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ISO/IEC 7816-6:2016(E)

Page

Contents

Fore	eword	iv
Intro	oduction	vi
1	Scope	
2	Normative references	
3	Terms and definitions	
4	Abbreviated terms and notation	2
5	Maintenance of interindustry data objects	
6	Specific interindustry data elements 6.1 Name of an individual 6.2 Proprietary login data 6.3 Magnetic stripe data 6.4 PIN usage policy 6.5 Login template 6.6 Qualified name template 6.7 Cardholder image template 6.8 Application image template 6.9 Display control template	3 3 4 4 4 4 5 6 6 6 6
7	Identification of integrated circuit manufacturers 7.1 General 7.2 Identifier 7.3 Rules for assignment	
8	Interchange profile	7
9	Interindustry data elements in alphabetic order	
10	Interindustry tags in numeric order	
11	Interindustry templates 11.1 Interindustry data objects within interindustry templates 11.2 Interindustry templates defining a context	24 24
Anno	ex A (normative) Application for integrated circuit manufacturers number	
	iography	

ISO/IEC 7816-6:2016(E)

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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the conventence of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword Supplementary information

The committee responsible for this document is ISO/IEC JTC1, *Information technology*, SC 17, *Cards and personal identification*.

This third edition cancels and replaces the second edition (ISO/IEC 7816-6:2004), which has been technically revised. It also incorporates the Technical Corrigendum ISO/IEC 7816-6:2004/Cor 1:2006.

ISO/IEC 7816 consists of the following parts, under the general title *Identification cards* — *Integrated circuit cards*:

- Part 1: Cards with contacts Physical characteristics
- Part 2: Cards with contacts Dimensions and location of the contacts
- Part 3: Cards with contacts Electrical interface and transmission protocols
- Part 4: Organization, security and commands for interchange
- Part 5: Registration of application providers
- Part 6: Interindustry data elements for interchange
- Part 7: Interindustry commands for Structured Card Query Language (SCQL)
- Part 8: Commands and mechanisms for security operations
- Part 9: Commands for card management
- Part 10: Electronic signals and answer to reset for synchronous cards
- Part 11: Personal verification through biometric methods
- Part 12: Cards with contacts USB electrical interface and operating procedures
- Part 13: Commands for application management in a multi-application environment

ISO/IEC 7816-6:2016(E)

— Part 15: Cryptographic information application

Introduction

ISO/IEC 7816 is a series of International Standards specifying integrated circuit cards and the use of such cards for interchange. These cards are identification cards intended for information exchange negotiated between the outside world and the integrated circuit in the card. As a result of an information exchange, the card delivers information (computation result, stored data), and/or modifies its content (data storage, event memorization).

- Five parts are specific to cards with galvanic contacts and three of them specify electrical interfaces.
 - ISO/IEC 7816-1 specifies physical characteristics for cards with contacts.
 - ISO/IEC 7816-2 specifies dimensions and location of the contacts.
 - ISO/IEC 7816-3 specifies electrical interface and transmission protocols for asynchronous cards.
 - ISO/IEC 7816-10 specifies electrical interface and answer to reset for synchronous cards.
 - ISO/IEC 7816-12 specifies electrical interface and operating procedures for USB cards.
- All the other parts are independent from the physical interface technology. They apply to cards accessed by contacts and/or by radio frequency.
 - ISO/IEC 7816-4 specifies organization, security and compands for interchange.
 - ISO/IEC 7816-5 specifies registration of application providers.
 - ISO/IEC 7816-6 specifies interindustry data elements for interchange.
 - ISO/IEC 7816-7 specifies commands for structured card query language.
 - ISO/IEC 7816-8 specifies commands for security operations.
 - ISO/IEC 7816-9 specifies commands for card management.
 - ISO/IEC 7816-11 specifies personal verification through biometric methods.
 - ISO/IEC 7816-13 specifies commands for handling the life cycle of applications.
 - ISO/IEC 7816-15 specifies cryptographic information application.

ISO/IEC 10536 specifies access by close coupling. ISO/IEC 14443 and ISO/IEC 15693 specify access by radio frequency. Such cards are also known as contactless cards.

INTERNATIONAL STANDARD

Identification cards — Integrated circuit cards —

Part 6: Interindustry data elements for interchange

1 Scope

This part of ISO/IEC 7816 specifies directly or by reference, data elements, including composite data elements that may be used in interindustry interchange.

It identifies the following characteristics of each data element:

- identifier;
- name;
- description and reference;
- format and coding (if not available in other ISO standards or parts of ISO/IEC 7816).

The layout of each data element is described as seen at the interface between the interface device and the card.

This part of ISO/IEC 7816 provides the definition of data elements without consideration of any restrictions on the usage of the data elements.

It does not cover the internal implementation within the card and/or the outside world. With the exception of login data objects (6.5), only application class tags are eligible in this part of ISO/IEC 7816.

When using an interindustry template, an application is allowed to nest context-specific class tags (see ISO/IEC 7816-4) under such a template unless it is previously marked as Reserved for Future Use ISO/IEC JTC 1/SC 17.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 4909, Identification cards — Financial transaction cards — Magnetic stripe data content for track 3

ISO/IEC 7813, Information technology — Identification cards — Financial transaction cards

ISO/IEC 7816 (all parts), Identification cards — Integrated circuit cards

ISO/IEC 10918-1, Information technology — Digital compression and coding of continuous-tone still images — Part 1: Requirements and guidelines

ISO/IEC 11544, Information technology — Coded representation of picture and audio information — Progressive bi-level image compression