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Foreword

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

It is based on work originally done in the 3GPP in TSG-terminals WG3.

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Introduction

The present document defines a generic Terminal/Integrated Circuit Card (ICC) interface.

The aim of the present document is to ensure interoperability between an ICC and a terminal independently of the respective manufacturer, card issuer or operator. The present document does not define any aspects related to the administrative management phase of the ICC. Any internal technical realization of either the ICC or the terminal is only specified where these are reflected over the interface.

Application specific details for applications residing on an ICC are specified in the respective application specific documents. The Universal Subscriber Identity Module (USIM)-application for 3G telecommunication networks is specified in ETSI TS 131 102 [2].

1 Scope

The present document specifies the interface between the UICC and the terminal.

The present document specifies:

- the requirements for the physical characteristics of the UICC;
- the electrical interface for exchanging APDUs between the UICC and the terminal, based on ISO/IEC 7816-3 [11];
- the initial communication establishment and the transport protocols for this interface;
- a model which serves as a basis for the logical structure of the UICC APDU interface;
- communication commands and procedures for the UICC APDU interface;
- application independent files and protocols for the UICC APDU interface.

Starting from Release 17, the UICC may support Logical Secure Element interfaces, which allows it to host multiple logical secure elements. A special form of such a Logical Secure Element (LSE) is a logical UICC. Where required, the lower layers which represent the features common to all LSEs are denoted as LSE base. The applicability of the clauses in the present document to either the LSE base or to the logical UICC is given in the introduction of each affected clause.

The administrative procedures, initial card management and optional communication interfaces between the UICC and terminal are not within the scope of the present document.

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.

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

[1] ETSI TS 123 038: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Alphabets and language-specific information (3GPP TS 23.038)".

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

[3] ETSI TS 101 220: "Smart Cards; ETSI numbering system for telecommunication application providers".

[4] ETSI TS 102 223: "Smart Cards; Card Application Toolkit (CAT)".

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