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(Release 16)

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  - 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.

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.

Introduction

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

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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

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 SCP 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.

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

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[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] Void.

[4] Void.

[5] Void.

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

[7] Trusted Computing Group (2011): "TPM Main - Part 1 Design Principles - Specification version 1.2".

NOTE: Available at https://trustedcomputinggroup.org/wp-content/uploads/TPM-Main-Part-1-Design-Principles_v1.2_rev116_01032011.pdf.

[8] ISO/IEC 14443 (all parts): "Cards and security devices for personal identification -- Contactless proximity objects".

[9] ISO/IEC 18092: "Information technology -- Telecommunications and information exchange between systems -- Near Field Communication -- Interface and Protocol (NFCIP-1)".

[10] ISO/IEC 15693 (all parts): "Cards and security devices for personal identification -- Contactless vicinity objects".

[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] Void.

[14] OMA-AD-SRM-V1-0-0-20090310-A: "OMA Secure Removable Media Architecture".

NOTE: Available at http://www.openmobilealliance.org/release/SRM/V1_0-20090310-A/OMA-AD-SRM-V1_0-20090310-A.pdf.

[15] OMA-RD-SRM-V1-0-20090310-A: "OMA Secure Removable Media Requirements".

NOTE: Available at https://www.openmobilealliance.org/release/SRM/V1_0-20090310-A/OMA-RD-SRM-V1_0-20090310-A.pdf.

[16] ETSI TS 102 241: "Smart Cards; UICC Application Programming Interface (UICC API) for Java Card (™) (Release 8)".

[17] ETSI TS 127 007: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; AT command set for User Equipment (UE) (3GPP TS 27.007 Release 9)".

[18] ETSI TS 102 613: "Smart Cards; UICC - Contactless Front-end (CLF) Interface; Physical and data link layer characteristics".

[19] ETSI TS 102 622: "Smart Cards; UICC - Contactless Front-end (CLF) Interface; Host Controller Interface (HCI)".

[20] ISO/IEC 18000 (all parts): "Information technology -- Radio frequency identification for item management".

[21] ETSI TS 102 483: "Smart cards; UICC-Terminal interface; Internet Protocol connectivity between UICC and terminal (Release 8)".

[22] Void.

[23] ETSI TS 102 484: "Smart Cards; Secure channel between a UICC and an end-point terminal".

[24] ETSI TS 102 600: "Smart Cards; UICC-Terminal interface; Characteristics of the USB interface".

[25] ETSI TS 102 671: "Smart Cards; Machine to Machine UICC; Physical and logical characteristics".

[26] GlobalPlatform: "Requirements for NFC Mobile: Management of Multiple Contactless Secure Elements v1.0".

NOTE: Available at https://globalplatform.wpengine.com/wp-content/uploads/2018/06/GlobalPlatform_Requirements_Secure_Elements.pdf.

[27] NFC Forum: "NFC Controller Interface (NCI) Technical Specification Version 1.1".

NOTE: Available at https://members.nfc-forum.org/apps/group_public/download.php/17505/NFCForum-TS-NCI-1.1_For_Feedback_Only.pdf.

[28] IEEE 802.15.4™-2020: "IEEE Standard for Low-Rate Wireless Networks".

[29] IEEE 802.15.4z™-2020: "IEEE Standard for Low-Rate Wireless Networks -- Amendment 1: Enhanced Ultra Wideband (UWB) Physical Layers (PHYs) and Associated Ranging Techniques".

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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 SCP 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.

[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".

[i.5] Mobile Broadband in Notebooks Guidelines, version 4.0, December 2009.

[i.6] ETSI TR 102 906: "Smart Cards; UICC-Terminal interface; UICC in Mobile Broadband Notebook".

[i.7] ETSI TR 131 970: "Universal Mobile Telecommunications System (UMTS); LTE; 5G; UICC power optimisation for Machine-Type Communication (3GPP TR 131 970)".

[i.8] GSMA RSP Technical Specification SGP.22, Version 2.3.

[i.9] 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)".

[i.10] 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)".

[i.11] ETSI TS 131 102: "Universal Mobile Telecommunications System (UMTS); LTE; Characteristics of the Universal Subscriber Identity Module (USIM) application (3GPP TS 31.102 Release 6)".

[i.12] OMA-TS-SRM-V1-0-20090310-A: "OMA Secure Removable Media Specification".

NOTE: Available at https://www.openmobilealliance.org/release/SRM/V1_0-20090310-A/OMA-TS-SRM-V1_0-20090310-A.pdf.

[i.13] IETF RFC 2616: "Hypertext Transfer Protocol -- HTTP/1.1".

NOTE: Obsoleted by IETF RFC 7230, IETF RFC 7231, IETF RFC 7232, IETF RFC 7233, IETF RFC 7234 and IETF RFC 7235.

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3 Definition of terms, symbols and abbreviations

3.1 Terms

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

AT command interface: modem interface protocol specified in ETSI TS 127 007 [17]

card emulation mode: mode of operation where the UICC emulates a contactless card through the CLF

central repository: repository of registered applications residing in the UICC

chunked transfer-coding: mechanism that allows HTTP messages to be split in several parts as defined in IETF RFC 2616 [i.13]

ContactLess Front-end (CLF): 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.

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

CLFI Protocol (CLFIP): 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 [i.12]

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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

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NOTE: 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].

external entity: entity that is external to the UICC and the modem; it can be the Mobile Broadband Notebook or a distant entity (e.g. a server)

HCI host: logical entity that operates one or more contactless service(s), as defined in ETSI TS 102 622 [19]

High Speed Protocol (HSP): running on top of the NUT interface

Host Controller Interface (HCI): HCI is a part of the implementation of CLFIP, as defined in ETSI TS 102 622 [19]

logical SE: SE functionalities, applications and files grouped together to act like a SE (e.g. UICC) when multiple logical SE interfaces are supported

Logical SE interface: logical connection between an endpoint in the terminal and one logical SE

M2M communication module: electronics system including all necessary components to establish wireless communications between machines

NOTE: M2M communication modules are usually integrated directly into target devices, such as Automated Meter Readers (AMRs), vending machines, alarm systems, car equipment or others.

M2M device applications: applications deployed on a machine to machine device that deliver a service to the UICC

MFF (M2M form factor): new form factor dedicated to M2M applications

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