 131 102 [11]
NOTE 1: The 3GPP RID, as registered by ISO/IEC according to ISO/IEC 7816-4 [3], 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. NOTE 3: Currently, no application or functionality is defined for this AID.				

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.

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

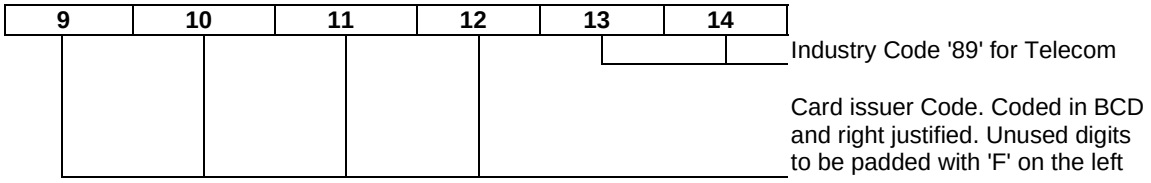
Coding: As specified in clause 4.2 and as shown in annex A.

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 Recommendation ITU-T E.118 [4].

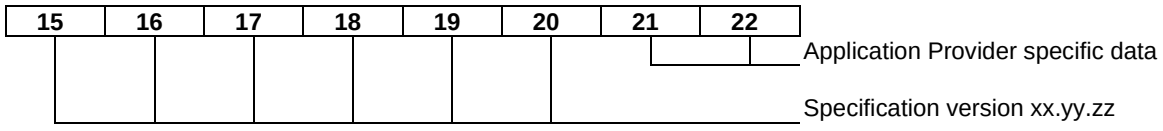
Digits 15 up to 22 **Application provider field 8 digits**

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'.

Digits 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.

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

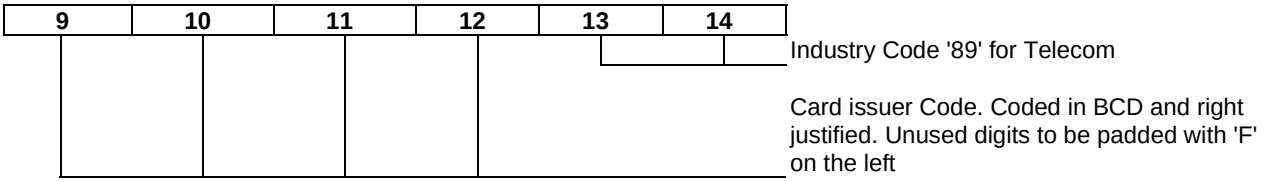
Coding: As specified in clause 4.2 and as shown in annex A.

Digits 5 to 8 **Country code**

Coding: As specified in clause 4.2.

Digits 9 to 14 **Application provider code**

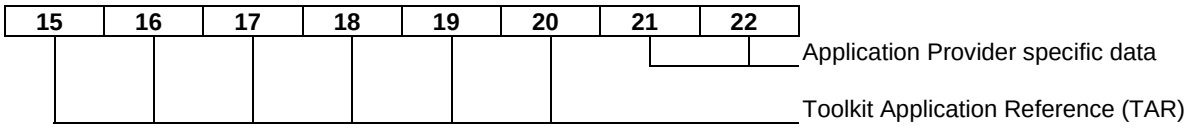
Coding: As defined below.



Card issuer code and Industry code are coded in line with Recommendation ITU-T 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 ETSI 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 ETSI TS 102 226 [19]).

Application Provider specific data: for application administration purposes.

Annex H (normative): Tag allocation guidelines

This annex 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 tables in clause 7 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):

Digits 1 to 4 **ETSI application code**

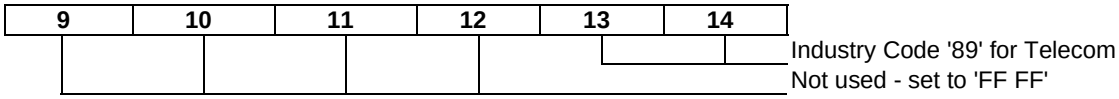
Coding: '0005' as specified in clause 4.2.

Digits 5 to 8 **Not used**

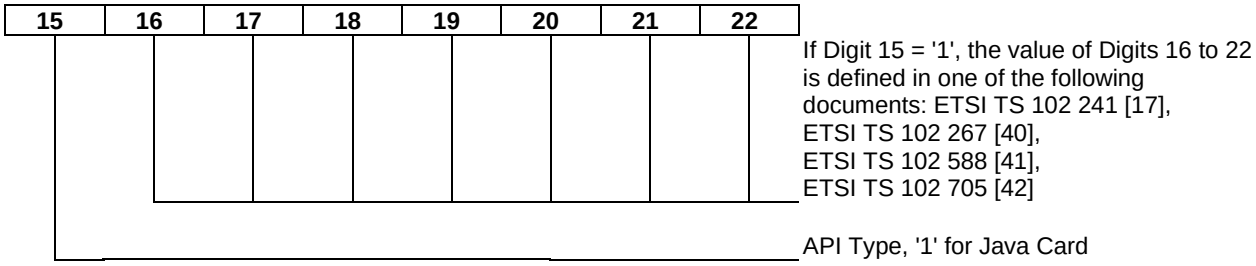
Coding: Set to 'FF FF'.

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):

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

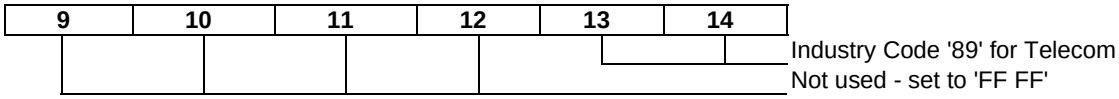
Coding: '1005' as specified in clause 4.2.

Digits 5 to 8 **Not used**

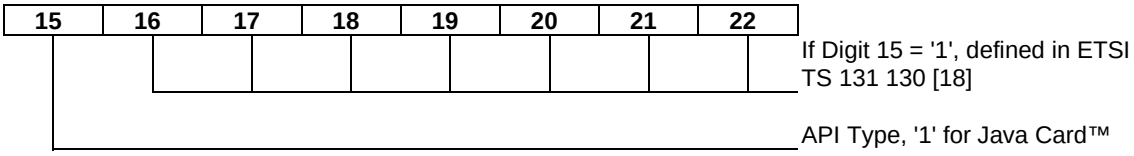
Coding: Set to 'FF FF'.

Digits 9 to 14 **Industry code**

Coding: As defined below.



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



Annex K (normative): Coding of the PIX for ISIM API for Java Card™ package

The following coding applies for the structure of the PIX when the application is a ISIM Toolkit API package (i.e. 3GPP application code = '1006' - as defined in annex E):

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

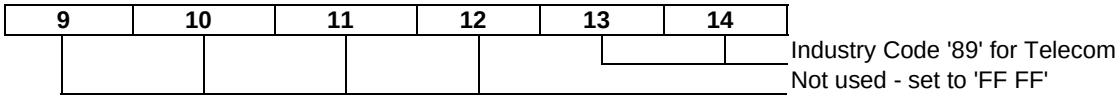
Coding: '1006' as specified in clause 4.2.

Digits 5 to 8 **Not used**

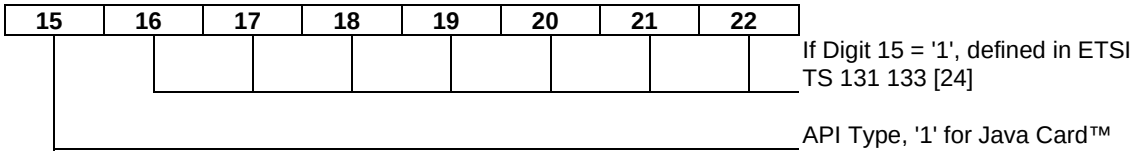
Coding: Set to 'FF FF'.

Digits 9 to 14 **Industry code**

Coding: As defined below.



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



Annex L (normative): Coding of the PIX for 3GPP Contact Manager API packages

The following coding applies for the structure of the PIX when the application is a 3GPP Contact Manager API package (i.e. ETSI application code = '1007' - as defined in annex A):

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

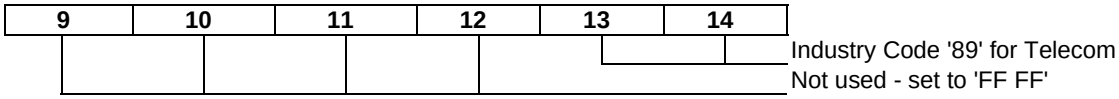
Coding: '1007' as specified in clause 4.2.

Digits 5 to 8 **Not used**

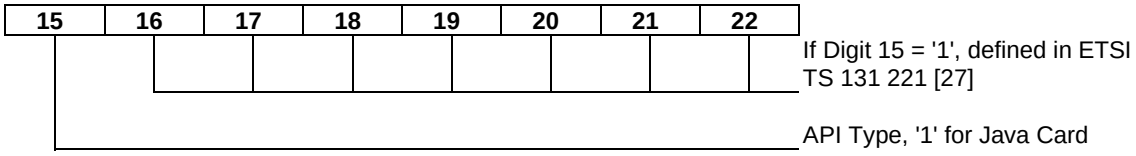
Coding: Set to 'FF FF'.

Digits 9 to 14 **Industry code**

Coding: As defined below.



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



Annex M (normative): Allocated 3GPP2 PIX numbers

Table M.1: Allocated 3GPP2 PIX numbers

3GPP2 Application Identifiers				
Application	**AID**			**Document (see note 2)**
	RID (see note 1)	**PIX**		
		3G App Code (see note 3)	**Additional PIX coding**	
3GPP2 CSIM	'A000000343'	'1002'	See annex F for further coding details	3GPP2 C.S0065-0 [28]

NOTE 1: The 3GPP2 RID, as registered by ISO/IEC according to ISO/IEC 7816-5 [33], is 'A000000343'.
NOTE 2: It is the responsibility of the 3GPP2 technical body, in charge of the application standardization, to inform the ETSI Secretariat when the respective document is withdrawn or renumbered.
NOTE 3: The application code given is the same than for the 3GPP USIM, as USIM and CSIM are equivalent between 3GPP and 3GPP2.

Annex N (normative): Allocated oneM2M PIX numbers

Table N.1: Allocated oneM2M PIX numbers

oneM2M Application Identifiers				
Application	**AID**			**Document (see note 2)**
	RID (see note 1)	**PIX**		
		App Code	**Additional PIX coding**	
oneM2M UICC (see note 3)	'A000000645'	'1001'	See annex F for further coding details	ETSI TS 118 103 [34]
oneM2M 1M2MSM	'A000000645'	'1002'	See ETSI TS 118 103 [34] for further coding details	ETSI TS 118 103 [34]
NOTE 1: The oneM2M RID, as registered by ISO/IEC according to ISO/IEC 7816-5 [33], is 'A000000645'. NOTE 2: It is the responsibility of the oneM2M technical body, in charge of the application standardization, to inform the ETSI Secretariat when the respective document is withdrawn or renumbered. NOTE 3: Currently, no application or functionality is defined for this AID.				

Annex O (informative): Bibliography

- ETSI EG 201 220: "Integrated Circuit Cards (ICC); ETSI numbering system for telecommunication; Application providers (AID)".
- ETSI TS 102 223: "Smart Cards; Card Application Toolkit (CAT)".
- ETSI TR 121 905: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905)".

Annex P (normative): Allocated family identifiers

Table P.1: Allocated family identifiers

Family name	NID	NSS	Family identifier
Telecom family	etsi.org	Telecom-Bundle	E2C37BAC-3A71-584A-84DA-194452C2F768

Annex Q (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	
		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 ETSI EG 201 220 (see bibliography) to the present document. Furthermore, to align the specification version numbering system with that of the 3GPP, the new version number became 3.0.0.		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	
		SCP-010138	008		B	Incorporation of 3GPP AID specification.		3.2.0
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	
			013		B	Addition of ISIM AID.		5.0.0
2003-01	SCP-12	SCP-030060	016		D	Remove UICC as an abbreviation to align with 3GPP TR 21 905.	5.0.0	
		SCP-030077	014	2	B	Definition of TLV Forms and TLV Tag Value Tables.		
		SCP-030081	015		B	Update of Statement of Scope.		6.0.0
2003-05	SCP-13	SCP-030160	017		B	BER-TLV Tag Reservation for card application communication.	6.0.0	
		SCP-030112	018		B	Allocation of AID for the uicc.* packages.		6.1.0
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 ETSI TS 102 241.		
			024		F	Alignment of ETSI TS 101 220 with ETSI 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 ETSI TS 102 223.	6.3.0	
			035		B	Allocation of new tag values for Expanded Remote Application data format.		6.4.0
2004-09	SCP#18	SCP-040315	027	1	B	Introduction of new tags for the frames in CAT.	6.4.0	
			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.		6.5.0
2004-11	SCP#19	SCPt040286	040	2		BER-TLV reservation for 3GPP feature.	6.5.0	
		SCPt040272	041			Clarification for non-specific references.		
		SCP-040470	043			Alignments with ETSI TS 131 111.		6.6.0
		SCPt040300	042			Clarification of length coding for TLV.	6.6.0	
		SCPt040336	039			Classification on List of allocated BER-TLV tag values.		7.0.0
2005-01	SCP#20	SCPt040492	044			New Tag for Introduction of MEID.	7.0.0	
		SCPt040582	045			Addition of File Update Information tag.		
		SCP-050060	038	2		Allocation of TAR values for Expanded Remote Application data format.		7.1.0
2005-05	SCP#21	SCPt050147	046		B	Tags for 3GPP MMS commands.	7.1.0	
		SCPt050121	047		F	Modifications due to revision of ISO/IEC 7816-4 series.		
		SCPt050166	048		B	Allocation of TAR values for ADF Remote File Management Applications.		7.2.0
2005-09	SCP#22	SCP-050282	050	1	B	Tags for MMS Toolkit commands.	7.2.0	7.3.0
2005-12	SCP#23	SCPt050876	052		F	Correct reference to an annex.	7.3.0	
		SCPt050882	053		F	Cleaning of the specification.		
		SCP-050503	054		B	Reservation of Comprehension-TLV tags for 3GPP related to the new I-WLAN bearer in 3GPP.		7.4.0
2006-03	SCP#25	SCP-060152	056		D	Removal of double quotes.	7.4.0	7.5.0
2006-07	SCP#26	SCP-060244	055	2	B	Addition of specific UICC environmental conditions tag.	7.5.0	
		SCP-060253	059	1	B	Addition of supported system command tag.		
		SCP-060289	060		B	Reservation of Application code for DVB CBMS KMS.		7.6.0
2006-09	SCP#27	SCP-060474	064	1	F	Clarify 3GPP UICC AID.	7.6.0	
		SCP-060466	062	1	F	Correction of Terminal capability indication mechanism.		
		SCP-060486	066	1	B	Tags for error responses for wrong TLVs.		7.7.0
2007-01	SCP#29	SCP-070018	061	2	B	Addition of tag for the Extension of the number of logical channels.	7.7.0	
			067		B	Introduction of a PIX coding for the ISIM API for Java Card™ TS 31.133.		
		SCP-070055	068	2	B	Tags for Remote Management Actions.		7.8.0
2007-05	SCP#30	SCP-070133	069	1	B	Allocation of TAR values for the OMA SCWS and administrative agent.	7.8.0	
		SCP-070175	063	1	B	Modification of tags for RFM with script chaining.		7.9.0
2007-07	SCP#31	SCP-070275	065	4	B	Tags for Launch Application feature.	7.9.0	7.10.0
2007-08	SCP#32	SCP-070315	070	-	C	Reservation of Tag values for 3GPP.	7.10.0	7.11.0
2007-10	SCP#33	SCP-070422	072	-	B	Addition of support for the UICC-CLF interface.	7.11.0	7.12.0
2007-10	SCP#33	SCP-070426	071	-	B	TAR reservation for CAT TP Multiplexing.	7.12.0	8.0.0
2008-01	SCP#35	SCP-080014	073	1	B	Tag reservation related to addition of Network Rejection in 3GPP TS 31.111.	8.0.0	8.1.0
2008-07	SCP#38	SCPt080298	074	2	B	Reserve a CAT template value for proprietary use.	8.1.0	8.2.0
2008-07	SCP#38	SCP-080372	075	1	B	TLV reservation for Secure Channel.	8.1.0	8.2.0
2008-10	SCP#39	SCP-080440	076	-	B	Tag reservation related to addition of Geographical Location Request in 3GPP TS 31.111.	8.2.0	8.3.0
2008-10	SCP#39	SCP-080433	077	-	F	Correction to Toolkit Application Reference listing and ISIM PIX number.	8.2.0	8.3.0
2008-10	SCP#39	SCP-080433	078	-	B	PIX Reservation for 3GPP Contact Manager API for Java Card.	8.2.0	8.3.0
2008-10	SCP#39	SCP-080424	079	-	C	Introduction of the RID for 3GPP2 CSIM application.	8.2.0	8.3.0
2008-10	SCP#39	SCP-080440	080	-	B	Tag reservation related to addition of Broadcast Network Information in ETSI TS 102 223.	8.2.0	8.3.0

Change history								
Date	**Meeting**	**Plenary Doc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**Old**	**New**
2008-10	SCP#39	SCP-080428	081	-	B	TAR reservation for the Controlling Authority Security Domain.	8.2.0	8.3.0
2008-10	SCP#39	SCP-080433	082	-	B	Extending TARs for automatic application data format detection.	8.2.0	8.3.0
2009-01	SCP#40	SCP-090019	083	-	B	Tag reservation for ACTIVATE command.	8.3.0	8.4.0
2009-01	SCP#40	SCP-090063	084	1	B	Reservation of values for 3GPP related to I-WLAN Steering of Roaming Refresh Command.	8.3.0	8.4.0
2009-01	SCP#40	SCP-090062	085	1	B	Tag reservation alignments for Secure Channel.	8.3.0	8.4.0
2009-04	SCP#41	SCP-090114	086	-	F	Addition of missing values in scripting templates.	8.4.0	9.0.0
2009-04	SCP#41	SCP-090114	087	-	B	Reservation of tag values for OMA and GlobalPlatform.	8.4.0	9.0.0
2009-04	SCP#41	SCP-090137	088	-	B	Tag values allocation for 3GPP (support of LTE in 3GPP TS 31.111).	8.4.0	9.0.0
2009-07	SCP#42	SCP-090251	089	-	B	Addition of WiMAX and OMA RIDs.	8.4.0	9.0.0
2009-10	SCP#43	SCP-090322	090	-	B	Tags for indefinite length coding for remote command and response structures.	9.0.0	9.1.0
2009-10	SCP#43	SCP-090357	091	1	C	Generalized use of the Multiplexing Application.	9.0.0	9.1.0
2009-10	SCP#43	SCP-090322	092	-	B	TAR reservation for EMVCo.	9.0.0	9.1.0
2009-10	SCP#43	SCP-090322	093	-	B	Tag reservation of the contactless functionality control.	9.0.0	9.1.0
2010-03	SCP#44	SCP(10)0058	094	-	B	Reservation of Tag values for 3GPP.	9.1.0	9.2.0
2010-07	SCP#45	SCP(10)0144	097	1	B	Definition of TAR value for OMA BCAST smart card centric audience measurement.	9.2.0	10.0.0
2010-07	SCP#45	SCP(10)0144	098	-	D	Removal of redundant information in clause 6.	9.2.0	10.0.0
2010-07	SCP#45	SCP(10)0144	100	-	D	Correction of status of MM Transfer Status tag.	9.2.0	10.0.0
2010-07	SCP#45	SCP(10)0144	101	-	C	Context specific tags for COMPREHENSION-TLVs.	9.2.0	10.0.0
2010-10	SCP#46	SCP(10)0248	102	-	B	Tag for extended registry application data.	10.0.0	10.1.0
2011-01	SCP#47	SCP(11)0036r1	103	1	F	Correction of tag description for Network Measurement Results (3GPP).	10.1.0	10.2.0
2011-01	SCP#47	SCP(11)0037r1	104	-	B	TAR allocation for Visa® Inc.	10.1.0	10.2.0
2011-03	SCP#48	SCP(11)0091	105	-	B	Allocation of URI tag.	10.2.0	10.3.0
2011-05	SCP#49	SCP(11)0186r1	106	1	B	Addition of 3G App codes for USIM-INI and USIM-RN.	10.3.0	11.0.0
2011-05	SCP#49	SCP(11)0187	107	-	B	Addition of re-assignment indication for 3GPP-reserved COMPREHENSION-TLV tag values and addition of COMPREHENSION-TLV tag values for 3GPP IARI IMPU list IMS Status Code.	10.3.0	11.0.0
2011-05	SCP#49	SCP(11)0173r1	108	-	B	Addition of tags for encapsulated CAT (wrong CR number allocated, renumbered to 108).	10.3.0	11.0.0
2011-09	SCP#52	SCP(11)0279r1	109	1	F	CR 101 220 R11 #109r1: Tags for envelope container and call control result.	11.0.0	11.1.0
2012-03	SCP#54	SCP(12)000009r1	111	-	B	CR 101 220 R11 #111: Allocation of COMPREHENSION-TLV Tag Value for 3GPP2 Emergency Call.	11.0.0	11.1.0
2012-12	SCP#57	SCP(12)000266	112		B	Tags for encapsulated CAT secure channel Tag value for "MAC" is '60' as '61' was already assigned to "3GPP2 (Emergency Call Object Tag)".	11.1.0	12.0.0
2012-12	SCP#57	SCP(12)000262	114		B	ID for the High Update Arrays GP Global Service.	11.1.0	12.0.0
2012-12	SCP#57	SCP(12)000291r1	115		B	Addition of M2MSM ETSI app code and M2M service Tag.	11.1.0	12.0.0
2013-07	SCP #60	SCP(12)000259r1	113	1		Allocation of COMPREHENSION-TLV tag value for refresh enforcement policy.	11.1.0	12.0.0
2013-07	SCP #60	SCP(13)000153	116	1		Tag for CAT service list.	11.1.0	12.0.0
2013-07	SCP #60	SCP(13)000158r1	118			Tag for DNS Server Address.	11.1.0	12.0.0
2013-07	SCP #60	SCP(13)000172r1	119			Correction of RID registration.	11.1.0	12.0.0
2013-07	SCP #60	SCP(13)000154	117			Generic MO short message control support.	11.1.0	12.0.0
2013-10	SCP#61	SCP(13)000252r1	121		B	Allocation of tag values for new TLV objects defined in 3GPP.	12.0.0	12.1.0
2014-02	SCP#62	SCP(14)000036	122		D	Modifications for 3GPP2 CCAT Specification Update.	12.0.0	12.1.0
2014-04	SCP#63	SCP(14)000092	123		B	Add TLV tag support for 3GPP2 USSD.	12.0.0	12.1.0

Change history								
Date	**Meeting**	**Plenary Doc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**Old**	**New**
2014-04	SCP#63	SCP(14)000093	124		C	Deletion of tag value for IP Address List and Surrounding macrocells TLV objects (3GPP request).	12.0.0	12.1.0
2014-06	SCP#64	SCP(14)000164	125		B	Allocation of tag value for PLMN ID defined in 3GPP.	12.0.0	12.1.0
2014-06	SCP#64	SCP(14)000196r1	126		B	Attribution of AID and Tag for oneM2M.	12.0.0	12.1.0
2014-12	SCP#66	SCP(14)000278	127		B	Tag allocation for Platform to Platform CAT Secured APDU.	12.0.0	12.1.0
2014-14	SCP#66	SCP(14)000318	128		B	Allocation of TAR value for OMA LWM2M SMS security.	12.0.0	12.1.0
2014-12	SCP#66	SCP(14)000344r1	129		B	Allocation of 3G application code for 3GPP (HPSIM - TS 31.104).	12.0.0	12.1.0
2015-02	SCP#67	SCP(15)000073r2	130		F	Tag reservation for 3GPP usage.	12.0.0	12.1.0
2015-04	SCP#68	SCP(15)0000113r 1	132r1		B	Allocation of tag value for Supported Radio Access Technologies.	12.1.0	13.0.0
2015-06	SCP#69	SCP(15)000165	133		B	Alignment with 3GPP CT6 tag assignment.	12.1.0	13.0.0
2016-07	SCP#74	SCP(16)000137	137		B	Addition of eUICC operation command.	13.0.0	14.0.0
2016-07	SCP#74	SCP(16)000148	138		B	New Remote Management Application Data Template BER-TLV Tag.	13.0.0	14.0.0
2017-06	SCP#79	SCP(17)000076	139		B	Tag for application specific refresh data.	13.0.0	14.0.0
2017-06	SCP#79	SCP(17)000081r1	144		F	Creation of Rel-14 version of the specification and implementation of outstanding CRs.	13.0.0	14.0.0
2017-09	SCP#80	SCP(17)000132	145		B	Allocation of values reserved for 3GPP.	14.0.0	15.0.0
2019-03	SCP#87	SCP(19)000042	146		B	Tag for GSMA.	15.0.0	15.1.0
2019-10	SCP#89	SCP(19)000168	147		B	Introduction of the family identifier for SSP.	15.1.0	15.2.0
2019-10	SCP#89	SCP(19)000191	148		F	Add references to ETSI TS 102 267, ETSI TS 102 588 and ETSI TS 102 705.	15.1.0	15.2.0
2021-03	SCP#98	SCP(21)000010r1	149	1	B	Addition of 3GPP USIM (non-IMSI SUPI Type).	15.2.0	16.0.0
2022-03	SET#104	SET(22)000034	152		B	Alignment with 3GPP CT6 tag assignment and reallocation of tag value 58 wrongly allocated, introduction of Satellite NG-RAN.	16.0.0	17.0.0
2022-03	SET#104	SET(22)000035	153		B	Tag for LSI numbers data object.	16.0.0	17.0.0
2022-03	SET#104	SET(22)000036	154		B	AID and TAR values unique in the scope of an LSE.	16.0.0	17.0.0

History

Document history		
V17.0.0	August 2022	Publication