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Identification cards — Transport layer topologies — Configuration for HCI/HCP interchange

Cartes d'identification — Topologies de la couche transport — Configuration pour les échanges HCI/HCP

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and security devices for personal identification*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

This document is laid on the ground of ISO/IEC 7816 (all parts) specifying integrated circuit cards and the use of such cards for interchange, and on ETSI TS 102 622 defining the HCI core that is an application independent logical interface.

ETSI TS 102 622 is referenced in this document as a well-known HCI specification, however it should be noted ETSI TS 102 622 describes another host network with the host controller implemented by the CLF/NFC controller and with hosts residing on UICCs/SEs all connected to the host controller. ETSI TS 102 622 allows for other interfaces than SWP for data link layer of HCI, and does not mandate using the SWP but just describes the condition if the SWP is used.

Identification cards — Transport layer topologies — Configuration for HCI/HCP interchange

1 Scope

This document specifies the requirements for a protocol derived from HCI/HCP (see ETSI TS 102 622) enabling communication for devices regardless of data link and physical layers. This document covers the following:

a) outline of a system comprised of one or more hosts and one controller;

b) extension of connection topology between hosts and host controller (i.e. star topology and additional other topologies);

c) segregation between existing system using ETSI TS 102 613 and new system compliant to this document (this document refers ETSI TS 102 613, but does not change its specification and does not use RFU).

For ETSI TS 102 622, data link layer and physical layer like SWP specified in ETSI TS 102 613 is out of the scope.

Albeit questioned in this document, the duplication of OSI transport layer by e.g. enforcing encapsulation of HCP into T=1 or the reverse, is out of the scope.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 7816-3, *Identification cards — Integrated circuit cards — Part 3: Cards with contacts — Electrical interface and transmission protocols*

ISO/IEC 7816-4, *Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
APDU gate
entry point to a service processing command APDU inside a *host* (3.6) or returning response APDU

3.2
APDU application gate
entry point to a service sending command APDU and retrieving correspondent response APDU