

# ETSI TS 102 412 V8.3.0 (2009-01)

---

*Technical Specification*

## Smart Cards; Smart Card Platform Requirements Stage 1 (Release 8)

---

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)  
Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/b65b3518-cbcd-4a28-9b7c-6c13e9ccdffd/etsi-ts-102-412-v8.3.0-2009-01>



## Reference

RTS/SCP-R00002v830

## Keywords

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

**Important notice**

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

[http://portal.etsi.org/chaicor/ETSI\\_support.asp](http://portal.etsi.org/chaicor/ETSI_support.asp)

**Copyright Notification**

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2009.  
All rights reserved.

**DECT™**, **PLUGTESTS™**, **UMTS™**, **TIPHON™**, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

**3GPP™** is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

**LTE™** is a Trade Mark of ETSI currently being registered

for the benefit of its Members and of the 3GPP Organizational Partners.

**GSM®** and the GSM logo are Trade Marks registered and owned by the GSM Association.

# Contents

Intellectual Property Rights .....	7
Foreword.....	7
Introduction .....	7
1 Scope .....	8
2 References .....	8
2.1 Normative references .....	8
2.2 Informative references .....	9
3 Definitions and abbreviations.....	9
3.1 Definitions .....	9
3.2 Abbreviations .....	11
4 Requirements.....	12
4.1 Run time environment timing constraints .....	13
4.1.1 Abstract (informative).....	13
4.1.2 Background (informative).....	13
4.1.2.1 Use case - Network authentication.....	13
4.1.3 Requirements .....	14
4.1.4 Interaction with existing features (informative).....	14
4.2 Launch Application feature .....	14
4.2.1 Abstract (informative).....	14
4.2.2 Background (informative).....	14
4.2.3 Requirements .....	15
4.2.4 Interaction with existing features (informative).....	15
4.3 Mapped file support on the UICC .....	15
4.3.1 Abstract (informative).....	15
4.3.2 Background (informative).....	16
4.3.3 Requirements .....	16
4.3.4 Interaction with existing features (informative).....	16
4.4 Extension of logical channels.....	16
4.4.1 Abstract (informative).....	16
4.4.2 Background (informative).....	16
4.4.2.1 Typical problem situation .....	16
4.4.2.2 Possible problem solution .....	17
4.4.2.3 Use cases .....	17
4.4.2.3.1 Use case - JSR 177 applications .....	17
4.4.2.3.2 Use case - PC connection .....	17
4.4.3 Requirements .....	17
4.4.3.1 General requirements .....	17
4.4.3.2 Backward compatibility requirements.....	17
4.4.4 Interaction with existing features (informative).....	17
4.5 Secure channel to secure local terminal interfaces .....	17
4.5.1 Abstract (informative).....	17
4.5.2 Background (informative).....	18
4.5.2.1 Use case - User interface .....	18
4.5.2.2 Use case - UICC as a control point for device management .....	19
4.5.2.3 Use case - DRM and distributed applications .....	20
4.5.3 Requirements .....	22
4.5.3.1 End point requirements .....	22
4.5.3.2 Integrity requirements .....	22
4.5.3.3 Confidentiality requirements.....	22
4.5.3.4 Authentication requirements .....	22
4.5.3.5 Audit/Compliance requirements .....	22
4.5.3.6 Policy requirements.....	23
4.5.3.7 Transport Protocol requirements .....	23

4.5.4	Interaction with existing features (informative).....	23
4.5.4.1	Logical Channels.....	23
4.6	Authenticate command longer than 255 bytes.....	23
4.6.1	Abstract (informative).....	23
4.6.2	Background (informative).....	23
4.6.2.1	Use case - EAP packet exchange .....	23
4.6.3	Requirements .....	23
4.6.3.1	General requirements .....	23
4.6.3.2	Backward compatibility requirements.....	24
4.6.4	Interaction with existing features (informative).....	24
4.7	CAT mechanisms to indicate the bearer connection status .....	24
4.7.1	Abstract (informative).....	24
4.7.2	Background (informative).....	24
4.7.2.1	Use case - Availability of network bearers .....	24
4.7.2.2	Use case - Network connection temporarily lost.....	24
4.7.2.3	Use case - Availability of local bearers.....	24
4.7.3	Requirements .....	24
4.7.3.1	Requirement 1 - Network bearer connection status .....	24
4.7.3.2	Requirement 2 - Local bearer connection status .....	25
4.7.4	Interaction with existing features (informative).....	25
4.8	New UICC-Terminal interface .....	25
4.8.1	Abstract (informative).....	25
4.8.2	Background (informative).....	25
4.8.2.1	Use case - multimedia file management.....	25
4.8.2.2	Use case - MMI on UICC .....	25
4.8.2.3	Use case - real-time multimedia data encryption/decryption .....	26
4.8.2.4	Use case - storage of terminal applications on the UICC.....	26
4.8.2.5	Use case - direct and indirect UICC connection to a PC.....	26
4.8.2.6	Use case - web server on Smart Card.....	26
4.8.2.7	Use case - antivirus on UICC.....	26
4.8.2.8	Use case - big phonebook management from the UICC .....	26
4.8.2.9	Use case - reduce personalization time .....	27
4.8.2.10	Use case - generic TCP/IP connectivity .....	27
4.8.3	Requirements .....	27
4.8.3.1	General requirements .....	27
4.8.3.2	Backward compatibility requirements.....	28
4.8.4	Interaction with existing features (informative).....	28
4.9	UICC based application acting as a server .....	28
4.9.1	Abstract (informative).....	28
4.9.2	Background (informative).....	28
4.9.3	Requirements .....	28
4.9.4	Interaction with existing features (informative).....	28
4.10	API for applications registered to a Smart Card Web Server .....	29
4.10.1	Abstract (informative).....	29
4.10.2	Background (informative).....	29
4.10.2.1	Registration of an application to the SCWS.....	29
4.10.2.2	Data exchange between SCWS and application.....	29
4.10.2.3	Issuing Proactive Commands .....	29
4.10.3	Requirements .....	30
4.10.4	Interaction with existing features (informative).....	30
4.11	Specific UICC environmental conditions .....	30
4.11.1	Abstract (informative).....	30
4.11.2	Background (informative).....	30
4.11.2.1	Use case - Automotive service .....	30
4.11.2.2	Use case - Remote monitoring camera.....	30
4.11.2.3	Use case - Remote stock monitoring for vending machines .....	31
4.11.2.4	Use case - Online electronic advertising board .....	31
4.11.3	Considerations (informative) .....	31
4.11.4	Requirements .....	31
4.11.4.1	Requirement 1: Temperature range .....	31
4.11.4.2	Requirement 2: Humidity.....	31
4.11.5	Interaction with existing features (informative).....	31

4.12	Introduction of high density memory technology in UICC .....	31
4.12.1	Abstract (informative).....	31
4.12.2	Background (informative).....	32
4.12.2.1	Use case - Enhanced UICC features.....	32
4.12.3	Requirements .....	32
4.12.4	Interaction with existing features (informative).....	32
4.13	Power supply indication mechanism .....	32
4.13.1	Abstract (informative).....	32
4.13.2	Background (informative).....	33
4.13.2.1	Use case - generic situation.....	33
4.13.2.2	Use case - USIM application with toolkit applications .....	33
4.13.3	Requirements .....	33
4.13.3.1	General Requirements.....	33
4.13.3.2	Backward compatibility requirements.....	33
4.13.4	Interaction with existing features (informative).....	34
4.14	Internet Connectivity up to UICC applications .....	34
4.14.1	Abstract (informative).....	34
4.14.2	Use Cases (informative).....	34
4.14.2.1	Use Case - Card OTA management .....	34
4.14.2.2	Use Case - User local access from the terminal to a card server.....	34
4.14.2.3	Use Case - Remote access to an identity server in the card .....	35
4.14.2.4	Use Case - User access from a locally connected device to a card service .....	35
4.14.3	Requirements .....	35
4.14.4	Interaction with existing features (informative).....	35
4.15	Contactless UICC services .....	36
4.15.1	Abstract (informative).....	36
4.15.2	Background (informative).....	36
4.15.2.1	Use case - Access.....	36
4.15.2.1.1	System aspects of use case .....	36
4.15.2.1.2	UICC role in use case .....	36
4.15.2.2	Use case - tickets.....	37
4.15.2.2.1	System aspects of throughput ticketing scenario .....	37
4.15.2.2.2	System aspects of high priced ticketing scenario .....	38
4.15.2.2.3	UICC role in use case .....	38
4.15.2.3	Use case - digital rights .....	39
4.15.2.3.1	System aspects of contactless digital rights.....	39
4.15.2.3.2	UICC role in use case .....	39
4.15.2.4	Use case - payment application.....	40
4.15.2.5	Use case - loyalty application.....	40
4.15.2.6	Use case - health care application .....	41
4.15.3	Requirements .....	41
4.15.3.1	Physical interface requirements .....	41
4.15.3.2	Multi-protocol concurrent operation requirements .....	41
4.15.3.3	Contactless communication modes requirements .....	41
4.15.3.4	Compatibility with existing contactless systems requirements .....	42
4.15.3.5	Parameters to be transported by the CLFIP requirements .....	42
4.15.3.6	Application integration requirements.....	42
4.15.3.7	Terminal and user interaction requirements .....	42
4.15.3.8	Interoperability requirements .....	42
4.15.4	Interaction with existing features (informative).....	42
4.16	Administration of the Smart Card Web Server.....	42
4.16.1	Abstract (informative).....	42
4.16.2	Background (informative).....	43
4.16.3	Requirements .....	43
4.16.4	Interaction with existing features (informative).....	43
4.17	Confidential Application Services.....	43
4.17.1	Abstract (informative).....	43
4.17.2	Background (informative).....	43
4.17.2.1	Use case 1: Mobile TV services.....	43
4.17.2.2	Use case 2: Banking Services.....	45
4.17.2.3	Use case 3: Contactless Applications.....	46
4.17.2.4	Use case 4: Mobile Virtual Network Operator services .....	46

4.17.3	Requirements (normative) .....	48
4.17.3.1	Confidential application environment .....	48
4.17.3.2	Administration by Card issuer.....	48
4.17.3.2.1	Third party area environment administration .....	48
4.17.3.2.2	Third party area creation.....	48
4.17.3.2.3	Third party area policy definition .....	49
4.17.3.3	Administration by Third party.....	49
4.17.3.4	Service Operator specific requirements .....	49
4.17.4	Interaction with existing features (informative).....	50
4.18	UICC for Machine-to-Machine (M2M) applications .....	50
4.18.1	Abstract (informative).....	50
4.18.2	Use Cases (informative).....	50
4.18.2.1	Use case - Track and Trace .....	50
4.18.2.1.1	Use case - Emergency Call .....	51
4.18.2.1.2	Use case - Fleet Management.....	51
4.18.2.1.3	Use case - Theft Tracking.....	52
4.18.2.2	Use case - Monitoring .....	52
4.18.2.2.1	Use case - Metering / Prepaid delivery of utilities (water, gas, electricity) .....	52
4.18.2.2.2	Use case - Person / Animal protection.....	53
4.18.2.2.3	Use case - Object protection.....	54
4.18.2.3	Use case - Transaction .....	54
4.18.2.3.1	Use case - PoS Terminals (Point of Sale Terminals).....	54
4.18.2.4	Use case - Control.....	55
4.18.2.4.1	Use case - Controlling vending machines.....	55
4.18.2.4.2	Use case - Controlling production machines.....	55
4.18.3	Requirements .....	56
4.18.3.1	General M2M UICC Requirements .....	56
4.18.3.1.1	Specific requirements related to definition of classes.....	56
4.18.3.1.2	Example for a possible class system (informative).....	56
4.18.3.2	MFF Requirements .....	57
4.18.4	Interaction with existing features (informative).....	57
4.19	Location based services for broadcast technology .....	57
4.19.1	Abstract (informative).....	57
4.19.2	Use Cases (informative).....	57
4.19.3	Requirement for retrieving location information for broadcast technology.....	58
4.19.4	Interaction with existing features (informative).....	58
4.20	Terminals with reduced functionality.....	58
4.20.1	Abstract (informative).....	58
4.20.2	Use case (informative).....	58
4.20.2.1	Use case - Data card.....	58
4.20.3	Requirements .....	58
4.20.4	Interaction with existing features (informative).....	58
4.21	Digital Rights Management.....	59
4.21.1	Abstract (informative).....	59
4.21.2	Use cases (informative) .....	59
4.21.2.1	Use case - Transfer of protected contents and rights by using a UICC .....	59
4.21.2.2	Use case - Provisioning of rights in the UICC .....	59
4.21.2.3	Use case - Direct rendering of DRM-protected content by using the UICC .....	59
4.21.2.4	Use case - Pre-loading of rights by using the UICC .....	60
4.21.3	Requirements .....	60
4.21.4	Interaction with existing features (informative).....	60
<b>Annex A (informative):</b>	<b>Requirement numbering scheme.....</b>	<b>61</b>
<b>Annex B (informative):</b>	<b>Change history .....</b>	<b>62</b>
History .....		63

---

## 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 Technical Committee Smart Card Platform (SCP).

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

---

## Introduction

The present document specifies the requirements for Release 7 onwards of the TC SCP.

---

## 1 Scope

The present document specifies the additional requirements for Release 7 onwards of the TC SCP with respect to earlier releases.

The present document covers all the Stage 1 requirements which are not covered by other TC SCP stage 1 documents.

---

## 2 References

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.
- In the case of a reference to a TC SCP document, a non specific reference implicitly refers to the latest version of that document in the same Release as the present document.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

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

### 2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

- [1] ETSI TS 102 221: "Smart Cards; UICC-Terminal interface; Physical and logical characteristics (Release 7)".
- [2] ETSI TS 102 223: "Smart cards; Card Application Toolkit (CAT) (Release 6)".
- [3] ETSI TS 122 038: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); USIM Application Toolkit (USAT/SAT); Service description; Stage 1 (3GPP TS 22.038 Release 7)".
- [4] 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)".
- [5] ETSI TS 131 102: "Universal Mobile Telecommunications System (UMTS); Characteristics of the USIM application (3GPP TS 31.102 Release 6)".
- [6] ISO/IEC 7816-4: "Identification cards - Integrated circuit cards - Part 4: Organization, security and commands for interchange".
- [7] Trusted Computing Group (2003): "TPM Main - Part 1 Design Principles - Specification version 1.2".

NOTE: Available at [https://www.trustedcomputinggroup.org/downloads/tpm-wg-mainrev62\\_Part1\\_Design\\_Principles.pdf](https://www.trustedcomputinggroup.org/downloads/tpm-wg-mainrev62_Part1_Design_Principles.pdf).



- [8] ISO/IEC 14443: "Identification cards - Contactless integrated circuit(s) cards - Proximity cards".
- [9] ISO/IEC 18092: "Information technology - Telecommunications and information exchange between systems - Near Field Communication - Interface and Protocol (NFCIP-1)".
- [10] ISO/IEC 15693: "Identification cards - Contactless integrated circuit(s) cards - Vicinity cards".
- [11] ETSI EN 300 468: "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems".
- [12] ETSI EN 302 304: "Digital Video Broadcasting (DVB); Transmission System for Handheld Terminals (DVB-H)".
- [13] MA-TS-SRM-V1-0-20080128-C "OMA Secure Removable Media Specification".
- [14] OMA-AD-SRM-V1-0-0-20080128-C "OMA Secure Removable Media Architecture".
- [15] OMA-RD-SRM-V1-0-20080128-C "OMA Secure Removable Media Requirements".

## 2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

- [i.1] GSMA Pay Buy Mobile, Business Opportunity Analysis, Public White Paper, version 1.0, November 2007.
- [i.2] ISO/IEC 16750-3: "Road vehicles - Environmental conditions and testing for electrical and electronic equipment - Part 3: Mechanical loads".
- [i.3] AEC-Q100: "Stress Test Qualification for Integrated Circuits".
- [i.4] OMA-TS-BCAST-SvcCntProtection-V1.0: "Service and Content Protection for Mobile Broadcast Services".

---

## 3 Definitions and abbreviations

### 3.1 Definitions

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

**central repository:** a repository of registered applications residing in the UICC

**CLF:** ContactLess Front-end, circuitry in the terminal which:

- Handles the analog part of the contactless communication.
- May handle some layers of the contactless protocol.
- May exchange data with the terminal and the UICC.

**CLFI (CLF Interface):** physical interface between the UICC and the CLF

**CLFIP (CLFI Protocol):** communication protocol between the UICC and the CLF carried over the CLFI

**DRM Agent:** entity in the Device that manages Permissions for Media Objects on the Device, as described in OMA SRM technical specification [13]

**DRM Agent-SRM Agent Mutual Authentication:** DRM Agent and the SRM Agent can authenticate each other based on credentials that are securely provisioned in each. The result of this mutual authentication allows the DRM Agent and SRM Agent to establish a secure communication for the exchange and sharing of secret elements as described in the OMA SRM architecture specification [14]

**HSP:** high speed protocol running on top of the NUT interface

**M2M communication module:** electronics system including all necessary components to establish wireless communications between machines. M2M communication modules are usually integrated directly into target devices, such as automated meter readers (AMRs), vending machines, alarm systems, cars equipments or others

**M2M UICC:** UICC with specific properties for use in M2M environments, this includes existing form factors and an optional new form factor

**Machine to Machine (Communication):** communication between remotely deployed devices with specific responsibilities and requiring little or no human intervention, which are all connected to a dedicated management server via the mobile network data communications

**ME/TE owner:** entity having the right to configure or administrate a CAD and/or remote terminal

**MFF (M2M Form Factor):** a new form factor dedicated to M2M applications

**Packaging:** process to mount an integrated circuit device (e.g. UICC) into a package, which provides physical contacts for electric interconnection, protects the device in harsh environments and prevents the device from mechanical damage, vibration, chemistry attack and high temperatures, etc.

**Rights:** collection of permissions and constraints defining under which circumstances access is granted to DRM Content as described in the OMA SRM technical specification [13]

**Secure Removable Media:** removable media that implements means to protect against unauthorized access to its internal data and includes an SRM Agent. (e.g. secure memory card, smart card) as described in the OMA SRM technical specification [13]

**Service Operator:** third party that is able to manage sub-third party areas

**terminal:** entity with which the Smart Card can establish a secure channel

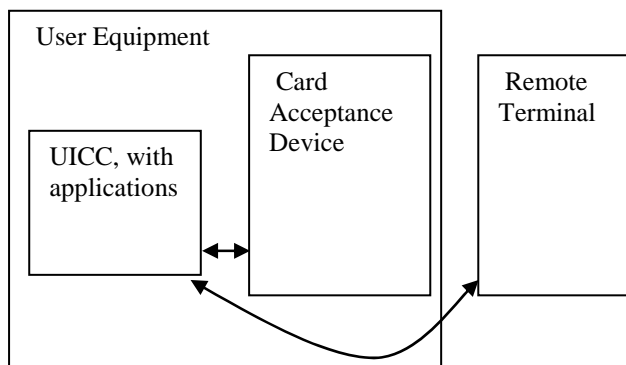
EXAMPLE 1: Card Acceptance Device such as a mobile handset i.e. in the case of a wired Smart Card to terminal (such as PDA or handset) communication.

EXAMPLE 2: A Remote Terminal is a terminal communicating to a CAD, which can access the UICC resources, for example a PC connect over a local link to handset.

NOTE: In the present document a distinction will be made between a CAD and a Remote Terminal only where applicable, in case this distinction is not relevant the generic term terminal will be used.

**terminal end point:** point for terminating the secure channel from the UICC point of view, which could be a Mobile Terminal or a Remote Terminal

EXAMPLE: A remote terminal can be a Set-top box, a PC, or even a Bluetooth earpiece connected to a Mobile Terminal.



**Figure 1: Possible secure channels with a UICC**

**third party application:** application developed and installed on the card by a player different from the card issuer

**third party area:** area of the UICC (memory and resources) allocated to accommodate one (or several) third party application

**third party policy:** set of policies which define some characteristics and restrictions for the third party applications allocated into the corresponding third party areas

**trusted device:** device which is not infected by malevolent code, whether because it is compliant to the requirements defined in TCG [7] or because the user/owner/administrator guarantees device integrity by giving verifiable evidence

NOTE: A more exact definition is out of scope of SCP.

#### UICC powering modes:

- Battery powered:
  - Mode where the UICC and the CLF are powered from the battery of the terminal.
- Not Battery powered:
  - Mode where the UICC and the CLF are not powered from the battery of the terminal.

## 3.2 Abbreviations

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

ADF	Application Dedicated File
AEC	Automotive Electronics Council
API	Application Programming Interface
CAD	Card Acceptance Device
CAS	Conditional Access System
CAT	Card Application Toolkit
CAT-TP	Card Application Toolkit - Transport Protocol
CEK	Content Encryption Key
CPU	Central Processing Unit
DF	Dedicated File
DM	Device Management
DRM	Digital Rights Management
DRM-UA	Digital Rights Management User Agent
DVB	Digital Video Broadcasting
DVB-H	DVB-Hand held

DVB-SH	Digital Video Broadcasting - Satellite services to Handhelds
DVB-T	Digital Video Broadcasting - Terrestrial
EAP	Extensible Authentication Protocol
EF	Elementary File
GPRS	General Packet Radio Service
HTTP	HyperText Transfer Protocol
HTTPS	Secure HyperText Transfer Protocol
IMS	IP Multimedia Services
IP	Internet Protocol
ISIM	IMS SIM
JSR	Java Specification Request
M2M	Machine to Machine (communication)
MBMS	Multimedia Broadcast/Multicast Service
ME	Mobile Equipment
MFF	Machine to Machine Form Factor
MNO	Mobile Network Operator
MO	(Device) Management Object
MT	Mobile Termination
MVNO	Mobile Virtual Network Operator
NUT	New UICC-Terminal
OMA	Open Mobile Alliance
OTA	Over The Air
PDA	Personal Digital Assistance
PIN	Personal Identification Number
PKI	Public Key Infrastructure
POP	Post Office Protocol
POS	Point Of Sale
RFID	Radio Frequency Identification
RO	Rights Object
SC	Smart Card
SCWS	Smart Card Web Server
SMTP	Simple Mail Transfer Protocol
SRM	Secure Removable Media
TCG	Trusted Computing Group
T-DMB	Terrestrial - Digital Multimedia Broadcasting
TLS	Transport Layer Security
TMP	Trusted Media Player
TSM	Trusted Service Manager
UA	(Digital Rights Management) User Agent
UE	User Equipment
UMTS	Universal Mobile Telecommunications System
URL	Uniform Resource Locator
USIM	Universal Subscriber Identity Module
USSM	UICC Security Service Module
WIM	Wireless Identity Module

---

## 4 Requirements

The present document specifies:

- run time environment timing constraints;
- launch application command;
- mapped file support on the UICC;
- extension of logical channels;
- secure channel to secure local terminal interfaces;
- authenticate command longer than 255 bytes;

- CAT mechanisms to indicate the bearer connection status;
- New UICC-Terminal (NUT) interface;
- Smart Card Web Server running in UICC;
- API for applications registered to a Smart Card Web Server;
- specific UICC environmental conditions;
- introduction of high density memory technology in UICC;
- power supply indication mechanism;
- Internet Connectivity up to UICC applications;
- contactless UICC services;
- administration of the Smart Card Web Server;
- confidential application services;
- UICC for Machine-to-Machine (M2M) applications;
- Location based services for broadcast technology;
- terminals with reduced functionality;
- OMA Secure Removable Media capability for the UICC.

## 4.1 Run time environment timing constraints

### 4.1.1 Abstract (informative)

SCP specifications up to Release 6 do not put any restrictions to the run time behaviour of Smart Card applications on the CAT layer and on the application layer. However, an example for a situation which requires a defined runtime behaviour of the UICC is given in a note in Release 6 of TS 102 223 [2]: The maximum work time of applications before sending a MORE TIME proactive command to the terminal should not exceed a certain amount of time. This remark is made in the context of the network authentication command and it is not normative. To avoid future problems due to this undefined behaviour, the requirements in this clause aim at providing the infrastructure needed to achieve standardized behaviour in situations like those described above from Release 7 onwards.

### 4.1.2 Background (informative)

#### 4.1.2.1 Use case - Network authentication

An application may not block a UICC with a USIM application longer than a well defined period of time in order to be able to process network authentication commands within a time limit which is a network parameter (TS 102 223 [2]).