

Source: T3

Agenda item: 8.3

Presentation of Specification to TSG T

Presentation to: TSG T Meeting #6

Document for presentation: 3G TS 31.110 "Numbering system for telecommunication IC card applications" V2.0.0

Presented for: Approval

Abstract of document:

This specification describes the numbering system for Application IDentifiers (AID) for 3G telecommunication Integrated Circuits (IC) card applications.

The numbering system described in the present document provides a means for an application and related services offered by a provider to identify if a given card contains the elements required by its application and related services.

An AID is used to address an application in the card. It consists of a Registered application provider IDentifier (RID) and a Proprietary application Identifier eXtension (PIX).

The present document describes the coding of the PIX.

Changes since last presentation to WG T Meeting # 5

Outstanding Issues:

The 3GPP has applied to the ISO/IEC registering authority for a RID, but as yet, have not received the actual number. It is expected that this will be received in late December or early January. The specification cannot be published without the RID.

Contentious Issues:

none identified

3G TS 31.110 V2.0.9 (1999-12)

Technical Specification

3rd Generation Partnership Project; Technical Specification Group Terminals; Numbering system for telecommunication IC card applications (3G TS 31.110 version 2.0.0)



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Reference

TSGT-0331110

Keywords

UICC, AID

3GPP

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Contents

Foreword.....	Error! Bookmark not defined.
1 Scope	4
2 References	4
3 Definitions and abbreviations.....	5
3.1 Definitions	5
3.2 Abbreviations.....	5
4 Structure of the Application IDentifier (AID).....	6
4.1 Registered application provider IDentifier (RID)	6
4.2 Proprietary application IDentifier eXtension (PIX).....	6
5 Use of the Application IDentifier (AID)	7
Annex A: Allocated 3G PIX numbers.....	8
Annex B: (Normative) Coding of the PIX for 3G Applications	9
History	10

Foreword

This Technical Specification has been produced by the 3GPP.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG 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 working draft under the control of the relevant TSG Working Group

1 presented to TSG for information;

2 presented to TSG for approval;

3 Indicates TSG 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 specification.

1 Scope

The present document describes the numbering system for Application IDentifiers (AID) for 3G telecommunication Integrated Circuits (IC) card applications.

The numbering system described in the present document provides a means for an application and related services offered by a provider to identify if a given card contains the elements required by its application and related services.

An AID is used to address an application in the card. It consists of a Registered application provider IDentifier (RID) and a Proprietary application Identifier eXtension (PIX).

The present document describes the coding of the PIX.

2 References

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or
- b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or
- c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or
- d) publications without mention of a specific version, in which case the latest version applies.

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

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

- [3] ITU-T Recommendation E.118: "The international telecommunication charge card".
- [4] ITU-T Recommendation E.164: "Numbering plan for the ISDN era".
- [5] GSM 11.11: "Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [6] GSM 11.14: "Digital cellular telecommunications system (Phase 2+); Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface".
- [7] GSM 03.19: "Digital cellular telecommunications system (Phase 2+); Subscriber Identify Module Application Programming Interface (SIM API); SIM API for Java Card; Stage 2".
- [8] 3G TS 31.101: "Technical Specification Group Terminals; UICC-Terminal, Physical and Logical Characteristics".
- [9] 3G TS 31.102: "Technical Specification Group Terminals; Characteristics of the USIM Application".
- [10] 3G TS 31.111: "Technical Specification Group Terminals; USIM Application Toolkit".
- [11] 3G TS 31.xxx: [GSM 03.48 Transferred to 3GPP]
- [12] EG 201 220: "Integrated Circuit Cards (ICC); ETSI numbering system for telecommunication Application providers (AID)".

3 Definitions and abbreviations

3.1 Definitions

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

Application Identifier (AID): A data element which identifies an application in a card. 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 [2]).

Application Provider : An entity which provides those components of an application on a card required to perform the respective application (see ISO/IEC 7816-5 [2]).

Telecommunication IC card application: An application described by a 3G document.

3.2 Abbreviations

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

AID	Application Identifier
GSM	Global System for Mobile communications
IC	Integrated Circuit(s)
ICC	IC Card
ID	Identifier
PIX	Proprietary application Identifier eXtension
RID	Registered application provider Identifier

4 Structure of the Application Identifier (AID)

In accordance with subclause 5.2 of ISO/IEC 7816-5 [2], the AID has the following structure:

Application Identifier (AID)	
Registered application provider Identifier (RID)	Proprietary application Identifier eXtension (PIX)
5 bytes	≤11 bytes

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 3G RID, as registered by ISO/IEC according to ISO/IEC 7816-5 [2], is [tbd].

4.2 Proprietary application Identifier eXtension (PIX)

The PIX is used at the discretion of 3G 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 1-4	3G application code
Purpose:	To be used for identification of the standardized 3G card application. Different versions of an application may have individual codings.
Management:	Assigned by ETSI Secretariat on request from the 3G technical body responsible for the document in question.
Coding:	Hexadecimal. The coding indicates the 3G document that specifies the standardized 3G card application and the 3G PIX number. The correspondence between digits 1-4 and the 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 3G applications.

Digits 5-8	Country code
Purpose:	To indicate the country of the application provider of the 3G standardized application.
Management:	Assigned by ETSI Secretariat.
Coding:	According to ITU Recommendation E.164 [4]. The coding is right justified and padded with 'F' on the left.

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

Digits 9-14	Application provider code
Purpose:	Individual code for the application provider of the 3G standardized application.
Management:	Assigned by ETSI Secretariat.
Coding:	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 3G standardized application. According to ISO/IEC 7816-5 [2] subclause 5.2, 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 3G Working Group.

5 Use of the Application Identifier (AID)

The use of the AID is specified in ISO/IEC 7816-4 [1] and ISO/IEC 7816-5 [2].

Annex A: (informative) Allocated 3G PIX numbers

Table A.1: Allocated ETSI PIX numbers

The table below is shown for information. The original table can be found in EG 201 220 [12].

ETSI Application Identifiers				
Application	AID			ETSI document
	RID (note 1)	ETSI App Code	PIX	
Reserved	'A000000009'	'0000'	Reserved for ETSI	
GSM	'A000000009'	'0001'	See EG 201 220 [12] for further coding details	GSM 11.11 [5]
GSM SIM toolkit	'A000000009'	'0002'	See EG 201 220 [12] for further coding details	GSM 11.14 [6]
GSM SIM API for Java™Card	'A000000009'	'0003'	See EG 201 220 [12] for further coding details	GSM 03.19 [7]

NOTE 1: The ETSI RID, as registered by ISO/IEC according to ISO/IEC 7816-5 [2], is 'A000000009'.

Table A.2: Allocated 3G PIX numbers

3G Application Identifiers				
Application	AID			3G document (note 2)
	RID (note 1)	3G App Code	PIX	
3G UICC	[TBD]	'1001'	See annex B for further coding details	3G TS 31.101 [8]
3G USIM	[TBD]	'1002'	See annex B for further coding details	3G TS 31.102 [9]
3G USIM toolkit	[TBD]	'1003'	See annex B for further coding details	3G TS 31.111 [10]

NOTE 1: The 3GPP RID, as registered by ISO/IEC according to ISO/IEC 7816-5 [2], is [TBD].

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 B: (Normative)

Coding of the PIX for 3G Applications

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

Digit 1-4 3G application code

Coding: As specified in clause 4.2 of this document, and as shown in table A.2.

Digits 5-8 Country code

Coding: As specified in clause 4.2 of this document

Digits 9-14 Application provider code

Coding: As defined below.

9	10	11	12	13	14	
						Industry Code '89' for Telecom
						Card issuer Code. Coded in BCD and right justified. Unused digits to be padded with 'F' on the left.

Card issuer code and Industry code are coded in line with ITU-T recommendation E.118 [3].

Digits 15 up to 22 Application provider field. 8 digits

Digits 15 to 22 are used only if the 3G application code is '1003' (i.e. UICC Toolkit application)

Coding: Hexadecimal. If the application is a UICC Toolkit application (as defined in 3G TS 31.111 [10]), the coding is as defined below.

15	16	17	18	19	20	21	22	
								Application Provider specific data
								Toolkit Application Reference (TAR)

Toolkit Application Reference as specified in 3G TS 31.xxx [TBD transfered GSM 03.48] [11], is managed by the application provider

Application Provider specific data: For application administration purposes.

History

Document history		
V0.0.1	November 1999	First Draft presented at 3G TSG-T3 (USIM) Meeting #10
V1.0.0	November 1999	T3 #10 agreed to present v1.0.0 for information to TSG-T (identical to v0.0.1)
V1.0.1	December 1999	Includes editorial updates added during T3 #11 (8 - 10 December, 1999)
V2.0.0	December 1999	Presented for approval to TSG-T #6 (13-15 December, 1999)